

# 2019 Annual Groundwater Monitoring and Corrective Action Report

Georgia Power Company – Plant Mitchell  
Ash Ponds A, 1, and 2  
Project No.: 6122160170

Prepared for:



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### CERTIFICATION STATEMENT

This 2019 Annual Groundwater Monitoring and Corrective Action Report, Georgia Power Company Plant Mitchell - Ash Ponds A, 1, and 2 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 under the supervision of a licensed professional engineer and a licensed professional geologist with Wood Environment & Infrastructure Solutions, Inc.



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## Table of Contents

1.0	INTRODUCTION.....	1
1.1	Site Location and Description.....	1
1.2	Regional Geology & Hydrogeologic Setting .....	2
1.2.1	Site Geology.....	2
1.2.2	Site Hydrogeology.....	3
1.3	Groundwater Monitoring System.....	3
2.0	GROUNDWATER MONITORING ACTIVITIES.....	4
2.1	Monitoring Well Installation and Maintenance .....	4
2.2	Detection Monitoring Program.....	4
2.2.1	Background Monitoring.....	4
2.2.2	Initial Detection Monitoring .....	4
3.0	SAMPLE METHODOLOGY & ANALYSES.....	5
3.1	Groundwater Elevation Measurement.....	5
3.2	Groundwater Gradient and Flow Velocity .....	5
3.3	Groundwater Sampling .....	6
3.4	Laboratory Analyses .....	7
3.5	Quality Assurance & Quality Control.....	7
4.0	STATISTICAL ANALYSIS.....	8
4.1	Statistical Method.....	8
4.2	Statistical Analyses Results.....	10
4.3	Appendix IV Background Data .....	11
5.0	MONITORING PROGRAM STATUS.....	12
6.0	CONCLUSIONS & FUTURE ACTIONS.....	13
7.0	REFERENCES.....	14

## List of Tables & Figures

Table 1	Monitoring Network Well Summary
Table 2	Water Level Well Network Summary
Table 3	Groundwater Sampling Event Summary
Table 4	Summary of Groundwater Elevations
Table 5	Groundwater Flow Velocity Calculations – March 2019 (embedded in text)
Table 6	Analytical Data Summary – Detection Event 1 - March 2019
Table 7	Statistical Method Summary (embedded in text)
Table 8	Statistical Analysis Results Summary (embedded in text)
Figure 1	Site Location Map
Figure 2	Monitoring Network Well Location Map
Figure 3	Potentiometric Surface – Rock Wells – March 2019

## List of Appendices

- Appendix A Summary of Background Data
- Appendix B Analytical Data Reports for CCR Events 1 to 9
- Appendix C Statistical Analyses



## 1.0 Introduction

In accordance with the Georgia Environmental Protection Division (GA EPD) Rules of Solid Waste Management 391-3-4-.10(6)(a)-(c), this 2019 Annual Groundwater Monitoring and Corrective Action Report has been prepared to document groundwater monitoring activities conducted at Georgia Power Company's (GPC) Plant Mitchell Ash Ponds A, 1, and 2. To specify groundwater monitoring requirements, GA EPD Rule 391-3-4-.10(6)(a) incorporates by reference the United States Environmental Protection Agency (US EPA) Coal Combustion Residuals (CCR) Rule 40 Code of Federal Regulations (CFR) §257 Subpart D. For ease of reference, the US EPA CCR rules are cited within this report.

Groundwater monitoring and reporting for Plant Mitchell are performed in accordance with the monitoring requirements §257.90 through §257.91 and §257.93 through §257.94 and the Georgia EPD Rule 391-3-4-.10(6)(a)-(c). This report documents the activities completed to establish the groundwater monitoring program and actions through the first half of 2019 in accordance with §257.90(e) and §391-3-4-.10(6)(a).

Plant Mitchell Ash Pond A was closed in 1962, while Ash Pond 1 closed in 1980 and Ash Pond 2 ceased accepting CCR prior to October 19, 2015. Therefore, Ash Ponds A, 1, and 2 are not subject to Federal monitoring requirements. The Plant Mitchell CCR Surface Impoundments (Ash Pond A, Ash Pond 1, and Ash Pond 2) Permit Application was submitted to Georgia EPD in November 2018 and is currently under review. Groundwater monitoring has been initiated in order to meet GA EPD CCR requirements. This report documents the activities completed to establish the groundwater monitoring program and actions from the background study initiated in August 2016 through the first detection monitoring event in the first half of the 2019 calendar year.

### 1.1 Site Location and Description

Georgia Power Company's Plant Mitchell is located approximately eight (8) miles south of Albany, Georgia. The Plant Mitchell site (the Site) is comprised of approximately 474 acres, with the northern portion of the Site located in Dougherty County and the southern portion located in Mitchell County. Baker County is located immediately to the west of the Site, with the Flint River forming the county boundary (**Figure 1: Site Location Map**). As depicted in (**Figure 2: Monitoring Network Well Location Map**), the Plant Mitchell site is generally composed of the former coal-fired electric generating facility to the north and Ash Ponds A, 1, and 2 to the south. The Site is partly bounded by the Flint River on the west, the Georgia and Florida Railway on the east, pecan orchards to the south. The northern boundary of the Site is a residential property with a mowed lot. The wooded land immediately north of the former plant buildings is owned by GPC.

There are three CCR surface impoundments (ash ponds) at the Site: Ash Pond A, Ash Pond 1, and Ash Pond 2. The three ash ponds are located adjacent to each other and are therefore considered to be one multi-unit for groundwater monitoring purposes. The former coal-fired plant buildings have been demolished. The CCR material is being removed from the ash ponds

and the ponds are in the process of being closed. The removed CCR material is transported by rail and/or by truck for disposal at an approved landfill or beneficially reused.

## 1.2 Regional Geology & Hydrogeologic Setting

The geology and hydrogeology of the Plant Mitchell Ash Ponds A, 1, and 2 are summarized below. The Plant Mitchell site is located in the Dougherty Plain physiographic district within the Gulf Coastal Plain Physiographic Province (Watson, 1981; Clark and Zisa, 1976). The Dougherty Plain is characterized as relatively flat to gently rolling lowland karst terrain consisting of solutional features including caves, ephemeral streams, springs, and solution features which manifest surficially as shallow depressions.

The surface and near surface in the region are overlain by approximately 0-70 feet of unconsolidated sediment collectively referred to as residuum or overburden. This overburden is typically composed of discontinuous layers of sand and clay derived from the in-place weathering of the underlying Ocala Limestone. The overburden clay content ranges from 10 to 70 percent, with clay content typically being greater than 25 percent (Watson, 1981) making the overburden material less permeable than the underlying carbonate bedrock.

The Ocala Limestone in the region is described as a light-colored fossiliferous friable to well-indurated limestone (Gordon and Gonthier, 2017). Regionally, the Ocala Limestone is between 125 and 275 feet thick with increasing thickness to the southeast. The Ocala Limestone is part of the Floridan aquifer, which is hydraulically separated from the underlying Claiborne aquifer by the Lisbon Confining Unit (Gordon and Gonthier, 2017).

### 1.2.1 Site Geology

Based on the borings drilled to establish the detection monitoring network, the lithologies underlying the ash pond area from the ground surface to depth are: overburden (residuum) and carbonate bedrock. The overburden (residuum) at the Site consists of an interlayered sequence of predominantly fine-grained unconsolidated material including reddish brown to gray silty and clayey sands overlying sandy clay and clay. The overburden material is composed of the residual product of weathering of the underlying Ocala Limestone in the form of non-calcareous clay interlayered with quartz sand alluvium deposits (Hicks et al, 1981). A discontinuous zone of low permeability fine-grained sediments overlying the Ocala Limestone may serve as a barrier that restricts vertical movement of groundwater from the overburden to the limestone beneath the ash pond area, as indicated by many of the boring logs from multiple subsurface investigations at the Site. Laboratory analysis of undisturbed samples collected from fine-grained sediment directly overlying the limestone indicate this material can exhibit a permeability on the order of  $10^{-4}$  to  $10^{-8}$  cm/sec or  $10^{-1}$  to  $10^{-5}$  ft/day. These values are generally consistent with the published range of literature values for overburden materials in the Dougherty Plain area. Hayes, et al. (1983) estimated horizontal hydraulic conductivity ranging from 0.0004 ft/day to 30 ft/day with a median value of 0.002 ft/day for samples gathered in the Dougherty Plain. A sample collected to the north of the study area of Hayes, et al. (1983) estimated a hydraulic conductivity value of 0.002 feet/day and a vertical hydraulic conductivity value of 0.001 ft/day.

Locally, the Ocala Limestone bedrock is characterized as a pink to white, slightly silty, friable to well indurated fossiliferous limestone. The contact between overburden and bedrock at the Site is noted as an abrupt and distinct change in color, texture, and carbonate content from the overburden to bedrock. The Ocala Limestone is often described in the boring logs as a fine to coarse calcareous sand with increasing consolidation and cementation with depth. The surface of the carbonate bedrock is highly irregular due to differential weathering. In general, the bedrock surface slopes from the Site toward the Flint River in the west and southwest, and toward the unnamed creek in the east. In-situ hydraulic conductivity (slug) tests in the bedrock at the Site ranged from  $3.83 \times 10^{-4}$  to  $2.05 \times 10^{-3}$  cm/sec or 1.08 to 5.81 feet/day with an average of  $1.07 \times 10^{-3}$  cm/sec or 3.04 feet/day.

### 1.2.2 Site Hydrogeology

Two main hydrostratigraphic units are present at the Site: overburden (residuum) and carbonate bedrock comprise the uppermost aquifer. The bedrock and lower part of the overburden are saturated. Where there is CCR/embankment material overlying the overburden and bedrock, it is predominantly unsaturated as indicated by several piezometers screened in the CCR/overburden contact. The monitoring well network for the Ash Ponds monitors the carbonate bedrock because the limestone yields usable, continuous, and persistent water, unlike the overlying overburden.

General groundwater flow in the bedrock aquifer is from the northern and eastern boundaries of the Site toward Ash Ponds 1 and 2 where a more dominant westerly flow direction is present (**Figure 3 Potentiometric Surface – Rock Wells – March 2019**). An exception to this general flow regime is a groundwater mound in the bedrock aquifer on the southwest side of Ash Pond 2. The groundwater mound is attributed to a period of heavy rainfall causing water to pond in the southwest corner of Ash Pond 2 resulting in radial groundwater flow away from the southwest area of Ash Pond 2.

### 1.3 Groundwater Monitoring System

Pursuant to §257.91 and §391-3-4-.10(6)(a), GPC installed a groundwater monitoring system within the uppermost aquifer at Ash Ponds A, 1, and 2. The monitoring system is designed to monitor groundwater passing the waste boundary of the Ash Ponds A, 1, and 2 within the uppermost aquifer. Wells were located to serve as upgradient or downgradient monitoring points based on groundwater flow direction (**Table 1: Monitoring Network Well Summary**). The upgradient wells used to monitor groundwater quality include wells PZ-1D, PZ-2D, PZ-31, and PZ-32. Downgradient wells used to monitor groundwater quality include wells PZ-7D, PZ-14, PZ-15, PZ-16, PZ-17, PZ-18, PZ-19, PZ-23, PZ-25, and PZ-33. Twenty-eight wells are used for water level measurements only (**Table 2: Water Level Well Network Summary**).

A well network surrounds Ash Ponds A, 1, and 2 and monitors the groundwater conditions at the ash ponds. The monitoring well locations are shown in **Figure 2: Monitoring Network Well Location Map**. The current monitoring well network at Ash Ponds A, 1, and 2 consists of 14 wells (4 upgradient wells, and 10 downgradient wells).

## 2.0 Groundwater Monitoring Activities

As required by §257.90(e) and §391-3-4-.10(6)(a), the following describes monitoring-related activities performed during the CCR background study through to the first detection monitoring event during the first half of the 2019 calendar year. Because this is the first Annual Groundwater Monitoring and Corrective Action Report, it also describes activities performed prior to 2019 to establish the CCR groundwater monitoring program. The groundwater sampling was performed in accordance with §257.93 and §391-3-4-.10(6)(a). Samples were collected from each of the 14 wells in the monitoring system shown on **Figure 2**. Pursuant to §257.90(e)(3) and §391-3-4-.10(6)(a), **Table 3: Groundwater Sampling Event Summary**, presents a summary of CCR groundwater sampling events completed at Plant Mitchell's Ash Ponds A, 1, and 2.

### 2.1 Monitoring Well Installation and Maintenance

In accordance with the Georgia Rules for Solid Waste Management Chapter 391-3-4-.10(6)(a) and Federal Rule §257.91, a groundwater monitoring network was installed around Ash Ponds A, 1, and 2 that (1) consists of a sufficient number of wells, (2) installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer, and (3) meets the performance standards of §257.91(a) and §391-3-4-.10(6)(a). In summary, monitoring well-related activities included the following:

- Installation of a groundwater monitoring system for Ash Ponds A, 1, and 2 as presented in **Tables 1 and 2**.
- Installation of dedicated QED bladder pumps for groundwater sampling.
- Visual inspection of well conditions prior to sampling, recording the site conditions, and performing exterior maintenance to perform sampling under safe and clean conditions.

### 2.2 Detection Monitoring Program

In accordance with §257.94(b) and §391-3-4-.10(6)(a), the detection groundwater monitoring program was implemented by collecting 8 background groundwater samples. In addition, a 9<sup>th</sup> round of groundwater samples was collected as the initial detection monitoring event.

#### 2.2.1 Background Monitoring

A minimum of 8 independent samples were collected from each of the 14 CCR monitoring wells within the well network and analyzed for the constituents listed in Appendix III and Appendix IV as part of background monitoring from August 2016 to September 2018. Pursuant to §257.90(e)(3) and §391-3-4-.10(6)(a), a summary of the data and the laboratory data reports for the background sampling events are included in **Appendix A: Summary of Background Data** and **Appendix B: Analytical Data Reports for CCR Events 1 to 9**.

#### 2.2.2 Initial Detection Monitoring

Following background monitoring, the initial detection monitoring event was completed by collecting an additional round of groundwater samples from the 14 CCR monitoring wells. Groundwater samples were collected from each monitoring well and analyzed for Appendix III constituents according to §257.94(a) and §391-3-4-.10(6)(a). Data reports for the initial detection monitoring event are also included in **Appendix B**.

### 3.0 Sample Methodology & Analyses

The following sections describe the methods used to complete groundwater monitoring at Plant Mitchell Ash Ponds A, 1, and 2.

#### 3.1 Groundwater Elevation Measurement

Prior to each sampling event, groundwater elevations were recorded from each well in the network for Plant Mitchell Ash Ponds A, 1, and 2. Groundwater elevations recorded during the background and detection monitoring events are summarized in **Table 4: Summary of Groundwater Elevations**. Groundwater elevation data from the first detection monitoring event was used to develop potentiometric surface elevation contour maps (**Figure 3: Potentiometric Surface – Rock Wells – March 2019**). Groundwater flow in the limestone (**Figure 3**) is to the southwest-west. The groundwater flow pattern observed during the March 2019 detection monitoring event is consistent with conditions observed during the background period (Wood, 2018).

#### 3.2 Groundwater Gradient and Flow Velocity

The groundwater flow velocity at Plant Mitchell Ash Ponds A, 1, and 2 was calculated using a derivation of Darcy's Law. Specifically,

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

Where:

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

Although Darcy's equation is primarily applicable to diffuse flow in porous media, it is also used where flow is analogous to conditions in a homogenous aquifer. Stewart, et al. (1999) states that "water flow in the Upper Floridan (Ocala Limestone) can be classified generally as (1) diffuse, where flow is analogous to conditions in homogenous aquifer, and can be described by using basic Darcian equations; and (2) conduit, where water flows in distinct conduits and surrounding rock has comparatively low porosity and low permeability." While the presence of interpreted karst features is documented on the surface at the Plant Mitchell Site, little evidence exists for the presence of well interconnected karst features within the bedrock aquifer. Groundwater flow in the shallow Ocala Limestone at Plant Mitchell likely is diffuse based on the above evidence. Based on the lack of karst features such as cavities in boring logs, the narrow range and relatively low values of hydraulic conductivity, and relatively uniform potentiometric surface for the bedrock aquifer at the Site, the application of Darcy's equation produces approximate linear groundwater flow velocities for the shallow bulk carbonate bedrock aquifer. Groundwater flow velocities were calculated using an average hydraulic conductivity value of 3.04 feet/day, and an effective porosity of 20% (Hayes, et al., 1983). **Table 5: Groundwater Flow Velocity Calculations – March 2019** summarizes the groundwater flow velocities. Results for groundwater flow velocities ranged from 0.015 to 0.046 feet/day (5.5 to 16.8 feet/year).





**Table 5: Groundwater Flow Velocity Calculations – March 2019  
 Plant Mitchell Ash Ponds A, 1, and 2**

<b>Water-Bearing Zone</b>	<b>Location</b>	<b>Hydraulic Gradient (i) (feet/feet)</b>	<b>Average Hydraulic Conductivity (K) (feet/day)</b>	<b>Estimated Effective Porosity (n<sub>e</sub>)</b>	<b>Calculated Groundwater Flow Velocity (V) (feet/day)</b>	<b>Calculated Groundwater Flow Velocity (V) (feet/year)</b>
Limestone	Well PZ-01D toward Ash Pond A	0.003	3.04	0.2	0.046	16.8
Limestone	PZ-22 toward PZ-01R	0.002	3.04	0.2	0.030	11.0
Limestone	PZ-5D toward PZ-18	0.002	3.04	0.2	0.030	11.0
Limestone	PZ-02R/PZ-33 toward PZ-15	0.001	3.04	0.2	0.015	5.5

### 3.3 Groundwater Sampling

Groundwater samples were collected for the eight background events and the first detection monitoring event in accordance with §257.93(a) and §391-3-4-.10(6)(a). Each of the monitoring wells at the Plant Mitchell Ash Ponds A, 1, and 2 is equipped with a dedicated QED bladder pump. The 14 monitoring wells were purged and sampled using low-flow sampling procedures. Sampling equipment and pump intakes were placed at the midpoint of the well screen. Care was taken to maintain a water level above the top of screen and not draw the water level down below the pump during purging. Water level stabilization was achieved when three consecutive water level measurements vary by 0.3 foot or less at a pumping rate of no less than 100 milliliters per minute (mL/min). A SmarTroll (In-Situ field instrument) was used to monitor and record field water quality parameters (pH, conductivity, dissolved oxygen, temperature, and ORP) and a Hach 2100Q was used to measure turbidity during well purging to verify stabilization prior to sampling. Groundwater samples were collected when the following stabilization criteria were met:

- pH ± 0.1 Standard Units (S.U.);
- Specific conductance ± 5%;
- 10% for DO > 0.5 mg/l. No criterion applies if DO < 0.5 mg/L.
- Turbidity measurements less than 5 NTU
- Temperature – Record only, not used for stabilization criteria
- ORP – Record only, not used for stabilization criteria



Once stabilization was achieved, samples were collected into appropriately-preserved laboratory-supplied sample containers. Sample bottles were placed in ice-packed coolers and submitted to the analytical laboratory following chain-of-custody protocol.

### 3.4 Laboratory Analyses

Groundwater samples collected for the eight background monitoring events included both Appendix III and Appendix IV parameters. Groundwater samples collected in March 2019 for the first detection monitoring event were analyzed for Appendix III monitoring parameters only. Analytical methods used for groundwater sample analysis are listed on the analytical laboratory reports included in **Appendix B**.

Laboratory analyses were performed by Pace Analytical Services, LLC, of Peachtree Corners, Georgia, and Greensburg, Pennsylvania. Both Pace laboratories are accredited by National Environmental Laboratory Accreditation Program (NELAP) and maintain a NELAP certification for all parameters analyzed. In addition, Pace laboratories are certified to perform analysis by the State of Georgia. Data summaries of the background study are in **Appendix A: Summary of Background Data**. A summary of the first detection monitoring event is in **Table 6: Analytical Data Summary – Detection Event 1 – March 2019**. Groundwater data laboratory reports and chain of custody records for the monitoring events are presented in **Appendix B**.

### 3.5 Quality Assurance & Quality Control

During each sampling event, quality assurance/quality control samples (QA/QC) were collected at a rate of one sample per every 10 detection samples. Equipment blanks and duplicate samples were also collected during each of the sampling events. QA/QC sample data (**Appendix B**) was evaluated during data validation.

Groundwater quality data in this report was independently validated in accordance with US EPA guidance (US EPA, 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 RPDs, field and equipment blanks, and reporting limits. Where appropriate, validation qualifiers and flags are applied to the data using US EPA procedures as guidance (US EPA, 2017). Flagged data are identified in **Table 6 and Appendices A and B**, and the statistical analysis reports in **Appendix C** and described in the following section.

## 4.0 Statistical Analysis

The Site has initiated detection monitoring. Statistical analysis of Appendix III groundwater monitoring data was performed on samples collected from the groundwater monitoring network pursuant to §257.93(f) and §391-3-4-.10(6)(a) and following the statistical analysis plans. The statistical analysis plan used at the Site was developed in April 2019 by Groundwater Stats Consulting in accordance with 40 CFR §257.93(f) and §391-3-4-.10(6)(a) using methodology presented in Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance, March 2009, EPA 530/R-09-007 (US EPA, 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 Method

The Sanitas™ groundwater statistical software was used to perform the statistical analyses. Sanitas™ is a proprietary decision support software package that incorporates the statistical tests required of Subtitle C and D facilities by US EPA regulations and guidance as recommended in the Unified Guidance (US EPA, 2009) document.

The statistical method used to evaluate groundwater quality data was interwell prediction limits as described below. When using the interwell method, upgradient well data are pooled to establish a background statistical limit for each parameter. Data from the March 2019 detection monitoring event were compared to the statistical limit to determine whether downgradient well concentrations exceed background statistical limits. The interwell statistical method uses an optional 1-of-2 verification resample plan. When an initial statistically significant increase (SSI) or questionable result occurs, a second sample may be collected to verify the initial result or determine if the result was an outlier. Interwell prediction limits were used for the following locations and constituents:

- Ash Ponds A, 1, and 2: Interwell statistical methods were used for boron, calcium, chloride, fluoride, sulfate, Total Dissolved Solids (TDS), and pH.

Data from groundwater samples from downgradient wells collected in March 2019 detection monitoring event were compared to the statistical limits to evaluate whether concentrations exceed background statistical limits.

If data from a sampling event initially exceeds the PL, an optional resampling strategy can be used to verify the result. In 1-of-2 resampling, one independent resample is collected and evaluated within 90 days to determine whether the initial exceedance is verified. If the resample exceeds the PL, the initial exceedance is verified and a statistically significant increase (SSI) is identified. When a resample result does not verify the initial result, and does not exceed the PL, there is no SSI. If resampling is not performed, the initial exceedance is a confirmed exceedance. If the initial finding is not verified by a resampling result, the resampled value will replace the initial finding. When the resample confirms the initial finding, the exceedance will be reported.

Some analytes may have a statistically-significant seasonal trend, based on testing with the non-parametric, seasonal Kruskal-Wallis test. If a statistically significant seasonal trend is found, then the data may be deseasonalized prior to statistical testing. The Sanitas™ software did not deseasonalize the March 2019 data.

The following table provides a summary of the statistical methodology used at Ash Ponds A, 1, and 2 for the first detection monitoring conducted in March 2019 and will be used for routine detection monitoring in the future.

**Table 7: Statistical Method Summary  
Plant Mitchell Ash Ponds A, 1, and 2**

Statistical Methodology	Data Screening on Proposed Background	Evaluate outliers, trends, and seasonality when sufficient data are available
	Statistical Limits	Interwell statistical limits will be applied on a parameter basis, depending on the appropriateness of the method as determined by the Analysis of Variance.
	Prediction Limits	Parametric when data follow a normal or transformed normal distribution and when less than 50% non-detects, utilizing Kaplan Meier non-detect adjustment when applicable.  Nonparametric when data sets contain greater than 50% non-detects or when data are not normally or transformed-normally distributed.
	Management of Non-Detects	When data contain less than 15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the practical quantitation limit (PQL) as reported by the laboratory.  When data contain between 15-50% non-detects the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
	Confidence Intervals	Used in Assessment and Corrective Action monitoring.
	No Statistical Testing	Statistical testing is not required for parameters containing 100% non-detects (US EPA Unified Guidance, 2009, Chapter 6).
	Verification Resample Plan	Optional 1-of-2 with minimum of 8 samples per well for interwell testing.
	Optional	<ul style="list-style-type: none"> <li>▪ Initial statistical exceedance warrants optional independent resampling within 90 days.</li> <li>▪ If resample passes, well/parameter is not a confirmed statistically significant increase (SSI).</li> </ul>

Statistical Methodology	Optional	<ul style="list-style-type: none"> <li>▪ If resample exceeds, well/parameter has a confirmed SSI.</li> <li>▪ If no resample is collected, the original result is deemed verified.</li> </ul>
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#### 4.2 Statistical Analyses Results

Analytical data from the initial detection monitoring event in March 2019 at the Plant Mitchell Ash Ponds A, 1, and 2 were statistically analyzed in accordance with the statistical analysis plan. CCR detection monitoring is only for the sampling and analysis of the Appendix III constituents. The statistical analysis and comparison to prediction limits are included as **Appendix C**. Based on the statistical results presented in **Appendix C**, the following summarizes the SSIs identified during the initial detection monitoring event.



**Table 8: Statistical Analysis Results Summary  
 Plant Mitchell Ash Ponds A, 1, and 2**

<b>Parameter</b>	<b>Wells with Concentrations Above Prediction Limits</b>
Boron	PZ-7D, PZ-15, PZ-16, PZ-17, PZ-18, PZ-19, PZ-23, PZ-25, PZ-33
Calcium	PZ-7D, PZ-17, PZ-18, PZ-19, PZ-23, PZ-33
Chloride	PZ-7D, PZ-14, PZ-15, PZ-16, PZ-17, PZ-18, PZ-19
Fluoride	PZ-25
pH	PZ-18, PZ-19, PZ-23
Sulfate	PZ-7D, PZ-14, PZ-15, PZ-16, PZ-17, PZ-18, PZ-19, PZ-23, PZ-25, PZ-33
Total Dissolved Solids	PZ-7D, PZ-15, PZ-17, PZ-18, PZ-19, PZ-23, PZ-33

Pursuant to §257.94(e) and §391-3-4-.10(6)(a), within 90 days from determining an SSI, GPC will either (1) prepare a demonstration that a source other than Plant Mitchell Ash Ponds A, 1, and 2 was the cause, or (2) implement assessment monitoring per §257.95.

**4.3 Appendix IV Background Data**

Pursuant to §257.95 and §391-3-4-.10(6)(a), Appendix IV groundwater quality data is statistically analyzed and compared to groundwater protection standards if assessment monitoring is implemented. GPC is currently performing detection monitoring per §257.94 and §391-3-4-.10(6)(a) and has not implemented assessment monitoring at Plant Mitchell Ash Ponds A, 1, and 2. Therefore, statistical analysis of the Appendix IV data collected during the background monitoring period has not been performed.



## 5.0 Monitoring Program Status

The Plant Mitchell Ash Ponds A, 1, and 2 CCR multi-unit is in detection monitoring. SSIs of Appendix III constituents have been identified. Pursuant to §257.94(e)(1) and §391-3-4-.10(6)(a), GPC will either (1) prepare an alternate source demonstration or (2) implement assessment monitoring per §257.95 and §391-3-4-.10(6)(a). GPC will address the reported SSIs in accordance with the requirements, and options, of §257.94(e)(1-3).



## 6.0 Conclusions & Future Actions

Statistical evaluations of the groundwater monitoring data for Plant Mitchell Ash Ponds A, 1, and 2 identified SSIs of Appendix III groundwater monitoring constituents. In accordance with §257.94(e)(1-3), GPC will complete an alternate source demonstration or initiate assessment monitoring within 90 days.

The next semi-annual monitoring event is planned for September 2019.

## 7.0 References

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***TABLES & FIGURES***

**Table 1  
Monitoring Network Well Summary  
Plant Mitchell Ash Ponds A, 1, and 2**

Well Name	Installation Date	Latitude <sup>(1)</sup>	Longitude <sup>(1)</sup>	Ground Surface Elevation (ft msl) <sup>(2)</sup>	Top of Casing Elevation (ft msl)	Stick-up (ft)	Top of Screen Elevation (ft msl)	Bottom of Screen Elevation (ft msl)	Total Well Depth measured December 2016 (ft below TOC) <sup>(3)</sup>	Total Well Depth on Construction Log (ft below land surface)	Groundwater Zone Screened	Location
PZ-1D	6/11/2014	31.4472510	-84.1320950	192.7	196.21	3.5	125.1	115.1	81.7	78.0	Bedrock	Upgradient
PZ-2D	6/10/2014	31.4464580	-84.1295560	175.1	178.39	3.3	107.5	97.5	80.5	78.0	Bedrock	Upgradient
PZ-31	10/13/2016	31.4490140	-84.1337190	180.1	182.86	2.8	133.1	123.1	61.6	57.0	Bedrock	Upgradient
PZ-32	10/12/2016	31.4464859	-84.1309419	178.0	180.72	2.8	128.7	118.7	65.3	62.0	Bedrock	Upgradient
PZ-7D	6/3/2014	31.4337010	-84.1364880	170.0	173.13	3.1	123.6	113.6	60.4	57.0	Bedrock	Downgradient
PZ-14	7/25/2016	31.4338283	-84.1338940	180.4	183.62	3.2	140.4	130.4	53.2	50.0	Bedrock	Downgradient
PZ-15	7/23/2016	31.4341791	-84.1385315	166.9	170.10	3.2	96.9	86.94	83.2	80.0	Bedrock	Downgradient
PZ-16	7/25/2016	31.4356195	-84.1385225	170.7	173.71	3.0	130.7	120.7	53.2	50.0	Bedrock	Downgradient
PZ-17	7/22/2016	31.4368865	-84.1368364	169.5	172.66	3.2	119.5	109.5	62.7	60.0	Bedrock	Downgradient
PZ-18	7/23/2016	31.4384247	-84.1360169	166.6	169.78	3.2	116.6	106.6	63.2	60.0	Bedrock	Downgradient
PZ-19	7/13/2016	31.4396256	-84.1359816	169.1	171.96	2.9	120.1	110.1	62.6	59.0	Bedrock	Downgradient
PZ-23	7/27/2016	31.4402368	-84.1309165	188.5	191.62	3.1	138.5	128.5	63.6	60.0	Bedrock	Downgradient
PZ-25	7/20/2016	31.4421293	-84.1359850	167.9	171.12	3.2	117.9	107.9	63.2	60.0	Bedrock	Downgradient
PZ-33	10/1/2016	31.4358587	-84.1325124	186.9	189.52	2.7	129.1	119.1	73.6	70.4	Bedrock	Downgradient

Notes:

1. Horizontal locations referenced to the North American Datum of 1983.
2. ft msl indicates feet mean sea level.
3. TOC indicates top of casing.

**Table 2**  
**Water Level Well Network Summary**  
**Plant Mitchell Ash Ponds A, 1, and 2**

Well Name	Installation Date	Latitude	Longitude	Ground Surface Elevation (ft msl)	Top of Casing Elevation (ft msl)	Top of Screen Elevation (ft msl)	Bottom of Screen Elevation (ft msl)	Total Well Depth measured in the field December 2016 (ft below TOC)	Total Well Depth on Construction Log (ft below land surface)	Lithology Screened
PZ-01R	2/10/2016	31.44186900	-84.13488969	188.0	191.87	132.0	122.0	71.4	66.7	Overburden (Clay)/Bedrock
PZ-02R	2/3/2016	31.43719112	-84.13433471	188.5	191.66	131.6	121.6	71.0	67.2	Overburden (Clay)/Bedrock
PZ-2S	6/10/2014	31.4464610	-84.1295300	175.0	178.60	131.0	121.0	57.8	54.4	Overburden (Clay)
PZ-03R	2/9/2016	31.43426595	-84.13546813	189.7	192.35	143.5	133.5	61.0	56.4	Overburden (Clay)/Bedrock
PZ-3D	5/28/2014	31.4445480	-84.1303150	187.7	190.82	110.1	100.1	91.2	88.0	Bedrock
PZ-4D	5/29/2014	31.4413170	-84.1300250	187.7	190.84	142.1	132.1	58.4	56.0	Bedrock
PZ-5D	5/30/2014	31.43913800	-84.13081500	190.5	193.82	142.9	132.9	60.3	58.0	Bedrock
PZ-6S	6/13/2014	31.4359750	-84.1326040	186.2	189.34	148.6	138.6	51.4	48.0	Overburden (Clay)
PZ-8D	6/5/2014	31.4337460	-84.1390140	166.7	170.27	100.1	90.1	80.9	77.0	Bedrock
PZ-9D	6/4/2014	31.4346460	-84.1392670	162.6	166.08	126.0	116.0	50.0	47.0	Bedrock
PZ-10S	6/3/2014	31.43655800	-84.13839400	172.3	175.51	136.7	126.7	48.3	46.0	Bedrock
PZ-11S	6/12/2014	31.43833700	-84.13797600	188.2	191.57	140.6	130.6	61.5	58.0	Bedrock
PZ-12S	6/4/2014	31.4402100	-84.1375100	169.8	173.19	132.2	122.2	51.6	48.0	Bedrock
PZ-20	7/14/2016	31.4408438	-84.1359833	170.4	173.43	120.9	110.9	63.1	60.0	Bedrock
PZ-21	7/29/2016	31.4425300	-84.1334808	176.7	179.83	116.7	106.7	72.6	70.0	Bedrock
PZ-22	7/28/2016	31.4424857	-84.1308619	184.5	187.68	134.5	124.5	62.8	60.0	Bedrock
PZ-24	7/26/2016	31.4385015	-84.1318094	191.8	194.91	131.8	121.8	73.3	70.0	Bedrock
PZ-26	10/1/2016	31.4338003	-84.1395468	163.7	166.60	125.2	115.2	52.4	48.5	Bedrock
PZ-27	10/4/2016	31.4364880	-84.1389277	161.5	164.40	123.2	113.2	52.3	48.3	Bedrock
PZ-28	10/13/2016	31.4379002	-84.1385672	163.0	165.67	126.0	116.0	50.8	47.0	Bedrock
PZ-29	10/4/2016	31.4403815	-84.1377770	170.0	172.95	123.5	113.5	60.5	56.5	Bedrock
MW-102	2/22/1995	31.4421720	-84.1359780	168.0	170.75	131.9	122.7	49.4	45.9	Bedrock
MW-105	2/23/1995	31.4417960	-84.1300110	184.8	187.52	119.8	110.3	78.4	75.1	Bedrock
MW-108	2/16/1995	31.4340710	-84.1336680	183.0	185.59	145.3	136.2	54.5	47.4	Bedrock
MW-111	2/21/1995	31.4342270	-84.1386880	165.3	168.00	127.8	118.8	48.9	47.1	Bedrock
MW-113	2/21/1995	31.4362570	-84.1378240	172.1	174.76	129.8	120.4	52.0	52.4	Bedrock
MW-115	2/21/1995	31.4375780	-84.1362130	166.2	168.97	88.6	79.5	90.2	87.3	Bedrock
MW-116	2/23/1995	31.4398160	-84.1362120	169.0	171.86	100.8	94.4	not measured	75.2	Bedrock

Notes:

1. Horizontal locations referenced to the North American Datum of 1983.
2. ft msl indicates feet mean sea level.
3. TOC indicates top of casing.

**Table 3  
Groundwater Sampling Event Summary  
Plant Mitchell Ash Ponds A, 1, and 2**

Well ID	Hydraulic Location	Summary of Sampling Events															Status of Monitoring Well
		August 30 - September 8, 2016, and October 18, 2016	December 6 - 8, and 15, 2016	March 21 - 23, 2017	July 11 - 12, 2017	October 17 - 19, 2017	February 20 - 21, 2018	July 11 - 12, 2018	September 12 - 14, 2018	April 12, 2018	May 23, 2018	June 13, 2018	August 15 - 18, 2018	October 4, 2018	October 24, 2018	March 25 - 28, 2019	
Purpose of Sampling Event		Background	Background	Background	Background	Background	Background	Background	Background	Background Catchup	Background Catchup	Background Catchup	Background Catchup	Background Catchup	Background Catchup	Detection	Verification
<b>ASH PONDS MONITORING WELL NETWORK</b>																	
PZ-1D	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08							D01	Detection Monitoring
PZ-2S	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08							D01	Detection Monitoring
PZ-2D	Upgradient							BG04	BG06	BG01	BG02	BG03	BG05	BG07	BG08	D01	Detection Monitoring
PZ-6S	Upgradient		BG01	BG02	Well was no longer sampled as part of the background monitoring due to modifications to the proposed well network												
PZ-7D	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08							D01	Detection Monitoring
PZ-14	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08							D01	Detection Monitoring
PZ-15	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08							D01	Detection Monitoring
PZ-16	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08							D01	Detection Monitoring
PZ-17	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06		BG08				BG07			D01	Detection Monitoring
PZ-18	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06		BG08	BG03	BG04	BG05	BG07			D01	Detection Monitoring
PZ-19	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08							D01	Detection Monitoring
PZ-23	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08							D01	Detection Monitoring
PZ-24	Downgradient	BG01	Well was no longer sampled as part of the background monitoring due to modifications to the proposed well network														
PZ-25	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08							D01	Detection Monitoring
PZ-31	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08							D01	Detection Monitoring
PZ-32	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08							D01	Detection Monitoring
PZ-33	Downgradient		BG01	BG02	BG03	BG04	BG05	BG06	BG07					BG08		D01	Detection Monitoring

Notes:  
 BGXX = Background Event and Number  
 Dxx - Detection Event Number  
 V = Verification Event and parameter resampled



**Table 4  
Summary of Groundwater Elevations  
Plant Mitchell Ash Ponds A, 1, and 2**

Well ID	Top of Casing Elevation (feet above MSL)									
		8/29/2016 (Event #1)	12/15/2016 (Event #2)	3/20/2017 (Event #3)	7/10/2017 (Event #4)	10/16/2017 (Event #5)	2/19/2018 (Event #6)	7/10/2018 (Event #7)	9/10/2018 (Event #8)	3/25/2019 (Event #9)
MW-102	170.75	136.29	138.91	140.44	140.19	137.37	143.41	139.19	138.17	141.79
MW-105	187.52	137.64	139.17	142.17	140.93	138.90	142.98	140.12	139.92	144.59
MW-108	185.59	136.83	138.32	140.87	140.21	138.02	142.43	139.42	138.89	142.73
MW-111	168.00	135.37	137.93	139.42	138.87	137.37	141.83	138.38	136.74	140.78
MW-113	174.76	136.43	139.05	140.79	140.04	137.73	143.70	138.89	138.34	143.36
MW-115	168.97	135.75	138.32	140.10	139.35	137.70	142.35	138.82	137.30	141.46
MW-116	171.86	135.99	138.70	140.06	139.90	138.08	142.67	138.88	137.72	141.61
PZ-1D	196.21	140.28	143.53	145.38	143.35	141.12	145.82	142.82	144.12	147.92
PZ-01R	191.87	NM	138.92	140.60	140.02	138.25	142.89	139.01	138.08	142.14
PZ-2D	178.39	138.79	143.09	143.94	142.32	140.11	145.80	141.91	142.58	146.71
PZ-02R	191.66	NM	139.05	141.11	140.42	138.42	142.77	139.32	138.36	142.83
PZ-2S	178.60	138.96	143.29	144.13	142.48	140.25	145.95	142.04	142.75	146.88
PZ-3D	190.82	138.38	141.13	143.30	141.90	139.87	145.13	141.36	141.84	145.92
PZ-03R	192.35	NM	138.61	140.47	140.09	138.01	143.03	138.78	137.80	141.74
PZ-4D	190.84	138.01	138.66	142.50	140.98	138.80	141.73	140.38	140.33	145.09
PZ-5D	193.82	138.88	138.33	143.17	141.06	139.06	140.50	140.81	141.10	145.99
PZ-6S	189.34	161.70	175.49	173.57	164.89	157.58	171.93	167.42	172.91	174.11
PZ-7D	173.13	135.87	138.80	139.97	140.02	138.00	143.13	139.52	137.80	141.60
PZ-8D	170.27	135.33	138.05	139.43	138.80	137.26	141.79	138.19	136.72	140.75
PZ-9D	166.08	135.31	137.99	139.41	138.98	137.43	142.18	138.30	137.10	140.72
PZ-10S	175.51	135.77	138.72	140.07	139.65	137.47	143.18	138.54	137.70	141.79
PZ-11S	191.57	135.56	138.39	138.88	139.58	137.67	142.87	138.49	137.39	141.29
PZ-12S	173.19	134.96	137.59	139.15	138.66	136.95	141.89	137.85	136.78	140.51
PZ-14	183.62	136.64	138.26	140.91	140.09	137.92	142.41	139.24	138.78	142.69
PZ-15	170.10	135.18	137.75	139.35	138.83	137.36	141.72	138.41	136.66	140.56
PZ-16	173.71	135.50	138.61	139.85	139.46	137.54	142.93	138.35	137.43	141.39
PZ-17	172.66	136.01	138.56	140.21	139.80	137.80	143.04	138.86	137.84	142.16
PZ-18	169.78	135.72	138.30	139.98	139.53	137.76	142.61	138.61	137.67	141.90
PZ-19	171.96	136.01	138.75	140.21	139.98	137.94	143.14	138.72	137.74	141.85
PZ-20	173.43	136.23	138.77	140.27	140.14	138.19	143.10	138.92	137.84	141.75
PZ-21	179.83	137.16	139.59	141.72	140.87	138.94	144.01	140.02	139.43	143.73
PZ-22	187.68	137.84	139.94	142.66	141.14	139.28	144.43	140.53	140.69	145.16
PZ-23	191.62	138.13	138.65	142.55	140.86	138.78	141.55	140.29	140.12	145.30
PZ-24	194.91	137.21	138.23	141.50	140.26	138.13	141.71	139.46	139.00	143.81
PZ-25	171.12	136.46	139.10	140.61	140.41	138.52	143.61	139.31	138.32	141.93
PZ-26	166.60	NM	137.88	139.38	138.75	137.24	141.77	138.17	136.66	140.70
PZ-27	164.40	NM	138.62	139.82	139.42	137.44	142.58	138.30	137.24	141.06
PZ-28	165.67	NM	138.75	139.91	139.49	137.41	142.52	138.41	137.56	141.12
PZ-29	172.95	NM	138.09	139.65	139.12	137.57	142.35	138.32	137.34	140.93
PZ-31	182.86	NM	143.04	145.85	143.36	141.17	145.29	143.25	144.07	148.19
PZ-32	180.72	NM	143.74	144.28	142.59	140.33	146.06	141.89	143.11	147.00
PZ-33	189.52	NM	138.72	141.12	140.30	138.33	142.93	139.29	138.65	142.84

Notes:

NM - Not measured.

MSL - Mean Sea Level

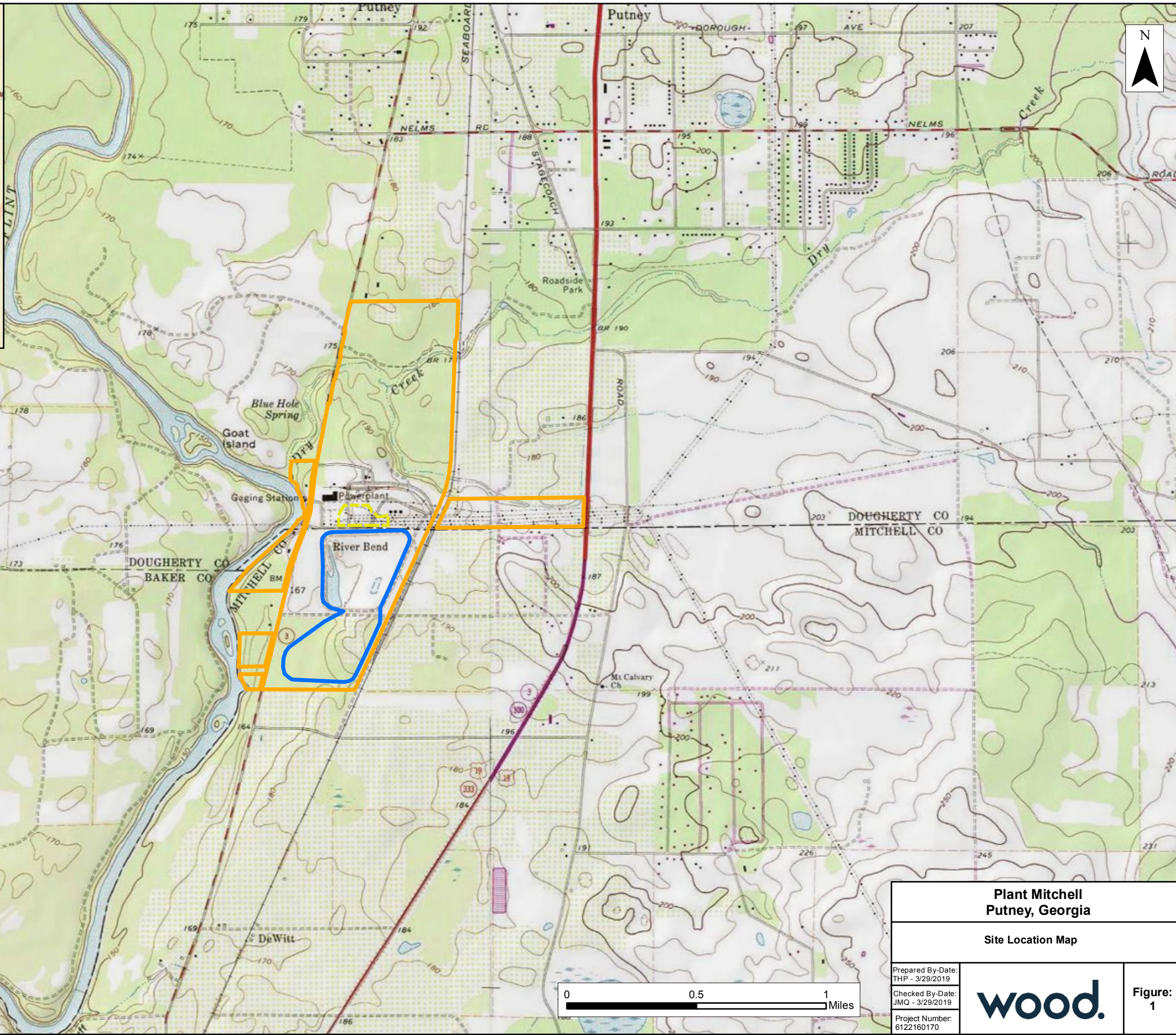
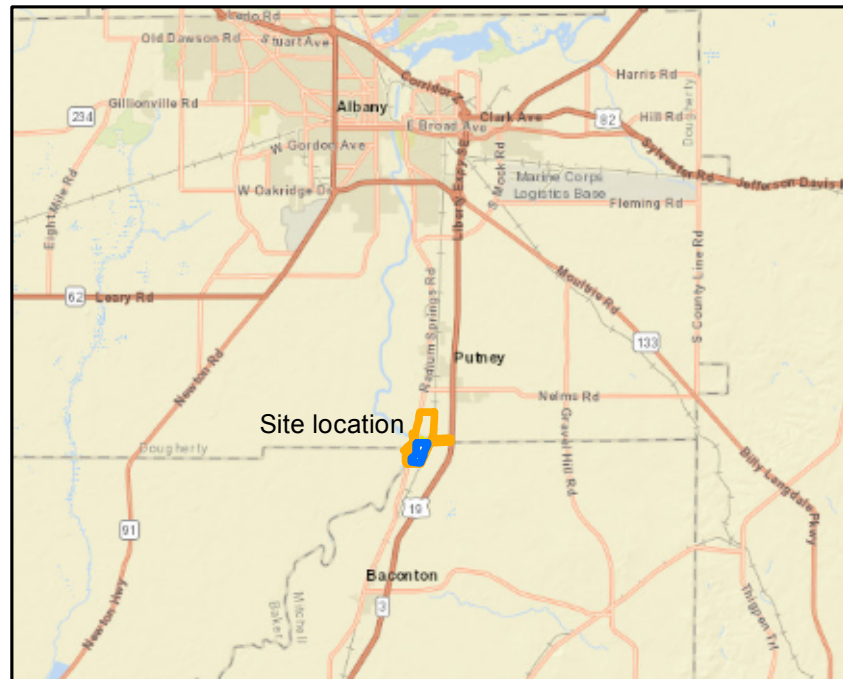
**Table 6**  
**Analytical Data Summary - Detection Event 1 - March 2019**  
**Plant Mitchell Ash Ponds A, 1, and 2**

Substance	MCL/ (SMCL)	Well ID															
	Sample Date	PZ-1D	PZ-2D	PZ-2S	PZ-7D	PZ-14	PZ-15	PZ-16	PZ-17	PZ-18	PZ-19	PZ-23	PZ-25	PZ-31	PZ-32	PZ-33	
APPENDIX III	Boron	N/R	0.0082 J	0.016 J	0.0092 J	0.33	0.023 J	0.22	0.21	0.34	0.41	0.70	0.18	0.22	0.0076 J	0.012 J	0.39
	Calcium	N/R	43.3	26.1	44.6	124	105	100	90.5	123	134	164	152	95.2	87.3	54.6	117
	Chloride	(250)	3.3	2.5	2.9	6.4	5.2	7.4	7.3	7.3	6.5	6.4	4.7	2.4	3.8	3.1	4.8
	Fluoride	4.0	< 0.3	0.040 J	< 0.3	< 0.3	< 0.3	0.10 J	< 0.3	0.15 J	< 0.3	0.074 J	< 0.3	0.37	< 0.3	< 0.3	< 0.3
	Sulfate	(250)	2.7	3.7	1.4	59.6	8.2	90.3	46.5	94.7	111	83.5	41.9	43.7	1.6	2.4	76.7
	TDS	(500)	334	87.0	144	365	281	337	277	420	408	378 J	410	287	253	167	405
	pH	N/R	7.5	8.8	7.7	7.0	7.0	7.8	7.2	7.0	6.9	6.7	6.8	7.1	7.0	7.4	7.0

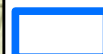


**Notes:**

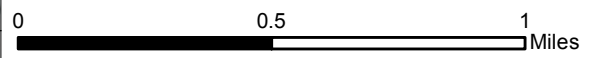
1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA or Georgia EPD only as a general guideline (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). pH results are reported in standard units (su)
4. < indicates the analyte was not detected above the laboratory reporting limit.
5. J indicates the analyte was detected between the laboratory method detection limit and laboratory reporting limit.  
Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but is evaluated statistically, as required by EPA's CCR Rule.
7. TDS indicates total dissolved solids.
8. Appendix III = indicator parameters evaluated during Detection Monitoring





**Legend**

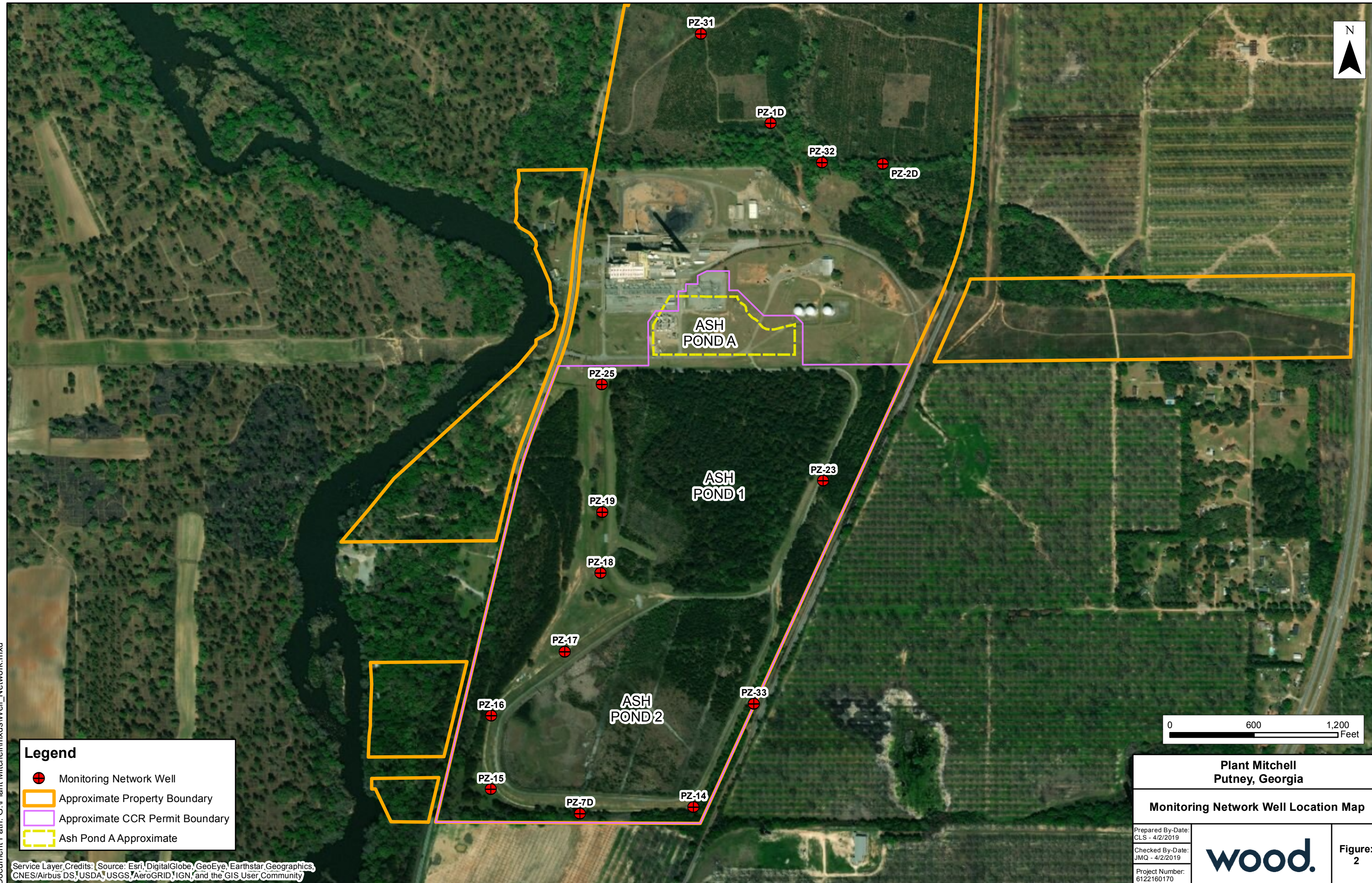
-  Ponds 1 and 2
-  Approximate Property Boundary
-  Pond A







<b>Plant Mitchell Putney, Georgia</b>	
<b>Site Location Map</b>	
Prepared By-Date: THP - 3/29/2019	
Checked By-Date: JMQ - 3/29/2019	
Project Number: 6122160170	

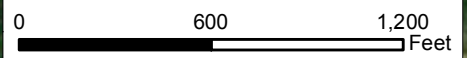
**Figure:  
1**





**Legend**

-  Monitoring Network Well
-  Approximate Property Boundary
-  Approximate CCR Permit Boundary
-  Ash Pond A Approximate



**Plant Mitchell  
Putney, Georgia**

**Monitoring Network Well Location Map**

Prepared By-Date:  
CLS - 4/2/2019

Checked By-Date:  
JMQ - 4/2/2019

Project Number:  
6122160170



**Figure:  
2**

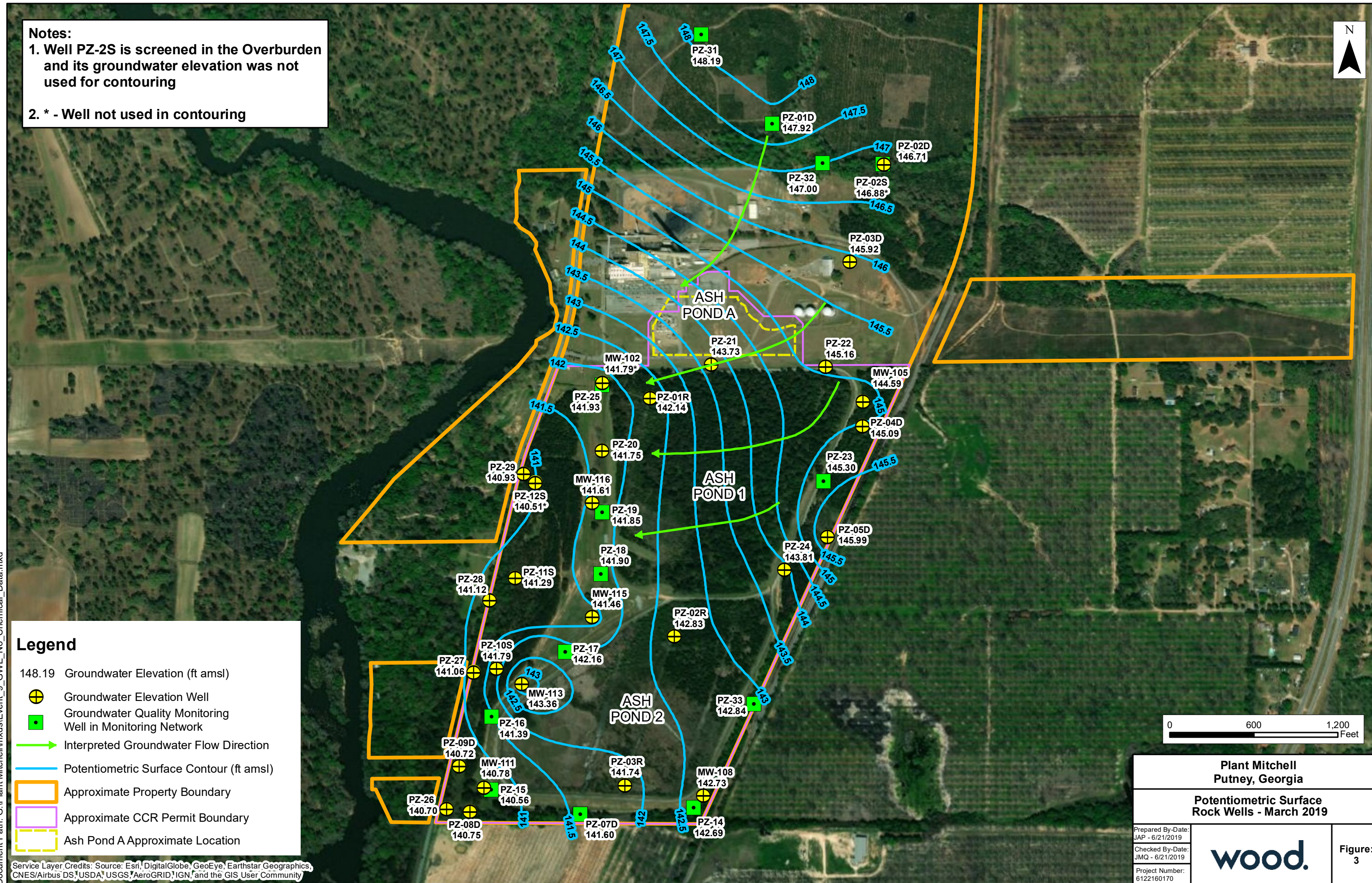
Document Path: G:\Plant Mitchell\mxd\Well\_Network.mxd

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



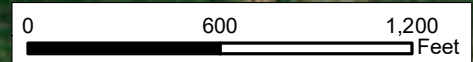
**Notes:**

- 1. Well PZ-2S is screened in the Overburden and its groundwater elevation was not used for contouring
- 2. \* - Well not used in contouring



**Legend**

- 148.19 Groundwater Elevation (ft amsl)
- ⊕ Groundwater Elevation Well
- Groundwater Quality Monitoring Well in Monitoring Network
- Interpreted Groundwater Flow Direction
- Potentiometric Surface Contour (ft amsl)
- Approximate Property Boundary
- Approximate CCR Permit Boundary
- Ash Pond A Approximate Location



<b>Plant Mitchell Putney, Georgia</b>	
<b>Potentiometric Surface Rock Wells - March 2019</b>	
Prepared By-Date: JAP - 6/21/2019	
Checked By-Date: JMQ - 6/21/2019	
Project Number: 6122160170	
<b>Figure: 3</b>	

Document Path: G:\Plant Mitchell\mxds\Event\_9\_GWE\_No\_Chemical\_Data.mxd

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



# ***APPENDIX A***

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## ***SUMMARY OF BACKGROUND DATA***

## Plant Mitchell Ash Ponds Analytical Data Summary

Georgia Power is in the process of closing all of its ash ponds. As part of this process, the company is monitoring groundwater around its ash ponds as required by the Environmental Protection Agency's (EPA) Coal Combustion Residuals (CCR) Rule and the Georgia Environmental Protection Division's (EPD) CCR Rule (State CCR rule). The CCR Rule and the State CCR rule require at least eight independent groundwater sampling events to be conducted at monitoring wells around its coal ash ponds to determine background groundwater conditions. These data tables summarize the results from background sample events. Collective data from background sampling events will be required to establish background groundwater conditions at each facility.

Substance		MCL/ (SMCL)	Well ID							
			PZ-1D	PZ-1D	PZ-1D	PZ-1D	PZ-1D	PZ-1D	PZ-1D	PZ-1D
			8/30/2016	12/6/2016	3/21/2017	7/11/2017	10/17/2017	2/20/2018	7/11/2018	9/12/2018
APPENDIX III	Boron	N/R	0.0132 U*	ND (0.0096 J)	ND (0.0082 J)	ND (0.0067 J)	ND (0.0083 J)	0.024 U*	ND (0.017 J)	ND (0.012 J)
	Calcium	N/R	40.4	43.3	44.1	47.4	48.7	46.8	65.3	46.6
	Chloride	(250)	3.1	3.4	2.9	3.4	3.3	3.3	2.9	2.8
	Fluoride	4.0	0.06 U*	0.06 U*	0.004 U*	ND (0.05 J)	ND	ND (0.098 J)	ND	ND (0.034 J)
	Sulfate	(250)	2.1	2.4	2.5	2.6	2.5	2.3	2.5	2.0 U*
	TDS	(500)	136	207	128	138	101	138	153	146
APPENDIX IV	Antimony	0.006	0.0009 U*	ND	ND (0.0028 J)	0.0035	ND (0.0025 J)	ND (0.00094 J)	ND (0.0019 J)	ND (0.0019 J)
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2.0	0.0335	0.0311	0.0305	0.0305	0.0255	0.027	0.032	0.021
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND (0.000061 J)
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.0039 J)	0.0047 U*	ND (0.0047 J)	ND (0.0054 J)	ND (0.0053 J)	ND (0.0029 J)	ND (0.0057 J)	ND (0.0033 J)
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND (0.0001 J)	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND (0.0019 J)	ND (0.0018 J)	ND (0.0018 J)	ND (0.0016 J)	ND	ND	ND
	Radium	5.0	0.503 U	0.302 U	0.526 U	0.676 U	0.201 U	1.07 U	0.825 U	0.317 U
Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND	
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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- (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
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- ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
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- TDS indicates total dissolved solids.
- U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
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- Well no longer sampled as part of the background monitoring due to well replacement, proximity to closure activities or modifications to the proposed well network.
- U\* This analyte should be considered "not-detected" because the analyte was detected in an associated blank at a similar level.



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Georgia Power is in the process of closing all of its ash ponds. As part of this process, the company is monitoring groundwater around its ash ponds as required by the Environmental Protection Agency's (EPA) Coal Combustion Residuals (CCR) Rule and the Georgia Environmental Protection Division's (EPD) CCR Rule (State CCR rule). The CCR Rule and the State CCR rule require at least eight independent groundwater sampling events to be conducted at monitoring wells around its coal ash ponds to determine background groundwater conditions. These data tables summarize the results from background sample events. Collective data from background sampling events will be required to establish background groundwater conditions at each facility.

Substance		MCL/ (SMCL)	Well ID							
			PZ-2S	PZ-2S	PZ-2S	PZ-2S	PZ-2S	PZ-2S	PZ-2S	PZ-2S
			8/30/2016	12/15/2016	3/21/2017	7/11/2017	10/17/2017	2/20/2018	7/11/2018	9/12/2018
APPENDIX III	Boron	N/R	0.0168 U*	ND (0.0163 J)	ND (0.0126 J)	ND	ND (0.0086 J)	ND	ND (0.0099 J)	ND (0.012 J)
	Calcium	N/R	45.0	45.0	45.9	50.7	49.8	44.4	44.9	46.6
	Chloride	(250)	2.9	ND (0.05 J)	2.8	3.1	3.0	2.9	2.7	2.4
	Fluoride	4.0	0.09 U*	ND	ND	ND (0.02 J)	ND (0.06 J)	ND (0.17 J)	ND	ND
	Sulfate	(250)	1.2	ND (0.07 J)	1.2	1.2	1.2	1.9	1.5	1.9 U*
	TDS	(500)	155	227	131	137	119	150	154	154
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2.0	0.0137	0.0131	ND (0.0085 J)	ND (0.0088 J)	ND (0.0084 J)	ND (0.0090 J)	ND (0.0069 J)	ND (0.0079 J)
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.0021 J)	ND (0.0024 J)	ND (0.0029 J)	ND (0.0033 J)	ND (0.0040 J)	ND (0.0030 J)	ND (0.0039 J)	ND (0.0029 J)
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND (0.0002 J)	ND (0.0002 J)	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND (0.0003 J)	ND	ND	ND	ND	ND
	Radium	5.0	0.794 U	0.870 U	0.422 U	1.00 U	0.282 U	1.10 U	0.461 U	0.700 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

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Substance		MCL/ (SMCL)	Well ID							
			PZ-2D	PZ-2D	PZ-2D	PZ-2D	PZ-2D	PZ-2D	PZ-2D	PZ-2D
			4/12/2018	5/23/2018	6/13/2018	7/11/2018	8/17/2018	9/12/2018	10/4/2018	10/24/2018
APPENDIX III	<b>Boron</b>	<b>N/R</b>	ND (0.016 J)	ND (0.018 J)	ND (0.014 J)	ND (0.017 J)	0.015 U*	ND (0.013 J)	ND (0.016 J)	ND (0.018 J)
	<b>Calcium</b>	<b>N/R</b>	ND	ND (17.6 J)	14.3	15.6	27.0	26.9	25.0	23.8
	<b>Chloride</b>	<b>(250)</b>	2.6	2.5	2.5	2.6	2.6 U*	2.3	2.7	2.8
	<b>Fluoride</b>	<b>4.0</b>	ND	ND (0.063 J)	ND (0.11 J)	ND	ND	ND (0.093 J)	ND (0.15 J)	ND (0.29 J)
	<b>Sulfate</b>	<b>(250)</b>	4.8	4.5	5.3	5.4	4.5	4.4	5.8	6.2
	<b>TDS</b>	<b>(500)</b>	69.0	62.0	93.0	84.0	115 J	97.0	103	110
APPENDIX IV	<b>Antimony</b>	<b>0.006</b>	ND	ND (0.0017 J)	ND (0.0018 J)	ND (0.0024 J)	ND (0.00082 J)	ND	ND	ND (0.00087 J)
	<b>Arsenic</b>	<b>0.01</b>	ND (0.00064 J)	ND	ND (0.00070 J)	ND	ND (0.00062 J)	ND	ND	ND (0.00068 J)
	<b>Barium</b>	<b>2.0</b>	ND	ND (0.0042 J)	0.012	ND (0.0056 J)	ND (0.0069 J)	0.011	ND (0.0066 J)	ND (0.0059 J)
	<b>Beryllium</b>	<b>0.004</b>	ND	ND	ND	ND	ND	ND	ND	ND (0.000060 J)
	<b>Cadmium</b>	<b>0.005</b>	ND	ND	ND	ND	ND	ND	ND	ND
	<b>Chromium</b>	<b>0.1</b>	0.010	0.011	0.011	ND (0.0096 J)	ND (0.0078 J)	ND (0.0056 J)	ND (0.0057 J)	ND (0.0058 J)
	<b>Cobalt</b>	<b>N/R</b>	ND	ND	ND	ND	ND	ND	ND	ND
	<b>Lead</b>	<b>0.015</b>	ND	ND	ND	ND	ND	ND	ND	ND
	<b>Lithium</b>	<b>N/R</b>	ND	ND	ND	ND (0.0011 J)	ND (0.0024 J)	ND (0.0025 J)	ND (0.0021 J)	ND (0.0021 J)
	<b>Mercury</b>	<b>0.002</b>	ND	ND	ND (0.000049 J)	ND	ND	ND	ND	0.000052 U*
	<b>Molybdenum</b>	<b>N/R</b>	ND	ND	ND	ND	ND	ND	ND	ND
	<b>Radium</b>	<b>5.0</b>	0.774 U	0.301 U	0.508 U	1.66 U*	0.683 U	0.217 U	1.14 J	0.441 U
	<b>Selenium</b>	<b>0.05</b>	ND	ND	ND	ND	ND	ND	ND	ND
<b>Thallium</b>	<b>0.002</b>	ND	ND	ND	ND	ND	ND	ND	ND (0.00016 J)	

Notes:

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Substance		MCL/ (SMCL)	Well ID							
			PZ-7D	PZ-7D	PZ-7D	PZ-7D	PZ-7D	PZ-7D	PZ-7D	PZ-7D
			9/1/2016	12/7/2016	3/22/2017	7/12/2017	10/19/2017	2/21/2018	7/12/2018	9/13/2018
APPENDIX III	Boron	N/R	0.379	0.394	0.365	0.267	0.326	0.29	0.32	0.31
	Calcium	N/R	101	103	111	119	107	118	121	116
	Chloride	(250)	7.4	7.6	7.2	7.3	7.4	7.6	7.1	6.6
	Fluoride	4.0	ND	0.15 U*	ND (0.09 J)	ND (0.02 J)	ND	ND (0.045 J)	ND	ND
	Sulfate	(250)	62	57	61	53	55	52.1	53.9	67.5
	TDS	(500)	373	433	409	374	318	367	423	394
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2.0	0.0117 J	0.0133	0.0114	ND (0.0097 J)	ND (0.0091 J)	ND (0.0086 J)	ND (0.0093 J)	ND (0.0078 J)
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	0.0030 U*	ND (0.0005 J)	ND	ND (0.0005 J)	ND	ND	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0022 J)	ND (0.0023 J)	ND (0.0025 J)	ND (0.0033 J)	ND	ND (0.0034 J)	ND (0.0038 J)	ND (0.0026 J)
	Mercury	0.002	ND	ND (0.00006 J)	ND	ND	ND	0.000053 U*	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5.0	0.880 U	0.179 U	0.279 U	0.125 U	0.329 U	0.504 U	0.188 U	0.0542 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND (0.0002 J)	ND (0.0001 J)	ND (0.0001 J)	ND	ND	ND	

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Substance		MCL/ (SMCL)	Well ID							
			PZ-14	PZ-14	PZ-14	PZ-14	PZ-14	PZ-14	PZ-14	PZ-14
			8/31/2016	12/7/2016	3/21/2017	7/11/2017	10/18/2017	2/20/2018	7/11/2018	9/12/2018
APPENDIX III	Boron	N/R	0.0285 U*	ND (0.0292 J)	ND (0.0198 J)	ND (0.0137 J)	ND (0.0212 J)	0.026 U*	0.026 U*	ND (0.020 J)
	Calcium	N/R	92.9	93.1	95.0	97.1	100	93.1	111	99.3
	Chloride	(250)	4.9	4.8	4.9	5.0	5.1	5.1	4.9	4.8
	Fluoride	4.0	0.13 U*	0.07 U*	ND	ND (0.05 J)	ND (0.11 J)	ND (0.040 J)	ND	ND
	Sulfate	(250)	4.1	1.5	2.0	2.0	4.2	2.4	3.8	4.3
	TDS	(500)	344	393	276	263	261	295	294	286
APPENDIX IV	Antimony	0.006	ND	ND	ND (0.0004 J)	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2.0	0.0253	0.0650	0.0379	0.0360	0.0247	0.030	0.027	0.022
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND (0.0020 J)	ND	ND (0.0003 J)	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0030 J)	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND (0.00007 J)	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND (0.0005 J)	ND	ND	ND	ND	ND
	Radium	5.0	1.77 J	0.672 U	0.330 U	0.701 U	0.808 U	2.12	0.232 U	0.532 U
	Selenium	0.05	ND (0.0012 J)	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	0.00006 U*	ND	ND	ND	ND	ND	

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Substance		MCL/ (SMCL)	Well ID							
			PZ-15	PZ-15	PZ-15	PZ-15	PZ-15	PZ-15	PZ-15	PZ-15
			9/1/2016	12/7/2016	3/22/2017	7/12/2017	10/18/2017	2/21/2018	7/12/2018	9/13/2018
APPENDIX III	Boron	N/R	0.215	0.224	0.205	0.184	0.197	0.21	0.23	0.22
	Calcium	N/R	74.8	74.0	99.3	91.4	92.0	89.0	94.5	90.8
	Chloride	(250)	7.0	7.0 J	7.4	8.0	7.8	7.2	7.5	6.8
	Fluoride	4.0	0.06 U*	0.09 U*	ND (0.11 J)	ND (0.23 J)	ND (0.19 J)	ND (0.093 J)	ND	ND (0.15 J)
	Sulfate	(250)	73	71	80	78	82	72.2	80.5	84.4
	TDS	(500)	284	242	332	308	275	312	337	336
APPENDIX IV	Antimony	0.006	ND (0.0010 J)	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND (0.0011 J)	ND (0.0006 J)	ND	ND (0.00089 J)	ND	ND
	Barium	2.0	0.103 J	0.0781	0.0589	0.0613	0.0617	0.076	0.056	0.048
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND (0.0012 J)	ND (0.0005 J)	ND (0.0005 J)	ND (0.0004 J)	ND (0.0004 J)	ND	ND	ND
	Lead	0.015	ND	ND	ND (0.00005 J)	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND	ND (0.0011 J)	ND	ND	ND	ND (0.0012 J)	ND (0.0013 J)
	Mercury	0.002	ND	ND	ND	ND	ND	0.000097 U*	ND	ND
	Molybdenum	N/R	ND	ND	ND (0.0004 J)	ND	ND	ND	ND	ND
	Radium	5.0	1.19 J	1.88 U*	0.617 U	0.674 U	0.844 U	0.842 U	0.552 U	0.662 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

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## Plant Mitchell Ash Ponds Analytical Data Summary

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Substance		MCL/ (SMCL)	Well ID							
			PZ-16	PZ-16	PZ-16	PZ-16	PZ-16	PZ-16	PZ-16	PZ-16
			9/6/2016	12/7/2016	3/22/2017	7/11/2017	10/18/2017	2/21/2018	7/12/2018	9/13/2018
APPENDIX III	Boron	N/R	0.170	0.173	0.218	0.180	0.195	0.21	0.21	0.21
	Calcium	N/R	74.6	68.9	77.8	77.3	84.7	81.8	85.2	80.2
	Chloride	(250)	7.9	7.6 J	7.7	8.1	8.2	7.3	7.2	7.3
	Fluoride	4.0	ND (0.09 J)	0.09 U*	0.04 U*	ND (0.05 J)	ND (0.04 J)	ND	ND	ND
	Sulfate	(250)	49	46	53	52	58	48.2	48.8	48.7
	TDS	(500)	257	248	304	265	240	285	285	291
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2.0	0.0794	0.0689	0.0423	0.0467	0.0446	0.046	0.043	0.038
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND (0.0008 J)	ND	ND	ND	ND	ND
	Cobalt	N/R	ND (0.0005 J)	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	0.000068 U*	ND	ND
	Molybdenum	N/R	ND	ND	ND (0.0004 J)	ND	ND	ND	ND	ND
	Radium	5.0	1.12 U*	1.37 U*	0.435 U	0.760 U	0.847 U	0.373 U	0.408 U	0.472 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.00018 J)	ND	ND (0.00017 J)	

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Substance		MCL/ (SMCL)	Well ID							
			PZ-17	PZ-17	PZ-17	PZ-17	PZ-17	PZ-17	PZ-17	PZ-17
			9/7/2016	12/8/2016	3/22/2017	7/12/2017	10/18/2017	2/21/2018	8/16/2018	9/14/2018
APPENDIX III	Boron	N/R	0.276	0.303	0.342	0.278	0.277	0.29	0.33	0.31
	Calcium	N/R	100	102	113	110	122	107	113	108
	Chloride	(250)	7.7	7.2 J	7.3	7.4	7.6	7.4	7.5	7.7
	Fluoride	4.0	ND (0.03 J)	0.18 U*	ND (0.09 J)	ND (0.21 J)	ND (0.24 J)	ND (0.24 J)	0.073 U*	ND
	Sulfate	(250)	99	94	100	100	100	98.8	111	102
	TDS	(500)	392	431	456	445	349	411	415	403
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND (0.0007 J)	ND	ND	ND (0.00072 J)	ND (0.00070 J)	ND
	Barium	2.0	0.0823	0.0668	0.0821	0.0805	0.0776	0.073	0.081	0.081
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND (0.0011 J)	ND (0.0006 J)	ND (0.0006 J)	ND (0.0005 J)	ND (0.0005 J)	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND	ND (0.0021 J)	ND (0.0020 J)	ND (0.0020 J)	ND (0.0022 J)	ND (0.0027 J)	ND (0.0025 J)
	Mercury	0.002	ND	ND	ND	ND	ND	0.000086 U*	ND	ND
	Molybdenum	N/R	ND	ND	ND (0.0004 J)	ND	ND	ND	ND	ND
	Radium	5.0	1.06 U	1.30 U*	0.566 U	0.856 U	0.957 J	1.40 J	0.625 U	1.16 J
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

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Substance		MCL/ (SMCL)	Well ID							
			PZ-18	PZ-18	PZ-18	PZ-18	PZ-18	PZ-18	PZ-18	PZ-18
			9/7/2016	12/8/2016	3/22/2017	7/12/2017	10/18/2017	2/21/2018	8/15/2018	9/13/2018
APPENDIX III	Boron	N/R	0.355	0.351	0.405	0.350	0.370	0.33	0.37	0.37
	Calcium	N/R	112	113	122	129	125	118	123	123
	Chloride	(250)	6.9	6.8 J	6.8	6.7	6.8	7.1	6.7	6.7
	Fluoride	4.0	ND (0.12 J)	0.18 U*	ND (0.08 J)	ND (0.17 J)	ND (0.06 J)	ND (0.086 J)	ND	ND
	Sulfate	(250)	96	94	95	96	99	91.8	101	106
	TDS	(500)	415	441	469	432	368	409	422	438
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2.0	0.0717	0.0513	0.0273	0.0269	0.0258	0.029	0.027	0.023
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND (0.0011 J)	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND (0.00043 J)	ND	ND
	Lithium	N/R	ND	ND	ND (0.0029 J)	ND (0.0024 J)	ND (0.0027 J)	ND (0.0021 J)	ND (0.0027 J)	ND (0.0029 J)
	Mercury	0.002	ND	ND	ND	ND	ND	0.000057 U*	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5.0	1.51 U*	1.29 U*	0.799 U	0.400 U	0.613 U	0.736 U	1.02 U	0.708 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND (0.00004 J)	ND	ND (0.00005 J)	ND	ND	ND	

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Substance		MCL/ (SMCL)	Well ID							
			PZ-19	PZ-19	PZ-19	PZ-19	PZ-19	PZ-19	PZ-19	PZ-19
			9/7/2016	12/8/2016	3/23/2017	7/12/2017	10/19/2017	2/21/2018	7/12/2018	9/14/2018
APPENDIX III	Boron	N/R	0.573	0.588	0.703	0.598	0.660	0.60	0.64	0.57
	Calcium	N/R	138	135	137	145	140	145	140	124
	Chloride	(250)	6.8	6.6 J	6.6	6.6	6.5	7.6	6.3	6.1
	Fluoride	4.0	ND (0.15 J)	0.12 U*	ND (0.14 J)	ND (0.07 J)	ND	0.37	ND (0.17 J)	ND
	Sulfate	(250)	87	84	90	93	92	84.5	84.9	89.5
	TDS	(500)	508	556	482	497	448	500	523	486
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND (0.0007 J)	ND	ND	ND	ND	ND
	Barium	2.0	0.0670	0.0522	0.0591	0.0604	0.0542	0.058	0.057	0.058
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND (0.0012 J)	ND (0.0009 J)	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0082 J)	ND (0.0061 J)	ND (0.0122 J)	ND (0.0130 J)	ND (0.0130 J)	ND (0.0085 J)	ND (0.013 J)	ND (0.018 J)
	Mercury	0.002	ND	ND	ND	ND	ND	0.000045 U*	ND	ND
	Molybdenum	N/R	ND (0.0027 J)	ND (0.0022 J)	ND (0.0025 J)	ND (0.0022 J)	ND (0.0021 J)	ND	ND (0.0022 J)	ND (0.0023 J)
	Radium	5.0	1.22 U*	1.69 U*	1.07	0.849 U	0.398 U	1.03 U	1.28 U	0.740 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND (0.0015 J)
Thallium	0.002	ND	ND (0.0003 J)	ND (0.0003 J)	ND (0.0004 J)	ND (0.0005 J)	ND (0.00049 J)	ND (0.00077 J)	ND (0.00076 J)	

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Substance		MCL/ (SMCL)	Well ID							
			PZ-23	PZ-23	PZ-23	PZ-23	PZ-23	PZ-23	PZ-23	PZ-23
			8/31/2016	12/7/2016	3/21/2017	7/11/2017	10/18/2017	2/20/2018	7/11/2018	9/13/2018
APPENDIX III	Boron	N/R	0.166	0.182	0.172	0.149	0.158	0.16	0.17	0.16
	Calcium	N/R	132	125	138	139	144	142	159	136
	Chloride	(250)	5.1	5.2	5.5	5.7	5.1	5.5	5.1	5.0
	Fluoride	4.0	0.13 U*	0.13 U*	ND (0.05 J)	ND (0.05 J)	ND	ND (0.30 J)	ND (0.077 J)	ND
	Sulfate	(250)	29	24	31	37	34	34.7	35.4	37.4
	TDS	(500)	400	406	409	414	366	429	440	448
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2.0	0.0407	0.0581	0.0678	0.0574	0.0351	0.050	0.051	0.038
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND (0.0002 J)	ND (0.0002 J)	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND (0.0009 J)	ND (0.0016 J)	ND (0.0019 J)	ND	ND (0.0021 J)	ND (0.0022 J)
	Cobalt	N/R	ND	ND (0.0008 J)	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND (0.00009 J)	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND (0.0006 J)	ND	ND	ND	ND	ND
	Radium	5.0	1.85 J	0.844 U	0.832 U	0.824 U	1.19 J	0.975 U	1.29	0.765 U
	Selenium	0.05	ND (0.0014 J)	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND (0.0002 J)	ND (0.0003 J)	ND (0.0002 J)	ND (0.0001 J)	ND (0.00026 J)	ND (0.00018 J)	ND	

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11. Well no longer sampled as part of the background monitoring due to well replacement, proximity to closure activities or modifications to the proposed well network.
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Substance		MCL/ (SMCL)	Well ID							
			PZ-24	PZ-24	PZ-24	PZ-24	PZ-24	PZ-24	PZ-24	
			9/8/2016							
APPENDIX III	Boron	N/R	0.0261 U*							
	Calcium	N/R	85.4							
	Chloride	(250)	7.2							
	Fluoride	4.0	ND (0.22 J)							
	Sulfate	(250)	13							
	TDS	(500)	337							
APPENDIX IV	Antimony	0.006	ND							
	Arsenic	0.01	ND							
	Barium	2.0	0.0931							
	Beryllium	0.004	ND	See Note 11						
	Cadmium	0.005	ND							
	Chromium	0.1	ND							
	Cobalt	N/R	ND (0.0015 J)							
	Lead	0.015	ND							
	Lithium	N/R	ND							
	Mercury	0.002	ND							
	Molybdenum	N/R	ND							
	Radium	5.0	0.486 U							
	Selenium	0.05	ND							
Thallium	0.002	ND								

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Substance		MCL/ (SMCL)	Well ID							
			PZ-25	PZ-25	PZ-25	PZ-25	PZ-25	PZ-25	PZ-25	PZ-25
			9/8/2016	12/8/2016	3/22/2017	7/11/2017	10/18/2017	2/21/2018	7/12/2018	9/13/2018
APPENDIX III	Boron	N/R	0.204	0.216	0.247	0.194	0.186	0.22	0.22	0.20
	Calcium	N/R	85.2	84.5	85.3	93.0	87.6	93.9	87.1	85.8
	Chloride	(250)	4.0	3.6 J	3.3	3.0	2.9	2.9	2.6	2.3
	Fluoride	4.0	ND (0.25 J)	ND (0.22 J)	ND (0.16 J)	ND (0.23 J)	ND (0.28 J)	ND (0.29 J)	ND (0.21 J)	ND (0.22 J)
	Sulfate	(250)	48	46	53	51	50	46.8	48.3	42.0
	TDS	(500)	293	309	299	301	256	297	310	307
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.0017 J)	ND	ND (0.0010 J)	ND	ND	ND (0.00071 J)	ND	ND
	Barium	2.0	0.102	0.102	0.0951	0.102	0.0997	0.11	0.10	0.10
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND (0.0008 J)	ND	ND (0.0010 J)	ND (0.0010 J)	ND (0.0011 J)	ND (0.00075 J)	ND (0.00080 J)	ND (0.0010 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0038 J)	ND (0.0038 J)	ND (0.0068 J)	ND (0.0059 J)	ND (0.0057 J)	ND (0.0063 J)	ND (0.0063 J)	ND (0.0061 J)
	Mercury	0.002	ND	ND	ND	ND	ND	0.000053 U*	ND	ND
	Molybdenum	N/R	ND	ND	ND (0.0010 J)	ND	ND	ND	ND	ND
	Radium	5.0	1.41 J	1.39 U*	0.852 U	1.04	0.678 U	0.863 U	1.42	0.766 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

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Substance		MCL/ (SMCL)	Well ID							
			PZ-31	PZ-31	PZ-31	PZ-31	PZ-31	PZ-31	PZ-31	PZ-31
			10/18/2016	12/6/2016	3/21/2017	7/11/2017	10/17/2017	2/20/2018	7/11/2018	9/12/2018
APPENDIX III	Boron	N/R	ND (0.0174 J)	ND (0.0133 J)	ND (0.0103 J)	ND	ND (0.0116 J)	0.046 U*	ND (0.014 J)	ND (0.0098 J)
	Calcium	N/R	88.3	83.4	94.0	86.0	91.6	86.5	95.4	86.0
	Chloride	(250)	4.5	5.0	4.3	4.7	4.6	4.4	4.0	3.7
	Fluoride	4.0	ND (0.16 J)	0.15 U*	0.02 U*	ND (0.06 J)	ND (0.05 J)	ND (0.21 J)	ND (0.087 J)	ND (0.049 J)
	Sulfate	(250)	2.2	6.1	5.7	4.8	6.4	5.2	3.6	2.7 U*
	TDS	(500)	264	299	260	244	218	264	273	252
APPENDIX IV	Antimony	0.006	ND (0.0018 J)	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2.0	0.0257	0.113	0.0226	0.0139	0.0103	0.015	0.011	ND (0.0087 J)
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND (0.0006 J)	ND (0.0006 J)	ND (0.0008 J)	ND	ND	ND
	Cobalt	N/R	ND	ND (0.0018 J)	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND (0.0005 J)	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND (0.0005 J)	ND	ND	ND	ND	ND
	Radium	5.0	0.0311 U	0.301 U	0.506 U	0.0701 U	0.412 U	0.810 U	0.749 U	0.200 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	0.00006 U*	ND	ND	ND	ND	ND	

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Substance		MCL/ (SMCL)	Well ID							
			PZ-32	PZ-32	PZ-32	PZ-32	PZ-32	PZ-32	PZ-32	PZ-32
			10/18/2016	12/7/2016	3/23/2017	7/11/2017	10/17/2017	2/20/2018	7/11/2018	9/13/2018
APPENDIX III	Boron	N/R	ND (0.0156 J)	ND (0.0157 J)	ND (0.0103 J)	ND	ND (0.0142 J)	0.011 U*	ND (0.014 J)	ND (0.013 J)
	Calcium	N/R	57.2	52.8	59.1	59.7	64.9	64.1	60.4	58.7
	Chloride	(250)	3.5	3.2	2.9	3.1	3.0	3.0	2.8	2.2
	Fluoride	4.0	ND (0.11 J)	0.07 U*	ND	ND (0.02 J)	ND	ND	ND	ND
	Sulfate	(250)	2.3	1.9	1.7	1.8	1.9	2.1	2.0	2.1 U*
	TDS	(500)	152	214	165	162	140	163	192	192
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.0020 J)	ND	ND	ND	ND	ND	ND
	Barium	2.0	0.0248	0.0506	0.0175	0.0161	0.0158	0.015	0.016	0.014
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND (0.0005 J)	ND	ND (0.0005 J)	ND	ND	ND
	Cobalt	N/R	ND	ND (0.0015 J)	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND (0.0001 J)	ND	ND (0.0002 J)	ND	ND (0.00007 J)	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5.0	0.0333 U	0.507 U	0.378 U	1.04 J	0.779 U	0.906 U	0.505 U	0.313 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND (0.0002 J)	ND (0.00008 J)	ND (0.00007 J)	ND (0.00008 J)	ND	ND	ND	

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Substance		MCL/ (SMCL)	Well ID							
			PZ-33	PZ-33	PZ-33	PZ-33	PZ-33	PZ-33	PZ-33	PZ-33
			12/8/2016	3/23/2017	7/12/2017	10/19/2017	2/21/2018	7/12/2018	9/14/2018	10/4/2018
APPENDIX III	Boron	N/R	0.375	0.396	0.343	0.413	0.36	0.41	0.38	0.39
	Calcium	N/R	117	122	124	118	122	129	123	126
	Chloride	(250)	6.9 J	6.2	6.0	6.4	6.9	7.3	7.3	7.0
	Fluoride	4.0	ND (0.21 J)	ND (0.18 J)	ND (0.06 J)	ND	ND (0.039 J)	ND	ND	ND ( 0.15 J)
	Sulfate	(250)	100	100	97	97	93.6	89.4	88.9	97.8
	TDS	(500)	503	430	438	393	435	447	447	450
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.0007 J)	ND	ND	ND (0.00094 J)	ND	ND	ND
	Barium	2.0	0.162	0.0753	0.0756	0.0681	0.085	0.076	0.071	0.072
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND (0.0001 J)	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND (0.0017 J)	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND (0.0041 J)	ND (0.0008 J)	ND (0.0007 J)	ND (0.0005 J)	ND (0.0012 J)	ND (0.00053 J)	ND	ND
	Lead	0.015	ND	ND (0.00009 J)	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	0.000043 U*	ND	ND (0.000041 J)	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5.0	0.968 U	0.444 U	0.814 U	0.748 U	1.05 U	0.751 U	1.01 U	1.05 J
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND (0.0001 J)	ND (0.0001 J)	ND (0.0001 J)	ND	ND	ND	ND	

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Substance		MCL/ (SMCL)	Well ID					
			PZ-6S	PZ-6S	PZ-6S	PZ-6S	PZ-6S	PZ-6S
			12/7/2016	3/22/2017				
APPENDIX III	Boron	N/R	0.263	0.294	See Note 11			
	Calcium	N/R	13.5	13.0				
	Chloride	(250)	6.5	5.7				
	Fluoride	4.0	0.08 U*	0.03 U*				
	Sulfate	(250)	33	35				
	TDS	(500)	192	76				
APPENDIX IV	Antimony	0.006	ND (0.0029 J)	0.0448				
	Arsenic	0.01	ND	ND				
	Barium	2.0	0.0234	0.0224				
	Beryllium	0.004	ND (0.0002 J)	ND (0.0001 J)				
	Cadmium	0.005	ND (0.0006 J)	ND (0.0006 J)				
	Chromium	0.1	ND	ND (0.0007 J)				
	Cobalt	N/R	ND	ND				
	Lead	0.015	ND (0.0002 J)	ND (0.0002 J)				
	Lithium	N/R	ND	ND				
	Mercury	0.002	ND (0.00018 J)	ND (0.00006 J)				
	Molybdenum	N/R	ND	ND				
	Radium	5.0	1.68 J	1.33				
	Selenium	0.05	ND (0.0017 J)	ND (0.0017 J)				
Thallium	0.002	ND	ND (0.00005 J)					

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---

# ***APPENDIX B***

## ***ANALYTICAL DATA REPORTS FOR CCR EVENTS 1 TO 9***



**PACE ANALYTICAL SERVICES, INC.**

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

**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AZH0946**

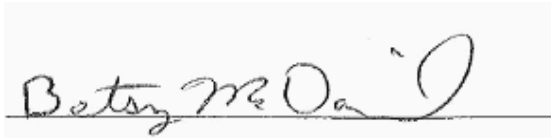
**September 07, 2016**

**Project: CCR Event**

**Project #: Plant Mitchell**

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

Approved:



Project Manager

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



**PACE ANALYTICAL SERVICES, INC.**

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

Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 07, 2016

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
EB-01	AZH0946-01	DI Water	08/30/16 09:20	08/31/16 09:25
PZ-2S	AZH0946-02	Ground Water	08/30/16 13:16	08/31/16 09:25
PZ-1D	AZH0946-03	Ground Water	08/30/16 13:47	08/31/16 09:25



**PACE ANALYTICAL SERVICES, INC.**

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Attention: Mr. Joju Abraham

September 07, 2016

Report No.: AZH0946

Project: CCR Event

Client ID: EB-01

Lab Number ID: AZH0946-01

Date/Time Sampled: 8/30/2016 9:20:00AM

Date/Time Received: 8/31/2016 9:25:00AM

Matrix: DI Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	08/31/16 15:15	08/31/16 15:15	6080844	JPT
<b>Inorganic Anions</b>											
Chloride	0.07	0.25	0.01	mg/L	EPA 300.0	B-01, J	1	08/31/16 10:53	08/31/16 18:27	6080842	RLC
Fluoride	0.04	0.30	0.02	mg/L	EPA 300.0	J	1	08/31/16 10:53	08/31/16 18:27	6080842	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	08/31/16 10:53	08/31/16 18:27	6080842	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:39	6080862	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:39	6080862	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:39	6080862	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:39	6080862	CSW
Boron	0.0140	0.100	0.0064	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 15:39	6080862	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:39	6080862	CSW
Calcium	0.141	0.500	0.0311	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 15:39	6080862	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:39	6080862	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:39	6080862	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:39	6080862	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:39	6080862	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:39	6080862	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:39	6080862	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:39	6080862	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/01/16 09:35	09/01/16 14:14	6080864	MTC



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September 07, 2016

Report No.: AZH0946

Project: CCR Event

Client ID: PZ-2S

Lab Number ID: AZH0946-02

Date/Time Sampled: 8/30/2016 1:16:00PM

Date/Time Received: 8/31/2016 9:25:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	155	25	10	mg/L	SM 2540 C		1	08/31/16 15:15	08/31/16 15:15	6080844	JPT
<b>Inorganic Anions</b>											
Chloride	2.9	0.25	0.01	mg/L	EPA 300.0	B-01	1	08/31/16 10:53	08/31/16 18:47	6080842	RLC
Fluoride	0.09	0.30	0.02	mg/L	EPA 300.0	J	1	08/31/16 10:53	08/31/16 18:47	6080842	RLC
Sulfate	1.2	1.0	0.05	mg/L	EPA 300.0		1	08/31/16 10:53	08/31/16 18:47	6080842	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:44	6080862	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:44	6080862	CSW
Barium	0.0137	0.0100	0.0004	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:44	6080862	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:44	6080862	CSW
Boron	0.0168	0.100	0.0064	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 15:44	6080862	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:44	6080862	CSW
Calcium	45.0	2.50	0.155	mg/L	EPA 6020B		5	09/01/16 09:25	09/03/16 13:49	6080862	CSW
Chromium	0.0021	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 15:44	6080862	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:44	6080862	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 15:44	6080862	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:44	6080862	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:44	6080862	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:44	6080862	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:44	6080862	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/01/16 09:35	09/01/16 14:16	6080864	MTC



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Attention: Mr. Joju Abraham

September 07, 2016

Report No.: AZH0946

Project: CCR Event

Client ID: PZ-1D

Lab Number ID: AZH0946-03

Date/Time Sampled: 8/30/2016 1:47:00PM

Date/Time Received: 8/31/2016 9:25:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	136	25	10	mg/L	SM 2540 C		1	08/31/16 15:15	08/31/16 15:15	6080844	JPT
<b>Inorganic Anions</b>											
Chloride	3.1	0.25	0.01	mg/L	EPA 300.0	B-01	1	08/31/16 10:53	08/31/16 19:08	6080842	RLC
Fluoride	0.06	0.30	0.02	mg/L	EPA 300.0	J	1	08/31/16 10:53	08/31/16 19:08	6080842	RLC
Sulfate	2.1	1.0	0.05	mg/L	EPA 300.0		1	08/31/16 10:53	08/31/16 19:08	6080842	RLC
<b>Metals, Total</b>											
Antimony	0.0009	0.0030	0.0008	mg/L	EPA 6020B	B-01, J	1	09/01/16 09:25	09/01/16 15:50	6080862	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:50	6080862	CSW
Barium	0.0335	0.0100	0.0004	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:50	6080862	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:50	6080862	CSW
Boron	0.0132	0.100	0.0064	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 15:50	6080862	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:50	6080862	CSW
Calcium	40.4	2.50	0.155	mg/L	EPA 6020B		5	09/01/16 09:25	09/03/16 13:55	6080862	CSW
Chromium	0.0039	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 15:50	6080862	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:50	6080862	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:50	6080862	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:50	6080862	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:50	6080862	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:50	6080862	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:50	6080862	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/01/16 09:35	09/01/16 14:23	6080864	MTC



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**Report No.: AZH0946**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6080844 - SM 2540 C</b>											
<b>Blank (6080844-BLK1)</b>						Prepared & Analyzed: 08/31/16					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (6080844-BS1)</b>						Prepared & Analyzed: 08/31/16					
Total Dissolved Solids	387	25	10	mg/L	400.00		97	84-108			
<b>Duplicate (6080844-DUP1)</b>						Source: AZH0946-03 Prepared & Analyzed: 08/31/16					
Total Dissolved Solids	131	25	10	mg/L		136			4	10	
<b>Duplicate (6080844-DUP2)</b>						Source: AZH0961-02 Prepared & Analyzed: 08/31/16					
Total Dissolved Solids	360	25	10	mg/L		365			1	10	



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**Report No.: AZH0946**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6080842 - EPA 300.0</b>											
<b>Blank (6080842-BLK1)</b>						Prepared & Analyzed: 08/31/16					
Chloride	0.03	0.25	0.01	mg/L							J
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
<b>LCS (6080842-BS1)</b>						Prepared & Analyzed: 08/31/16					
Chloride	9.83	0.25	0.01	mg/L	10.010		98	90-110			
Fluoride	10.1	0.30	0.02	mg/L	10.010		101	90-110			
Sulfate	9.98	1.0	0.05	mg/L	10.010		100	90-110			
<b>Matrix Spike (6080842-MS1)</b>						Source: AZH0942-01 Prepared & Analyzed: 08/31/16					
Chloride	16.1	0.25	0.01	mg/L	10.010	5.97	101	90-110			
Fluoride	12.9	0.30	0.02	mg/L	10.010	0.78	121	90-110			QM-05
Sulfate	202	1.0	0.05	mg/L	10.010	216	NR	90-110			QM-05
<b>Matrix Spike (6080842-MS2)</b>						Source: AZH0946-03 Prepared & Analyzed: 08/31/16					
Chloride	13.2	0.25	0.01	mg/L	10.010	3.11	101	90-110			
Fluoride	10.4	0.30	0.02	mg/L	10.010	0.06	104	90-110			
Sulfate	12.1	1.0	0.05	mg/L	10.010	2.06	100	90-110			
<b>Matrix Spike Dup (6080842-MSD1)</b>						Source: AZH0942-01 Prepared & Analyzed: 08/31/16					
Chloride	15.8	0.25	0.01	mg/L	10.010	5.97	99	90-110	2	15	
Fluoride	13.3	0.30	0.02	mg/L	10.010	0.78	125	90-110	3	15	QM-05
Sulfate	202	1.0	0.05	mg/L	10.010	216	NR	90-110	0.4	15	QM-05





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**Report No.: AZH0946**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6080862 - EPA 3005A</b>											
<b>Blank (6080862-BLK1)</b>						Prepared & Analyzed: 09/01/16					
Antimony	0.0012	0.0030	0.0008	mg/L							J
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.100	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0050	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0050	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0050	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							
<b>LCS (6080862-BS1)</b>						Prepared & Analyzed: 09/01/16					
Antimony	0.103	0.0030	0.0008	mg/L	0.10000		103	80-120			
Arsenic	0.100	0.0050	0.0016	mg/L	0.10000		100	80-120			
Barium	0.0966	0.0100	0.0004	mg/L	0.10000		97	80-120			
Beryllium	0.0964	0.0030	0.00008	mg/L	0.10000		96	80-120			
Boron	0.942	0.100	0.0064	mg/L	1.0000		94	80-120			
Cadmium	0.0996	0.0010	0.00007	mg/L	0.10000		100	80-120			
Calcium	0.943	0.500	0.0311	mg/L	1.0000		94	80-120			
Chromium	0.103	0.0100	0.0009	mg/L	0.10000		103	80-120			
Cobalt	0.0969	0.0100	0.0005	mg/L	0.10000		97	80-120			
Copper	0.0996	0.0050	0.0005	mg/L	0.10000		100	80-120			
Lead	0.0967	0.0050	0.0001	mg/L	0.10000		97	80-120			
Molybdenum	0.0995	0.0100	0.0017	mg/L	0.10000		100	80-120			
Nickel	0.0956	0.0050	0.0006	mg/L	0.10000		96	80-120			
Selenium	0.0980	0.0100	0.0010	mg/L	0.10000		98	80-120			
Silver	0.0982	0.0050	0.0005	mg/L	0.10000		98	80-120			
Thallium	0.0969	0.0010	0.0002	mg/L	0.10000		97	80-120			
Vanadium	0.104	0.0100	0.0071	mg/L	0.10000		104	80-120			
Zinc	0.105	0.0100	0.0021	mg/L	0.10000		105	80-120			
Lithium	0.101	0.0500	0.0021	mg/L	0.10000		101	80-120			



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**Report No.: AZH0946**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6080862 - EPA 3005A</b>											
<b>Matrix Spike (6080862-MS1)</b>			<b>Source: AZH0941-02</b>			<b>Prepared &amp; Analyzed: 09/01/16</b>					
Antimony	0.106	0.0030	0.0008	mg/L	0.10000	0.0008	105	75-125			
Arsenic	0.101	0.0050	0.0016	mg/L	0.10000	ND	101	75-125			
Barium	0.152	0.0100	0.0004	mg/L	0.10000	0.0424	110	75-125			
Beryllium	0.0983	0.0030	0.00008	mg/L	0.10000	ND	98	75-125			
Boron	0.990	0.100	0.0064	mg/L	1.0000	0.0146	98	75-125			
Cadmium	0.0964	0.0010	0.00007	mg/L	0.10000	0.0001	96	75-125			
Calcium	21.5	2.50	0.155	mg/L	1.0000	22.6	NR	75-125			QM-02
Chromium	0.104	0.0100	0.0009	mg/L	0.10000	ND	104	75-125			
Cobalt	0.104	0.0100	0.0005	mg/L	0.10000	0.0079	96	75-125			
Copper	0.0962	0.0050	0.0005	mg/L	0.10000	ND	96	75-125			
Lead	0.0950	0.0050	0.0001	mg/L	0.10000	ND	95	75-125			
Molybdenum	0.0981	0.0100	0.0017	mg/L	0.10000	ND	98	75-125			
Nickel	0.102	0.0050	0.0006	mg/L	0.10000	0.0036	98	75-125			
Selenium	0.101	0.0100	0.0010	mg/L	0.10000	0.0021	99	75-125			
Silver	0.0966	0.0050	0.0005	mg/L	0.10000	ND	97	75-125			
Thallium	0.0958	0.0010	0.0002	mg/L	0.10000	ND	96	75-125			
Vanadium	0.105	0.0100	0.0071	mg/L	0.10000	ND	105	75-125			
Zinc	0.107	0.0100	0.0021	mg/L	0.10000	0.0038	103	75-125			
Lithium	0.109	0.0500	0.0021	mg/L	0.10000	0.0059	103	75-125			
<b>Matrix Spike Dup (6080862-MSD1)</b>			<b>Source: AZH0941-02</b>			<b>Prepared &amp; Analyzed: 09/01/16</b>					
Antimony	0.104	0.0030	0.0008	mg/L	0.10000	0.0008	103	75-125	2	20	
Arsenic	0.105	0.0050	0.0016	mg/L	0.10000	ND	105	75-125	4	20	
Barium	0.150	0.0100	0.0004	mg/L	0.10000	0.0424	107	75-125	2	20	
Beryllium	0.0914	0.0030	0.00008	mg/L	0.10000	ND	91	75-125	7	20	
Boron	0.950	0.100	0.0064	mg/L	1.0000	0.0146	94	75-125	4	20	
Cadmium	0.0978	0.0010	0.00007	mg/L	0.10000	0.0001	98	75-125	1	20	
Calcium	22.5	2.50	0.155	mg/L	1.0000	22.6	NR	75-125	4	20	QM-02
Chromium	0.103	0.0100	0.0009	mg/L	0.10000	ND	103	75-125	2	20	
Cobalt	0.104	0.0100	0.0005	mg/L	0.10000	0.0079	96	75-125	0.5	20	
Copper	0.0970	0.0050	0.0005	mg/L	0.10000	ND	97	75-125	0.9	20	
Lead	0.0967	0.0050	0.0001	mg/L	0.10000	ND	97	75-125	2	20	
Molybdenum	0.0998	0.0100	0.0017	mg/L	0.10000	ND	100	75-125	2	20	
Nickel	0.104	0.0050	0.0006	mg/L	0.10000	0.0036	100	75-125	2	20	
Selenium	0.106	0.0100	0.0010	mg/L	0.10000	0.0021	104	75-125	5	20	
Silver	0.0970	0.0050	0.0005	mg/L	0.10000	ND	97	75-125	0.4	20	
Thallium	0.0975	0.0010	0.0002	mg/L	0.10000	ND	98	75-125	2	20	
Vanadium	0.107	0.0100	0.0071	mg/L	0.10000	ND	107	75-125	1	20	
Zinc	0.107	0.0100	0.0021	mg/L	0.10000	0.0038	103	75-125	0.6	20	
Lithium	0.103	0.0500	0.0021	mg/L	0.10000	0.0059	98	75-125	5	20	



**PACE ANALYTICAL SERVICES, INC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 07, 2016

**Report No.: AZH0946**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6080862 - EPA 3005A</b>											
<b>Post Spike (6080862-PS1)</b>				<b>Source: AZH0941-02</b>			<b>Prepared &amp; Analyzed: 09/01/16</b>				
Antimony	92.8			ug/L	100.00	0.846	92	80-120			
Arsenic	102			ug/L	100.00	0.707	101	80-120			
Barium	152			ug/L	100.00	42.4	109	80-120			
Beryllium	94.7			ug/L	100.00	0.0612	95	80-120			
Boron	949			ug/L	1000.0	14.6	93	80-120			
Cadmium	98.5			ug/L	100.00	0.0963	98	80-120			
Calcium	23100			ug/L	1000.0	22600	48	80-120			QM-02
Chromium	99.4			ug/L	100.00	0.280	99	80-120			
Cobalt	103			ug/L	100.00	7.87	95	80-120			
Copper	96.1			ug/L	100.00	0.182	96	80-120			
Lead	94.3			ug/L	100.00	0.0288	94	80-120			
Molybdenum	99.1			ug/L	100.00	0.668	98	80-120			
Nickel	103			ug/L	100.00	3.61	99	80-120			
Selenium	101			ug/L	100.00	2.13	99	80-120			
Silver	95.9			ug/L	100.00	0.0094	96	80-120			
Thallium	94.6			ug/L	100.00	0.0403	95	80-120			
Vanadium	103			ug/L	100.00	0.528	103	80-120			
Zinc	102			ug/L	100.00	3.81	98	80-120			
Lithium	103			ug/L	100.00	5.90	97	80-120			

**Batch 6080864 - EPA 7470A**

<b>Blank (6080864-BLK1)</b>				<b>Prepared &amp; Analyzed: 09/01/16</b>							
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (6080864-BS1)</b>				<b>Prepared &amp; Analyzed: 09/01/16</b>							
Mercury	0.00258	0.00050	0.000041	mg/L	2.5000E-3		103	80-120			



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 110 Technology Parkway, Peachtree Corners, GA 30092  
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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 07, 2016

**Report No.: AZH0946**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6080864 - EPA 7470A</b>											
<b>Matrix Spike (6080864-MS1)</b>			<b>Source: AZH0947-03</b>			<b>Prepared &amp; Analyzed: 09/01/16</b>					
Mercury	0.00252	0.00050	0.000041	mg/L	2.5000E-3	ND	101	75-125			
<b>Matrix Spike Dup (6080864-MSD1)</b>			<b>Source: AZH0947-03</b>			<b>Prepared &amp; Analyzed: 09/01/16</b>					
Mercury	0.00249	0.00050	0.000041	mg/L	2.5000E-3	ND	100	75-125	1	20	
<b>Post Spike (6080864-PS1)</b>			<b>Source: AZH0947-03</b>			<b>Prepared &amp; Analyzed: 09/01/16</b>					
Mercury	1.67			ug/L	1.6667	0.0131	99	80-120			



**PACE ANALYTICAL SERVICES, INC.**

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

Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 07, 2016

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## Legend

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### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

### Definition of Qualifiers

- QM-05** The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.
- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).
- B-01** Analyte was detected in the associated method blank at an estimated level equal to or greater than the MDL. Sample values reported as greater than the MDL and less than 10x the method blank value are reported as estimated values.

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







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

September 30, 2016

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: PLANT Mitchell  
Pace Project No.: 30194836

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on September 01, 2016. 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,

Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: PLANT Mitchell  
Pace Project No.: 30194836

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: PLANT Mitchell  
Pace Project No.: 30194836

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30194836001	EB-01	Water	08/30/16 09:20	09/01/16 10:00
30194836002	PZ-2S	Water	08/30/16 13:16	09/01/16 10:00
30194836003	PZ-1D	Water	08/30/16 13:47	09/01/16 10:00

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: PLANT Mitchell  
Pace Project No.: 30194836

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30194836001	EB-01	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194836002	PZ-2S	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194836003	PZ-1D	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1

### REPORT OF LABORATORY ANALYSIS

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: PLANT Mitchell  
 Pace Project No.: 30194836

**Sample: EB-01** Lab ID: 30194836001 Collected: 08/30/16 09:20 Received: 09/01/16 10:00 Matrix: Water  
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.0301 ± 0.0951 (0.223)</b> C:85% T:NA	pCi/L	09/14/16 08:09	13982-63-3	
Radium-228	EPA 9320	<b>0.519 ± 0.498 (1.02)</b> C:73% T:66%	pCi/L	09/27/16 12:10	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.549 ± 0.593 (1.24)</b>	pCi/L	09/29/16 14:55	7440-14-4	

**Sample: PZ-2S** Lab ID: 30194836002 Collected: 08/30/16 13:16 Received: 09/01/16 10:00 Matrix: Water  
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.0830 ± 0.0892 (0.173)</b> C:83% T:NA	pCi/L	09/14/16 08:09	13982-63-3	
Radium-228	EPA 9320	<b>0.711 ± 0.496 (0.956)</b> C:71% T:67%	pCi/L	09/27/16 12:11	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.794 ± 0.585 (1.13)</b>	pCi/L	09/29/16 14:55	7440-14-4	

**Sample: PZ-1D** Lab ID: 30194836003 Collected: 08/30/16 13:47 Received: 09/01/16 10:00 Matrix: Water  
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.116 ± 0.128 (0.260)</b> C:77% T:NA	pCi/L	09/14/16 08:09	13982-63-3	
Radium-228	EPA 9320	<b>0.387 ± 0.424 (0.859)</b> C:60% T:76%	pCi/L	09/22/16 02:20	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.503 ± 0.552 (1.12)</b>	pCi/L	09/29/16 14:55	7440-14-4	

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: PLANT Mitchell  
 Pace Project No.: 30194836

---

QC Batch: 232400 Analysis Method: EPA 9320  
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228  
 Associated Lab Samples: 30194836001, 30194836002, 30194836003

---

METHOD BLANK: 1138984 Matrix: Water  
 Associated Lab Samples: 30194836001, 30194836002, 30194836003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.973 ± 0.471 (0.817) C:83% T:71%	pCi/L	09/27/16 12:10	

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 - RADIOCHEMISTRY

Project: PLANT Mitchell  
Pace Project No.: 30194836

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QC Batch: 232404 Analysis Method: EPA 9315  
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium  
Associated Lab Samples: 30194836001, 30194836002, 30194836003

---

METHOD BLANK: 1138989 Matrix: Water  
Associated Lab Samples: 30194836001, 30194836002, 30194836003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00141 ± 0.114 (0.281) C:80% T:NA	pCi/L	09/14/16 08:08	

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

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## QUALIFIERS

Project: PLANT Mitchell  
Pace Project No.: 30194836

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt Pittsburgh



Client Name: Georgia Power Project # 30194836

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: \_\_\_\_\_

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

Thermometer Used N/A Type of Ice: Wet Blue None

Cooler Temperature Observed Temp N/A °C Correction Factor: \_\_\_\_\_ °C Final Temp: \_\_\_\_\_ °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: BLM 9-1-16

Comments:

	Yes	No	N/A	
Chain of Custody Present:	/			1.
Chain of Custody Filled Out:	/			2.
Chain of Custody Relinquished:	/			3.
Sampler Name & Signature on COC:		/		4. not signed in name as
Sample Labels match COC:	/			5. per COC. Jan 9/1/16
-Includes date/time/ID/Analysis Matrix:			<u>WT</u>	
Samples Arrived within Hold Time:	/			6.
Short Hold Time Analysis (<72hr remaining):		/		7.
Rush Turn Around Time Requested:		/		8.
Sufficient Volume:	/			9.
Correct Containers Used:	/			10.
-Pace Containers Used:		/		
Containers Intact:	/			11.
Filtered volume received for Dissolved tests		/		12.
All containers needing preservation have been checked.	/			13.
All containers needing preservation are found to be in compliance with EPA recommendation.		/		below 2 pH
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed <u>BLM</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			/	14.
Trip Blank Present:			/	15.
Trip Blank Custody Seals Present			/	
Rad Aqueous Samples Screened > 0.5 mrem/hr	/			Initial when completed: <u>BLM</u> Date: <u>9-1-16</u>

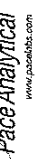
Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e. out of hold, incorrect preservative, out of temp, incorrect containers)  
 \*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: WRR  
Date: 9/9/2016  
Worklist: 31288  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1138989
MB concentration:	0.001
M/B Counting Uncertainty:	0.114
MB MDC:	0.281
MB Numerical Performance Indicator:	0.02
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSD31288	LCSD31288
Count Date:	9/21/2016
Spike I.D.:	16-026
Spike Concentration (pCi/mL):	44.677
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.514
Target Conc. (pCi/L, g, F):	8.684
Uncertainty (Calculated):	0.409
Result (pCi/L, g, F):	8.626
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.651
Numerical Performance Indicator:	-0.17
Percent Recovery:	99.21%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30194944003
Duplicate Sample I.D.:	30194944003DUP
Sample Result (pCi/L, g, F):	0.015
Sample Duplicate Result (pCi/L, g, F):	0.146
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.213
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.174
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	-1.708
Duplicate RPD:	173.24%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail**

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

Comments:

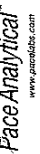
\*\*Batch must be re-prepped due to unacceptable precision.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MSD Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

*Handwritten signature: WRR*

# Quality Control Sample Performance Assessment



Test: Ra-228  
 Analyst: JLW  
 Date: 9/23/2016  
 Worklist: 31284  
 Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

<p><b>Sample Matrix Spike Control Assessment</b></p> <p>Sample Collection Date:                  Sample I.D.                  Sample MS I.D.                  Sample MSD I.D.                  Spike I.D.:</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/mL):                  Spike Volume Used in MS (mL):                  Spike Volume Used in MSD (mL):                  MS Aliquot (L, g, F):                  MS Target Conc. (pCi/L, g, F):                  MSD Aliquot (L, g, F):                  MSD Target Conc. (pCi/L, g, F):                  Spike uncertainty (calculated):</p> <p>Sample Result                  Sample Matrix Spike Result                  Matrix Spike Result Counting Uncertainty (pCi/L, g, F):                  Sample Matrix Spike Duplicate Result                  Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):                  MS Numerical Performance Indicator:                  MS Percent Recovery:                  MSD Percent Recovery:                  MS Status vs Numerical Indicator:                  MSD Status vs Numerical Indicator:                  MS Status vs Recovery:                  MSD Status vs Recovery:</p>
---

<p><b>Matrix Spike/Matrix Spike Duplicate Sample Assessment</b></p> <p>Sample I.D.                  Sample MS I.D.                  Sample MSD I.D.                  Sample Matrix Spike Result                  Matrix Spike Result Counting Uncertainty (pCi/L, g, F):                  Sample Matrix Spike Duplicate Result                  Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):                  Duplicate Numerical Performance Indicator:                  Duplicate Numerical Performance Indicator:                  MS/MSD Duplicate Status vs Numerical Indicator:                  MS/MSD Duplicate Status vs RPD:</p>
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<p><b>Method Blank Assessment</b></p> <p>MB Sample ID: 1138984                  MB concentration: 0.973                  M/B Counting Uncertainty: 0.438                  MB MDC: 0.817                  MB Numerical Performance Indicator: 4.35                  MB Status vs Numerical Indicator: N/A                  MB Status vs. MDC: See Comment*</p>
---

<p><b>Laboratory Control Sample Assessment</b></p> <p>Count Date:                  Spike I.D.:                  Spike Concentration (pCi/mL):                  Volume Used (mL):                  Aliquot Volume (L, g, F):                  Target Conc. (pCi/L, g, F):                  Uncertainty (Calculated):                  Result (pCi/L, g, F):                  LCS/LCSD Counting Uncertainty (pCi/L, g, F):                  Numerical Performance Indicator:                  Percent Recovery:                  Status vs Numerical Indicator:                  Status vs Recovery:</p>	<p>LCSD (Y or N)?</p> <p>LCSD31284                  9/27/2016                  16-025                  25.565                  0.20                  0.808                  6.325                  0.455                  6.148                  0.789                  -2.25                  97.20%                  N/A                  Pass</p>
--	--

<p><b>Duplicate Sample Assessment</b></p> <p>Sample I.D.:                  Duplicate Sample I.D.:                  Sample Result Counting Uncertainty (pCi/L, g, F):                  Sample Duplicate Result (pCi/L, g, F):                  Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):                  Are sample and/or duplicate results below MDC?                  Duplicate Numerical Performance Indicator:                  Duplicate Numerical Performance Indicator:                  (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:                  Duplicate Status vs Numerical Indicator:                  Duplicate Status vs RPD:</p>	<p>Enter Duplicate sample IDs if other than LCS/LCSD in the space below:</p> <p>LCSS1284                  LCSD31284                  5.336                  0.693                  6.148                  0.789                  NO                  -1.515                  13.49%                  N/A                  Pass</p>
--	--

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

Comments:  
 \*The method blank result is below the reporting limit for this analysis and is acceptable.



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**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AZI0021**

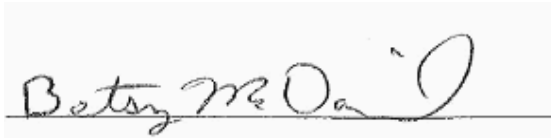
**September 12, 2016**

**Project: CCR Event**

**Project #: Plant Mitchell**

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

Approved:



Project Manager

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All test results relate only to the samples analyzed.



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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 12, 2016

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
FB-01	AZI0021-01	DI Water	08/31/16 07:59	09/01/16 09:20
PZ-23	AZI0021-02	Ground Water	08/31/16 11:25	09/01/16 09:20
PZ-14	AZI0021-03	Ground Water	08/31/16 15:35	09/01/16 09:20



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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 12, 2016

Report No.: AZI0021

Project: CCR Event

Client ID: FB-01

Lab Number ID: AZI0021-01

Date/Time Sampled: 8/31/2016 7:59:00AM

Date/Time Received: 9/1/2016 9:20:00AM

Matrix: DI Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	09/06/16 19:00	09/06/16 19:00	6090102	JPT
<b>Inorganic Anions</b>											
Chloride	0.06	0.25	0.01	mg/L	EPA 300.0	J	1	09/03/16 09:59	09/04/16 07:34	6090083	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/03/16 09:59	09/04/16 07:34	6090083	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	09/03/16 09:59	09/04/16 07:34	6090083	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:01	6090081	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:01	6090081	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:01	6090081	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:01	6090081	CSW
Boron	0.0106	0.100	0.0064	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:01	6090081	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:01	6090081	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:01	6090081	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:01	6090081	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:01	6090081	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:01	6090081	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:01	6090081	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:01	6090081	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:01	6090081	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:01	6090081	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 09:10	09/06/16 14:49	6090077	MTC





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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 12, 2016

Report No.: AZI0021

Project: CCR Event

Client ID: PZ-23

Lab Number ID: AZI0021-02

Date/Time Sampled: 8/31/2016 11:25:00AM

Date/Time Received: 9/1/2016 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	400	25	10	mg/L	SM 2540 C		1	09/06/16 19:00	09/06/16 19:00	6090102	JPT
<b>Inorganic Anions</b>											
Chloride	5.1	0.25	0.01	mg/L	EPA 300.0		1	09/03/16 09:59	09/04/16 09:20	6090083	RLC
Fluoride	0.13	0.30	0.02	mg/L	EPA 300.0	J	1	09/03/16 09:59	09/04/16 09:20	6090083	RLC
Sulfate	29	1.0	0.05	mg/L	EPA 300.0		1	09/03/16 09:59	09/04/16 09:20	6090083	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:07	6090081	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:07	6090081	CSW
Barium	0.0407	0.0100	0.0004	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:07	6090081	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/06/16 09:45	09/07/16 17:58	6090081	CSW
Boron	0.166	0.100	0.0064	mg/L	EPA 6020B		1	09/06/16 09:45	09/07/16 17:58	6090081	CSW
Cadmium	0.0002	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:07	6090081	CSW
Calcium	132	25.0	1.55	mg/L	EPA 6020B		50	09/06/16 09:45	09/08/16 15:54	6090081	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:07	6090081	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:07	6090081	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:07	6090081	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:07	6090081	CSW
Selenium	0.0014	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:07	6090081	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:07	6090081	CSW
Lithium	ND	0.0500	0.0103	mg/L	EPA 6020B		5	09/06/16 09:45	09/08/16 13:38	6090081	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 09:10	09/06/16 14:51	6090077	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 12, 2016

Report No.: AZI0021

Project: CCR Event

Client ID: PZ-14

Lab Number ID: AZI0021-03

Date/Time Sampled: 8/31/2016 3:35:00PM

Date/Time Received: 9/1/2016 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	344	25	10	mg/L	SM 2540 C		1	09/06/16 19:00	09/06/16 19:00	6090102	JPT
<b>Inorganic Anions</b>											
Chloride	4.9	0.25	0.01	mg/L	EPA 300.0		1	09/03/16 09:59	09/04/16 09:42	6090083	RLC
Fluoride	0.13	0.30	0.02	mg/L	EPA 300.0	J	1	09/03/16 09:59	09/04/16 09:42	6090083	RLC
Sulfate	4.1	1.0	0.05	mg/L	EPA 300.0		1	09/03/16 09:59	09/04/16 09:42	6090083	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:13	6090081	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:13	6090081	CSW
Barium	0.0253	0.0100	0.0004	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:13	6090081	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/06/16 09:45	09/07/16 18:04	6090081	CSW
Boron	0.0285	0.100	0.0064	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/07/16 18:04	6090081	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:13	6090081	CSW
Calcium	92.9	25.0	1.55	mg/L	EPA 6020B		50	09/06/16 09:45	09/08/16 16:00	6090081	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:13	6090081	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:13	6090081	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:13	6090081	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:13	6090081	CSW
Selenium	0.0012	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:13	6090081	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:13	6090081	CSW
Lithium	ND	0.0500	0.0103	mg/L	EPA 6020B		5	09/06/16 09:45	09/08/16 13:44	6090081	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 09:10	09/06/16 14:53	6090077	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 12, 2016

**Report No.: AZI0021**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090102 - SM 2540 C</b>											
<b>Blank (6090102-BLK1)</b>						Prepared & Analyzed: 09/06/16					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (6090102-BS1)</b>						Prepared & Analyzed: 09/06/16					
Total Dissolved Solids	398	25	10	mg/L	400.00		100	84-108			
<b>Duplicate (6090102-DUP1)</b>						Source: AZI0019-08 Prepared & Analyzed: 09/06/16					
Total Dissolved Solids	366	25	10	mg/L		389			6	10	
<b>Duplicate (6090102-DUP2)</b>						Source: AZI0022-01 Prepared & Analyzed: 09/06/16					
Total Dissolved Solids	3490	25	10	mg/L		3460			0.9	10	



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September 12, 2016

**Report No.: AZI0021**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090083 - EPA 300.0</b>											
<b>Blank (6090083-BLK1)</b>						Prepared & Analyzed: 09/03/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
<b>LCS (6090083-BS1)</b>						Prepared & Analyzed: 09/03/16					
Chloride	10.1	0.25	0.01	mg/L	10.010		100	90-110			
Fluoride	10.3	0.30	0.02	mg/L	10.010		103	90-110			
Sulfate	10.2	1.0	0.05	mg/L	10.010		101	90-110			
<b>Matrix Spike (6090083-MS1)</b>						<b>Source: AZI0019-06</b>			Prepared: 09/03/16 Analyzed: 09/04/16		
Chloride	13.6	0.25	0.01	mg/L	10.010	3.52	100	90-110			
Fluoride	10.9	0.30	0.02	mg/L	10.010	0.65	103	90-110			
Sulfate	207	1.0	0.05	mg/L	10.010	217	NR	90-110			QM-02
<b>Matrix Spike (6090083-MS2)</b>						<b>Source: AZI0020-02</b>			Prepared: 09/03/16 Analyzed: 09/04/16		
Chloride	17.1	0.25	0.01	mg/L	10.010	6.74	103	90-110			
Fluoride	11.1	0.30	0.02	mg/L	10.010	0.07	110	90-110			
Sulfate	85.3	1.0	0.05	mg/L	10.010	84.2	11	90-110			QM-05
<b>Matrix Spike Dup (6090083-MSD1)</b>						<b>Source: AZI0019-06</b>			Prepared: 09/03/16 Analyzed: 09/04/16		
Chloride	13.7	0.25	0.01	mg/L	10.010	3.52	101	90-110	0.6	15	
Fluoride	11.0	0.30	0.02	mg/L	10.010	0.65	103	90-110	0.8	15	
Sulfate	207	1.0	0.05	mg/L	10.010	217	NR	90-110	0.09	15	QM-02



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 12, 2016

**Report No.: AZI0021**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090077 - EPA 7470A</b>											
<b>Blank (6090077-BLK1)</b>						Prepared & Analyzed: 09/06/16					
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (6090077-BS1)</b>						Prepared & Analyzed: 09/06/16					
Mercury	0.00240	0.00050	0.000041	mg/L	2.5000E-3		96	80-120			
<b>Matrix Spike (6090077-MS1)</b>						Source: AZI0021-02 Prepared & Analyzed: 09/06/16					
Mercury	0.00235	0.00050	0.000041	mg/L	2.5000E-3	ND	94	75-125			
<b>Matrix Spike Dup (6090077-MSD1)</b>						Source: AZI0021-02 Prepared & Analyzed: 09/06/16					
Mercury	0.00234	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125	0.5	20	
<b>Post Spike (6090077-PS1)</b>						Source: AZI0021-02 Prepared & Analyzed: 09/06/16					
Mercury	1.67			ug/L	1.6667	0.00498	100	80-120			
<b>Batch 6090081 - EPA 3005A</b>											
<b>Blank (6090081-BLK1)</b>						Prepared & Analyzed: 09/06/16					
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.100	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0050	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0050	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0050	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 12, 2016

**Report No.: AZI0021**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090081 - EPA 3005A</b>											
<b>LCS (6090081-BS1)</b>						Prepared & Analyzed: 09/06/16					
Antimony	0.0970	0.0030	0.0008	mg/L	0.10000		97	80-120			
Arsenic	0.0990	0.0050	0.0016	mg/L	0.10000		99	80-120			
Barium	0.0955	0.0100	0.0004	mg/L	0.10000		96	80-120			
Beryllium	0.0976	0.0030	0.00008	mg/L	0.10000		98	80-120			
Boron	1.02	0.100	0.0064	mg/L	1.0000		102	80-120			
Cadmium	0.0949	0.0010	0.00007	mg/L	0.10000		95	80-120			
Calcium	0.972	0.500	0.0311	mg/L	1.0000		97	80-120			
Chromium	0.104	0.0100	0.0009	mg/L	0.10000		104	80-120			
Cobalt	0.0993	0.0100	0.0005	mg/L	0.10000		99	80-120			
Copper	0.100	0.0050	0.0005	mg/L	0.10000		100	80-120			
Lead	0.0967	0.0050	0.0001	mg/L	0.10000		97	80-120			
Molybdenum	0.0997	0.0100	0.0017	mg/L	0.10000		100	80-120			
Nickel	0.0986	0.0050	0.0006	mg/L	0.10000		99	80-120			
Selenium	0.0997	0.0100	0.0010	mg/L	0.10000		100	80-120			
Silver	0.0965	0.0050	0.0005	mg/L	0.10000		96	80-120			
Thallium	0.0975	0.0010	0.0002	mg/L	0.10000		97	80-120			
Vanadium	0.112	0.0100	0.0071	mg/L	0.10000		112	80-120			
Zinc	0.112	0.0100	0.0021	mg/L	0.10000		112	80-120			
Lithium	0.0988	0.0500	0.0021	mg/L	0.10000		99	80-120			
<b>Matrix Spike (6090081-MS1)</b>											
<b>Source: AZI0022-01</b>						Prepared & Analyzed: 09/06/16					
Antimony	0.0998	0.0030	0.0008	mg/L	0.10000	0.0014	98	75-125			
Arsenic	0.116	0.0050	0.0016	mg/L	0.10000	0.0144	102	75-125			
Barium	0.161	0.0100	0.0004	mg/L	0.10000	0.0627	98	75-125			
Beryllium	0.0842	0.0030	0.00008	mg/L	0.10000	0.0004	84	75-125			
Boron	25.9	5.00	0.321	mg/L	1.0000	24.1	179	75-125			QM-02
Cadmium	0.0937	0.0010	0.00007	mg/L	0.10000	ND	94	75-125			
Calcium	261	25.0	1.55	mg/L	1.0000	250	NR	75-125			QM-02
Chromium	0.110	0.0100	0.0009	mg/L	0.10000	0.0021	108	75-125			
Cobalt	0.109	0.0100	0.0005	mg/L	0.10000	0.0089	100	75-125			
Copper	0.0954	0.0050	0.0005	mg/L	0.10000	0.0006	95	75-125			
Lead	0.0996	0.0050	0.0001	mg/L	0.10000	0.0113	88	75-125			
Molybdenum	0.108	0.0100	0.0017	mg/L	0.10000	ND	108	75-125			
Nickel	0.0995	0.0050	0.0006	mg/L	0.10000	0.0037	96	75-125			
Selenium	0.109	0.0100	0.0010	mg/L	0.10000	0.0023	106	75-125			
Silver	0.0892	0.0050	0.0005	mg/L	0.10000	ND	89	75-125			
Thallium	0.0921	0.0010	0.0002	mg/L	0.10000	ND	92	75-125			
Vanadium	0.121	0.0100	0.0071	mg/L	0.10000	ND	121	75-125			
Zinc	5.05	0.0100	0.0021	mg/L	0.10000	4.92	131	75-125			
Lithium	0.0898	0.0500	0.0021	mg/L	0.10000	ND	90	75-125			



**PACE ANALYTICAL SERVICES, INC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 12, 2016

**Report No.: AZI0021**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090081 - EPA 3005A</b>											
<b>Matrix Spike Dup (6090081-MSD1)</b>			<b>Source: AZI0022-01</b>			<b>Prepared &amp; Analyzed: 09/06/16</b>					
Antimony	0.0987	0.0030	0.0008	mg/L	0.10000	0.0014	97	75-125	1	20	
Arsenic	0.118	0.0050	0.0016	mg/L	0.10000	0.0144	104	75-125	2	20	
Barium	0.159	0.0100	0.0004	mg/L	0.10000	0.0627	96	75-125	1	20	
Beryllium	0.0882	0.0030	0.00008	mg/L	0.10000	0.0004	88	75-125	5	20	
Boron	24.3	5.00	0.321	mg/L	1.0000	24.1	13	75-125	7	20	QM-02
Cadmium	0.0909	0.0010	0.00007	mg/L	0.10000	ND	91	75-125	3	20	
Calcium	249	25.0	1.55	mg/L	1.0000	250	NR	75-125	5	20	QM-02
Chromium	0.104	0.0100	0.0009	mg/L	0.10000	0.0021	102	75-125	6	20	
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000	0.0089	97	75-125	4	20	
Copper	0.0890	0.0050	0.0005	mg/L	0.10000	0.0006	88	75-125	7	20	
Lead	0.101	0.0050	0.0001	mg/L	0.10000	0.0113	90	75-125	1	20	
Molybdenum	0.106	0.0100	0.0017	mg/L	0.10000	ND	106	75-125	2	20	
Nickel	0.0967	0.0050	0.0006	mg/L	0.10000	0.0037	93	75-125	3	20	
Selenium	0.105	0.0100	0.0010	mg/L	0.10000	0.0023	102	75-125	4	20	
Silver	0.0874	0.0050	0.0005	mg/L	0.10000	ND	87	75-125	2	20	
Thallium	0.0943	0.0010	0.0002	mg/L	0.10000	ND	94	75-125	2	20	
Vanadium	0.118	0.0100	0.0071	mg/L	0.10000	ND	118	75-125	3	20	
Zinc	4.91	0.0100	0.0021	mg/L	0.10000	4.92	NR	75-125	3	20	
Lithium	0.0956	0.0500	0.0021	mg/L	0.10000	ND	96	75-125	6	20	
<b>Post Spike (6090081-PS1)</b>											
<b>Source: AZI0022-01</b>			<b>Prepared &amp; Analyzed: 09/06/16</b>								
Antimony	99.1			ug/L	100.00	1.42	98	80-120			
Arsenic	115			ug/L	100.00	14.4	101	80-120			
Barium	158			ug/L	100.00	62.7	95	80-120			
Beryllium	85.8			ug/L	100.00	0.382	85	80-120			
Boron	24500			ug/L	1000.0	24100	36	80-120			QM-02
Cadmium	89.6			ug/L	100.00	0.0388	90	80-120			
Calcium	243000			ug/L	1000.0	250000	NR	80-120			QM-02
Chromium	105			ug/L	100.00	2.07	103	80-120			
Cobalt	106			ug/L	100.00	8.86	97	80-120			
Copper	89.8			ug/L	100.00	0.564	89	80-120			
Lead	100			ug/L	100.00	11.3	89	80-120			
Molybdenum	104			ug/L	100.00	0.165	103	80-120			
Nickel	96.1			ug/L	100.00	3.70	92	80-120			
Selenium	104			ug/L	100.00	2.29	102	80-120			
Silver	86.3			ug/L	100.00	0.0004	86	80-120			
Thallium	91.4			ug/L	100.00	0.141	91	80-120			
Vanadium	118			ug/L	100.00	4.37	114	80-120			
Zinc	4920			ug/L	100.00	4920	NR	80-120			
Lithium	99.7			ug/L	100.00	1.36	98	80-120			





**PACE ANALYTICAL SERVICES, INC.**

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

Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 12, 2016

---

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## Legend

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### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

### Definition of Qualifiers

- QM-05** The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.
- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

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

CHAIN OF CUSTODY RECORD

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

PAGE: OF

Form containing sections for CLIENT NAME, CLIENT ADDRESS, REPORT TO, PROJECT NAME, ANALYSIS REQUESTED, CONTAINER TYPE, PRESERVATION, MATRIX CODES, and REMARKS. Includes handwritten entries for sample IDs (FB-01, PZ-23, PZ-14), collection times, and dates.

Pace COC Revised: xlsx



# PACE ANALYTICAL SERVICES, INC.

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

## LOG-IN CHECKLIST

Printed: 9/12/2016 3:17:13PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 09/01/16 09:20

Work Order: AZI0021

Logged In By: Charles Hawks

### OBSERVATIONS

#Samples: 3

#Containers: 9

Minimum Temp(C): 2.0

Maximum Temp(C): 2.0

Custody Seal(s) Used: Yes

### CHECKLIST ITEMS

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

Comments:



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

October 04, 2016

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: Plant Mitchell  
Pace Project No.: 30195005

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on September 02, 2016. 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,

Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## CERTIFICATIONS

Project: Plant Mitchell  
Pace Project No.: 30195005

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: Plant Mitchell  
Pace Project No.: 30195005

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30195005001	FB-01	Water	08/31/16 07:59	09/02/16 10:20
30195005002	PZ-23	Water	08/31/16 11:25	09/02/16 10:20
30195005003	PZ-14	Water	08/31/16 15:35	09/02/16 10:20

### REPORT OF LABORATORY ANALYSIS

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**SAMPLE ANALYTE COUNT**

Project: Plant Mitchell  
 Pace Project No.: 30195005

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30195005001	FB-01	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30195005002	PZ-23	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195005003	PZ-14	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

**REPORT OF LABORATORY ANALYSIS**

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: Plant Mitchell  
 Pace Project No.: 30195005

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: FB-01</b>		<b>Lab ID: 30195005001</b>	Collected: 08/31/16 07:59	Received: 09/02/16 10:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	<b>0.0315 ± 0.131 (0.309)</b>	pCi/L	09/14/16 11:29	13982-63-3		
Radium-228	EPA 9320	<b>0.518 ± 0.374 (0.722)</b>	pCi/L	09/22/16 21:46	15262-20-1		
Total Radium	Total Radium Calculation	<b>0.550 ± 0.505 (1.03)</b>	pCi/L	09/23/16 13:04	7440-14-4		

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-03</b>		<b>Lab ID: 30195005002</b>	Collected: 08/31/16 11:25	Received: 09/02/16 10:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	<b>0.415 ± 0.183 (0.266)</b>	pCi/L	09/16/16 08:19	13982-63-3		
Radium-228	EPA 9320	<b>1.43 ± 0.438 (0.562)</b>	pCi/L	09/23/16 01:45	15262-20-1		
Total Radium	Total Radium Calculation	<b>1.85 ± 0.621 (0.828)</b>	pCi/L	10/03/16 15:46	7440-14-4		

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-14</b>		<b>Lab ID: 30195005003</b>	Collected: 08/31/16 15:35	Received: 09/02/16 10:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	<b>0.258 ± 0.134 (0.197)</b>	pCi/L	09/16/16 08:19	13982-63-3		
Radium-228	EPA 9320	<b>1.51 ± 0.467 (0.607)</b>	pCi/L	09/23/16 01:45	15262-20-1		
Total Radium	Total Radium Calculation	<b>1.77 ± 0.601 (0.804)</b>	pCi/L	10/03/16 15:46	7440-14-4		

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell  
Pace Project No.: 30195005

---

QC Batch:	232409	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	30195005001		

---

METHOD BLANK:	1138994	Matrix:	Water
Associated Lab Samples:	30195005001		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.716 ± 0.356 (0.609) C:84% T:86%	pCi/L	09/22/16 21:46	

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 Mitchell  
Pace Project No.: 30195005

---

QC Batch: 232977                      Analysis Method: EPA 9315  
QC Batch Method: EPA 9315              Analysis Description: 9315 Total Radium  
Associated Lab Samples: 30195005002, 30195005003

---

METHOD BLANK: 1141794                      Matrix: Water  
Associated Lab Samples: 30195005002, 30195005003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.177 ± 0.109 (0.163) C:88% T:NA	pCi/L	09/16/16 08:18	

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 Mitchell  
 Pace Project No.: 30195005

---

QC Batch: 232983 Analysis Method: EPA 9320  
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228  
 Associated Lab Samples: 30195005002, 30195005003

---

METHOD BLANK: 1141811 Matrix: Water  
 Associated Lab Samples: 30195005002, 30195005003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.562 ± 0.343 (0.628) C:77% T:84%	pCi/L	09/23/16 01:56	

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

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: Plant Mitchell  
 Pace Project No.: 30195005

---

QC Batch: 232408 Analysis Method: EPA 9315  
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium  
 Associated Lab Samples: 30195005001

---

METHOD BLANK: 1138993 Matrix: Water  
 Associated Lab Samples: 30195005001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0402 ± 0.0839 (0.189) C:94% T:NA	pCi/L	09/14/16 11:05	

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**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: Plant Mitchell  
Pace Project No.: 30195005

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

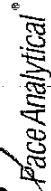
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WO#: 30195005



Pace Analytical Services, Inc.  
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 300  
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

**CHAIN OF CUSTODY RECORD**



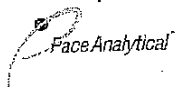
CLIENT NAME: Georgia Power		ANALYSIS REQUESTED	
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		CONTAINER TYPE: P P P P PRESERVATION: 3 7 7 3 # of	
REPORT TO: Joju Abraham	CC: Maria Padilla Heath McConkle	CONTAINERS →	
REQUESTED COMPLETION DATE:	PO #: GPC10684198	C O N T A I N E R S →	
PROJECT NAME/STATE: <b>Plant Mitchell</b>		C O N T A I N E R S →	
PROJECT #: <b>Phase II CCR</b>		C O N T A I N E R S →	
Collection DATE	MATRIX CODE*	GRA B	SAMPLE IDENTIFICATION
8-31-16 07:59	W	✓	FB-01
8-31-16 11:25	GW	✓	PZ-23
8-31-16 15:25	GW	✓	PZ-14
SAMPLED BY AND TITLE: RECEIVED BY: <i>[Signature]</i>		RELINQUISHED BY: <i>[Signature]</i>	DATE/TIME: 8-31-16/07:59
RECEIVED BY LAB:		RELINQUISHED BY:	DATE/TIME: 9-2-16 1020
pH checked: Yes <input type="checkbox"/> No <input type="checkbox"/>	Ice: Yes <input type="checkbox"/> No <input type="checkbox"/>	Temperature: Min: Max:	Temperature: Min: Max:
SAMPLE SHIPPED VIA: UPS (FEDEX)		COURIER: # of Coolers: 1	CLIENT: OTHER: FS
Custody Seal: Intact <input type="checkbox"/> Broken <input type="checkbox"/> Not Present <input type="checkbox"/>		Cooler ID:	
LAB #:		FOR LAB USE ONLY	
Entered into LIMS:		Tracking #: 8102 9462 4407	

Pace COC Revised.xlsx



Sample Condition Upon Receipt Pittsburgh

30195005



Client Name: Georgia Power Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 6812 5048 9/16

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

Thermometer Used N/A Type of Ice: Wet Blue None

Cooler Temperature Observed Temp \_\_\_\_\_ °C Correction Factor: \_\_\_\_\_ °C Final Temp: \_\_\_\_\_ °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: ML 9-2-16

Comments:	Yes	No	N/A	
Chain of Custody Present:	/			1.
Chain of Custody Filled Out:	/			2.
Chain of Custody Relinquished:	/			3.
Sampler Name & Signature on COC:		/		4. <u>No signature &amp; picture</u>
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: <u>GW, W, WT</u>	/			5. <u>you had requested is done as per spec.</u>
Samples Arrived within Hold Time:				6.
Short Hold Time Analysis (<72hr remaining):				7.
Rush Turn Around Time Requested:				8.
Sufficient Volume:				9.
Correct Containers Used: -Pace Containers Used:	/			10.
Containers Intact:	/			11.
Filtered volume received for Dissolved tests All containers needing preservation have been checked.	/			12.
All containers needing preservation are found to be in compliance with EPA recommendation.	/			13. <u>all below 2 PH</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>ML</u> Date/time of preservation: _____
				Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):				14.
Trip Blank Present:				15.
Trip Blank Custody Seals Present				Initial when completed: <u>ML</u> Date: <u>9-2-16</u>
Rad Aqueous Samples Screened > 0.5 mrem/hr				

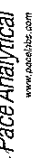
Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)  
\*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: WRR  
Date: 9/21/2016  
Worklist: 31292  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1138993
MB concentration:	0.040
M/B Counting Uncertainty:	0.084
MB MDC:	0.189
MB Numerical Performance Indicator:	0.94
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS (Y or N)?		N	
		LCS31292	LCS31292	LCS31292	
Count Date:	9/14/2016				
Spike I.D.:	16-026				
Spike Concentration (pCi/mL):	44.678				
Volume Used (mL):	0.10				
Aliquot Volume (L, g, F):	0.514				
Target Conc. (pCi/L, g, F):	8.685				
Uncertainty (Calculated):	0.409				
Result (pCi/L, g, F):	7.435				
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.631				
Numerical Performance Indicator:	-3.26				
Percent Recovery:	85.61%				
Status vs Numerical Indicator:	N/A				
Status vs Recovery:	Pass				

Duplicate Sample Assessment	
Sample I.D.:	30195006001
Duplicate Sample I.D.:	30195006001Dup
Sample Result (pCi/L, g, F):	1.011
Sample Duplicate Result (pCi/L, g, F):	0.292
Sample Duplicate Result (pCi/L, g, F):	0.838
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.295
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	0.819
Duplicate RPD:	18.76%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

*John 10/16/16*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	Sample I.D.:
Sample MS I.D.:	Sample MS I.D.:
Sample MSD I.D.:	Sample MSD I.D.:
Spike I.D.:	Spike I.D.:
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike Volume Used in MS (mL):
Spike Volume Used in MSD (mL):	MS Aliquot (L, g, F):
MS Target Conc. (pCi/L, g, F):	MSD Aliquot (L, g, F):
MSD Target Conc. (pCi/L, g, F):	Spike uncertainty (calculated):
Sample Result:	Sample Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Result:	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result:	MS Numerical Performance Indicator:
MS Numerical Performance Indicator:	MSD Numerical Performance Indicator:
MS Percent Recovery:	MS Percent Recovery:
MSD Percent Recovery:	MS Status vs Numerical Indicator:
MS Status vs Numerical Indicator:	MS Status vs Recovery:
MS Status vs Recovery:	MSD Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample MS I.D.:
Sample MS I.D.:	Sample MSD I.D.:
Sample Matrix Spike Result:	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result:	Duplicate Numerical Performance Indicator:
MS/MSD Duplicate RPD:	MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:	MS/MSD Duplicate Status vs Recovery:

# Quality Control Sample Performance Assessment

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

Test: Ra-226

Analyst: WRR

Date: 9/21/2016

Worklist: 31359

Matrix: DW

**Method Blank Assessment**

MB Sample ID: 1141794  
 MB concentration: 0.177  
 MB Counting Uncertainty: 0.106  
 MB MDC: 0.163  
 MB Numerical Performance Indicator: 3.28  
 MB Status vs Numerical Indicator: N/A  
 MB Status vs. MDC: See Comment\*

**Laboratory Control Sample Assessment**

LCSID (Y or N)?	N
LCS31359	LCS31359
Count Date:	9/16/2016
Spike I.D.:	16-026
Spike Concentration (pCi/mL):	44.677
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.498
Target Conc. (pCi/L, g, F):	8.971
Uncertainty (Calculated):	0.422
Result (pCi/L, g, F):	8.159
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.589
Numerical Performance Indicator:	-2.19
Percent Recovery:	90.96%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

**Duplicate Sample Assessment**

Sample I.D.:	30195125002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	30195125002DUP	
Sample Result (pCi/L, g, F):	0.276	
Duplicate Result (pCi/L, g, F):	0.203	
Sample Duplicate Result (pCi/L, g, F):	0.108	
Duplicate Duplicate Result (pCi/L, g, F):	0.241	
Ave sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	1.049	
Duplicate RPD:	87.95%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	

**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
 Sample I.D.:  
 Sample MS I.D.:  
 Sample MSD I.D.:  
 Spike I.D.:

MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
 Spike Volume Used in MS (mL):  
 Spike Volume Used in MSD (mL):  
 MS Aliquot (L, g, F):  
 MS Target Conc. (pCi/L, g, F):  
 MSD Aliquot (L, g, F):  
 MSD Target Conc. (pCi/L, g, F):  
 Spike uncertainty (calculated):

Sample Result:  
 Sample Result Counting Uncertainty (pCi/L, g, F):  
 Sample Matrix Spike Result:  
 Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
 Sample Matrix Spike Duplicate Result:  
 Matrix Duplicate Result Counting Uncertainty (pCi/L, g, F):  
 MS Numerical Performance Indicator:  
 MSD Numerical Performance Indicator:  
 MS Percent Recovery:  
 MSD Percent Recovery:  
 MS Status vs Numerical Indicator:  
 MSD Status vs Numerical Indicator:  
 MS Status vs Recovery:  
 MSD Status vs Recovery:

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
 Sample MS I.D.:  
 Sample MSD I.D.:  
 Sample Matrix Spike Result:  
 Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
 Sample Matrix Spike Duplicate Result:  
 Matrix Duplicate Result Counting Uncertainty (pCi/L, g, F):  
 Duplicate Numerical Performance Indicator:  
 MS/MSD Duplicate RPD:  
 MS/MSD Duplicate Status vs Numerical Indicator:  
 MS/MSD Duplicate Status vs RPD:

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

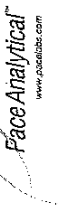
Comments:

\*The method blank result is below the reporting limit for this analysis and is acceptable.

\*\*\*Batch must be re-prepped due to unacceptable precision.

*Handwritten signature and date: WRR 9/21/16*

# Quality Control Sample Performance Assessment



Test: Ra-228  
 Analyst: JLW  
 Date: 9/12/2016  
 Worklist: 31293  
 Matrix: DW

Method Blank Assessment	
MB Sample ID	1138994
MB concentration:	0.716
MB Counting Uncertainty:	0.332
MB MDC:	0.609
MB Numerical Performance Indicator:	4.22
MB Status vs Numerical indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	
Count Date:	9/22/2016
Spike I.D.:	16-025
Spike Concentration (pCi/mL):	25.604
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.811
Target Conc. (pCi/L, g, F):	6.316
Uncertainty (Calculated):	0.455
Result (pCi/L, g, F):	6.066
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.768
Numerical Performance Indicator:	-0.55
Percent Recovery:	96.04%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30195006001
Duplicate Sample I.D.:	30195006001DUP
Sample Result (pCi/L, g, F):	1.460
Sample Duplicate Result (pCi/L, g, F):	0.455
Sample Duplicate Result (pCi/L, g, F):	2.259
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.522
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	-2.261
Duplicate RPD:	42.96%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

**Comments:**

\*The method blank result is below the reporting limit for this analysis and is acceptable.

\*\*\*Batch must be re-prepped due to unacceptable precision.

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
MS Aliquot (L, g, F):	
MS Target Conc.(pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs Recovery:	

# Quality Control Sample Performance Assessment



Test: Ra-228  
Analyst: JLW  
Date: 9/15/2016  
Worklist: 31364  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1141811
MB concentration:	0.562
M/B Counting Uncertainty:	0.328
MB MDC:	0.828
MB Numerical Performance Indicator:	3.36
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	9/23/2016
Spike I.D.:	16-025
Spike Concentration (pCi/mL):	25.603
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.802
Target Conc. (pCi/L, g, F):	6.385
Uncertainty (Calculated):	0.460
Result (pCi/L, g, F):	7.456
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.639
Numerical Performance Indicator:	2.67
Percent Recovery:	116.77%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30195125002
Duplicate Sample I.D.:	30195125002DUP
Sample Result (pCi/L, g, F):	1.548
Sample Duplicate Result (pCi/L, g, F):	0.474
Sample Duplicate Result (pCi/L, g, F):	2.200
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.545
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	-1.767
Duplicate RPD:	34.76%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

# Evaluation of duplicate precision is not applicable if either the sample or duplicate result is below the MDC.

Comments:

*Handwritten signature*

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
MS Aliquot (L, g, F):	
MS Target Conc.(pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MS Numerical Performance Indicator:	
MS Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	



**PACE ANALYTICAL SERVICES, INC.**

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

**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AZI0057**

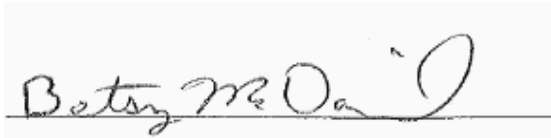
**September 13, 2016**

**Project: CCR Event**

**Project #: Plant Mitchell**

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

Approved:



Project Manager

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All test results relate only to the samples analyzed.



**PACE ANALYTICAL SERVICES, INC.**

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110 Technology Parkway, Peachtree Corners, GA 30092  
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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
PZ-15	AZI0057-01	Ground Water	09/01/16 14:40	09/02/16 10:30
Dup-01	AZI0057-02	Ground Water	09/01/16 00:00	09/02/16 10:30
PZ-7D	AZI0057-03	Ground Water	09/01/16 15:48	09/02/16 10:30



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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0057

Project: CCR Event

Client ID: PZ-15

Lab Number ID: AZI0057-01

Date/Time Sampled: 9/1/2016 2:40:00PM

Date/Time Received: 9/2/2016 10:30:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	284	25	10	mg/L	SM 2540 C		1	09/07/16 19:40	09/07/16 19:40	6090134	JPT
<b>Inorganic Anions</b>											
Chloride	7.0	0.25	0.01	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 01:22	6090170	RLC
Fluoride	0.06	0.30	0.02	mg/L	EPA 300.0	J	1	09/07/16 16:12	09/08/16 01:22	6090170	RLC
Sulfate	73	5.0	0.26	mg/L	EPA 300.0		5	09/07/16 16:12	09/11/16 23:18	6090170	RLC
<b>Metals, Total</b>											
Antimony	0.0010	0.0030	0.0008	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 22:58	6090084	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:58	6090084	CSW
Barium	0.103	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:58	6090084	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:58	6090084	CSW
Boron	0.215	0.100	0.0064	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:58	6090084	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:58	6090084	CSW
Calcium	74.8	5.00	0.311	mg/L	EPA 6020B		10	09/07/16 08:35	09/09/16 14:27	6090084	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:58	6090084	CSW
Cobalt	0.0012	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 22:58	6090084	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:58	6090084	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:58	6090084	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:58	6090084	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:58	6090084	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:58	6090084	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 16:23	6090123	MTC





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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0057

Project: CCR Event

Client ID: Dup-01

Lab Number ID: AZI0057-02

Date/Time Sampled: 9/1/2016 12:00:00AM

Date/Time Received: 9/2/2016 10:30:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	291	25	10	mg/L	SM 2540 C		1	09/07/16 19:40	09/07/16 19:40	6090134	JPT
<b>Inorganic Anions</b>											
Chloride	7.0	0.25	0.01	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 01:42	6090170	RLC
Fluoride	0.06	0.30	0.02	mg/L	EPA 300.0	J	1	09/07/16 16:12	09/08/16 01:42	6090170	RLC
Sulfate	72	5.0	0.26	mg/L	EPA 300.0		5	09/07/16 16:12	09/11/16 23:39	6090170	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:04	6090084	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:04	6090084	CSW
Barium	0.104	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:04	6090084	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:04	6090084	CSW
Boron	0.216	0.100	0.0064	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:04	6090084	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:04	6090084	CSW
Calcium	76.0	5.00	0.311	mg/L	EPA 6020B		10	09/07/16 08:35	09/09/16 14:32	6090084	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:04	6090084	CSW
Cobalt	0.0012	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 23:04	6090084	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:04	6090084	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:04	6090084	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:04	6090084	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:04	6090084	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:04	6090084	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 16:26	6090123	MTC



**PACE ANALYTICAL SERVICES, INC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0057

Project: CCR Event

Client ID: PZ-7D

Lab Number ID: AZI0057-03

Date/Time Sampled: 9/1/2016 3:48:00PM

Date/Time Received: 9/2/2016 10:30:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	373	25	10	mg/L	SM 2540 C		1	09/07/16 19:40	09/07/16 19:40	6090134	JPT
<b>Inorganic Anions</b>											
Chloride	7.4	0.25	0.01	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 02:03	6090170	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 02:03	6090170	RLC
Sulfate	62	5.0	0.26	mg/L	EPA 300.0		5	09/07/16 16:12	09/12/16 00:00	6090170	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:10	6090084	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:10	6090084	CSW
Barium	0.0117	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:10	6090084	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:10	6090084	CSW
Boron	0.379	0.100	0.0064	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:10	6090084	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:10	6090084	CSW
Calcium	101	25.0	1.55	mg/L	EPA 6020B		50	09/07/16 08:35	09/09/16 14:38	6090084	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:10	6090084	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:10	6090084	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:10	6090084	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:10	6090084	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:10	6090084	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:10	6090084	CSW
Lithium	0.0022	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 23:10	6090084	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 16:28	6090123	MTC



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**Report No.: AZI0057**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090134 - SM 2540 C</b>											
<b>Blank (6090134-BLK1)</b>						Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (6090134-BS1)</b>						Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	375	25	10	mg/L	400.00		94	84-108			
<b>Duplicate (6090134-DUP1)</b>						Source: AZI0050-02 Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	4860	25	10	mg/L		4920			1	10	
<b>Duplicate (6090134-DUP2)</b>						Source: AZI0051-03 Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	393	25	10	mg/L		396			0.8	10	



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**Report No.: AZI0057**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090170 - EPA 300.0</b>											
<b>Blank (6090170-BLK1)</b>						Prepared & Analyzed: 09/07/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
<b>LCS (6090170-BS1)</b>						Prepared: 09/07/16 Analyzed: 09/08/16					
Chloride	10.4	0.25	0.01	mg/L	10.010		103	90-110			
Fluoride	10.7	0.30	0.02	mg/L	10.010		107	90-110			
Sulfate	10.3	1.0	0.05	mg/L	10.010		103	90-110			
<b>Matrix Spike (6090170-MS1)</b>						<b>Source: AZI0058-04</b> Prepared: 09/07/16 Analyzed: 09/08/16					
Chloride	16.3	0.25	0.01	mg/L	10.010	5.92	104	90-110			
Fluoride	11.2	0.30	0.02	mg/L	10.010	ND	112	90-110			QM-05
Sulfate	42.4	1.0	0.05	mg/L	10.010	35.5	69	90-110			QM-05
<b>Matrix Spike (6090170-MS2)</b>						<b>Source: AZI0058-10</b> Prepared: 09/07/16 Analyzed: 09/08/16					
Chloride	298	0.25	0.01	mg/L	10.010	314	NR	90-110			QM-05
Fluoride	12.6	0.30	0.02	mg/L	10.010	0.68	120	90-110			QM-05
Sulfate	198	1.0	0.05	mg/L	10.010	201	NR	90-110			QM-05
<b>Matrix Spike Dup (6090170-MSD1)</b>						<b>Source: AZI0058-04</b> Prepared: 09/07/16 Analyzed: 09/08/16					
Chloride	16.4	0.25	0.01	mg/L	10.010	5.92	104	90-110	0.3	15	
Fluoride	11.2	0.30	0.02	mg/L	10.010	ND	112	90-110	0.4	15	QM-05
Sulfate	42.4	1.0	0.05	mg/L	10.010	35.5	69	90-110	0.07	15	QM-05



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**Report No.: AZI0057**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090084 - EPA 3005A</b>											
<b>Blank (6090084-BLK1)</b>						Prepared & Analyzed: 09/07/16					
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.100	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0050	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0050	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0050	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							
<b>LCS (6090084-BS1)</b>						Prepared & Analyzed: 09/07/16					
Antimony	0.103	0.0030	0.0008	mg/L	0.10000		103	80-120			
Arsenic	0.103	0.0050	0.0016	mg/L	0.10000		103	80-120			
Barium	0.0928	0.0100	0.0004	mg/L	0.10000		93	80-120			
Beryllium	0.101	0.0030	0.00008	mg/L	0.10000		101	80-120			
Boron	1.01	0.100	0.0064	mg/L	1.0000		101	80-120			
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000		101	80-120			
Calcium	0.992	0.500	0.0311	mg/L	1.0000		99	80-120			
Chromium	0.0996	0.0100	0.0009	mg/L	0.10000		100	80-120			
Cobalt	0.0986	0.0100	0.0005	mg/L	0.10000		99	80-120			
Copper	0.0992	0.0050	0.0005	mg/L	0.10000		99	80-120			
Lead	0.0951	0.0050	0.0001	mg/L	0.10000		95	80-120			
Molybdenum	0.101	0.0100	0.0017	mg/L	0.10000		101	80-120			
Nickel	0.101	0.0050	0.0006	mg/L	0.10000		101	80-120			
Selenium	0.102	0.0100	0.0010	mg/L	0.10000		102	80-120			
Silver	0.0999	0.0050	0.0005	mg/L	0.10000		100	80-120			
Thallium	0.0946	0.0010	0.0002	mg/L	0.10000		95	80-120			
Vanadium	0.0999	0.0100	0.0071	mg/L	0.10000		100	80-120			
Zinc	0.105	0.0100	0.0021	mg/L	0.10000		105	80-120			
Lithium	0.106	0.0500	0.0021	mg/L	0.10000		106	80-120			



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**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090084 - EPA 3005A</b>											
<b>Matrix Spike (6090084-MS1)</b>			<b>Source: AZI0057-01</b>			<b>Prepared &amp; Analyzed: 09/07/16</b>					
Antimony	0.109	0.0030	0.0008	mg/L	0.10000	0.0010	108	75-125			
Arsenic	0.106	0.0050	0.0016	mg/L	0.10000	ND	106	75-125			
Barium	0.232	0.0100	0.0004	mg/L	0.10000	0.103	129	75-125			QM-02
Beryllium	0.0937	0.0030	0.00008	mg/L	0.10000	ND	94	75-125			
Boron	1.00	0.100	0.0064	mg/L	1.0000	0.215	79	75-125			
Cadmium	0.105	0.0010	0.00007	mg/L	0.10000	ND	105	75-125			
Calcium	77.9	5.00	0.311	mg/L	1.0000	74.8	317	75-125			QM-02
Chromium	0.101	0.0100	0.0009	mg/L	0.10000	ND	101	75-125			
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000	0.0012	101	75-125			
Copper	0.0989	0.0050	0.0005	mg/L	0.10000	0.0005	98	75-125			
Lead	0.0958	0.0050	0.0001	mg/L	0.10000	ND	96	75-125			
Molybdenum	0.104	0.0100	0.0017	mg/L	0.10000	ND	104	75-125			
Nickel	0.100	0.0050	0.0006	mg/L	0.10000	0.0007	99	75-125			
Selenium	0.105	0.0100	0.0010	mg/L	0.10000	ND	105	75-125			
Silver	0.0974	0.0050	0.0005	mg/L	0.10000	ND	97	75-125			
Thallium	0.0966	0.0010	0.0002	mg/L	0.10000	ND	97	75-125			
Vanadium	0.104	0.0100	0.0071	mg/L	0.10000	ND	104	75-125			
Zinc	0.106	0.0100	0.0021	mg/L	0.10000	ND	106	75-125			
Lithium	0.0976	0.0500	0.0021	mg/L	0.10000	ND	98	75-125			
<b>Matrix Spike Dup (6090084-MSD1)</b>			<b>Source: AZI0057-01</b>			<b>Prepared &amp; Analyzed: 09/07/16</b>					
Antimony	0.109	0.0030	0.0008	mg/L	0.10000	0.0010	108	75-125	0.4	20	
Arsenic	0.108	0.0050	0.0016	mg/L	0.10000	ND	108	75-125	1	20	
Barium	0.225	0.0100	0.0004	mg/L	0.10000	0.103	122	75-125	3	20	
Beryllium	0.0932	0.0030	0.00008	mg/L	0.10000	ND	93	75-125	0.5	20	
Boron	1.04	0.100	0.0064	mg/L	1.0000	0.215	83	75-125	4	20	
Cadmium	0.0994	0.0010	0.00007	mg/L	0.10000	ND	99	75-125	5	20	
Calcium	80.5	5.00	0.311	mg/L	1.0000	74.8	577	75-125	3	20	QM-02
Chromium	0.103	0.0100	0.0009	mg/L	0.10000	ND	103	75-125	1	20	
Cobalt	0.101	0.0100	0.0005	mg/L	0.10000	0.0012	100	75-125	1	20	
Copper	0.100	0.0050	0.0005	mg/L	0.10000	0.0005	100	75-125	2	20	
Lead	0.0954	0.0050	0.0001	mg/L	0.10000	ND	95	75-125	0.4	20	
Molybdenum	0.107	0.0100	0.0017	mg/L	0.10000	ND	107	75-125	3	20	
Nickel	0.102	0.0050	0.0006	mg/L	0.10000	0.0007	101	75-125	2	20	
Selenium	0.107	0.0100	0.0010	mg/L	0.10000	ND	107	75-125	2	20	
Silver	0.0968	0.0050	0.0005	mg/L	0.10000	ND	97	75-125	0.6	20	
Thallium	0.0941	0.0010	0.0002	mg/L	0.10000	ND	94	75-125	3	20	
Vanadium	0.105	0.0100	0.0071	mg/L	0.10000	ND	105	75-125	0.2	20	
Zinc	0.107	0.0100	0.0021	mg/L	0.10000	ND	107	75-125	0.8	20	
Lithium	0.0978	0.0500	0.0021	mg/L	0.10000	ND	98	75-125	0.2	20	



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**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090084 - EPA 3005A</b>											
<b>Post Spike (6090084-PS1)</b>				<b>Source: AZI0057-01</b>			<b>Prepared &amp; Analyzed: 09/07/16</b>				
Antimony	96.6			ug/L	100.00	0.985	96	80-120			
Arsenic	108			ug/L	100.00	1.26	106	80-120			
Barium	222			ug/L	100.00	103	118	80-120			
Beryllium	94.3			ug/L	100.00	0.0250	94	80-120			
Boron	1020			ug/L	1000.0	215	80	80-120			
Cadmium	101			ug/L	100.00	0.0398	101	80-120			
Calcium	76500			ug/L	1000.0	74800	171	80-120			QM-02
Chromium	99.6			ug/L	100.00	0.207	99	80-120			
Cobalt	101			ug/L	100.00	1.18	99	80-120			
Copper	97.5			ug/L	100.00	0.537	97	80-120			
Lead	93.2			ug/L	100.00	0.0337	93	80-120			
Molybdenum	106			ug/L	100.00	0.920	105	80-120			
Nickel	101			ug/L	100.00	0.724	101	80-120			
Selenium	107			ug/L	100.00	-0.255	107	80-120			
Silver	95.2			ug/L	100.00	0.0009	95	80-120			
Thallium	92.7			ug/L	100.00	0.0308	93	80-120			
Vanadium	105			ug/L	100.00	-0.365	105	80-120			
Zinc	106			ug/L	100.00	1.00	105	80-120			
Lithium	100			ug/L	100.00	0.977	99	80-120			

**Batch 6090123 - EPA 7470A**

<b>Blank (6090123-BLK1)</b>				<b>Prepared &amp; Analyzed: 09/07/16</b>							
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (6090123-BS1)</b>				<b>Prepared &amp; Analyzed: 09/07/16</b>							
Mercury	0.00241	0.00050	0.000041	mg/L	2.5000E-3		97	80-120			



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**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090123 - EPA 7470A</b>											
<b>Matrix Spike (6090123-MS1)</b>			<b>Source: AZI0050-05</b>			<b>Prepared &amp; Analyzed: 09/07/16</b>					
Mercury	0.00234	0.00050	0.000041	mg/L	2.5000E-3	ND	94	75-125			
<b>Matrix Spike Dup (6090123-MSD1)</b>			<b>Source: AZI0050-05</b>			<b>Prepared &amp; Analyzed: 09/07/16</b>					
Mercury	0.00230	0.00050	0.000041	mg/L	2.5000E-3	ND	92	75-125	2	20	
<b>Post Spike (6090123-PS1)</b>			<b>Source: AZI0050-05</b>			<b>Prepared &amp; Analyzed: 09/07/16</b>					
Mercury	1.70			ug/L	1.6667	0.0134	101	80-120			





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## Legend

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### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

### Definition of Qualifiers

- QM-05** The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.
- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

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



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

CHAIN OF CUSTODY RECORD

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-508-7239		<b>REPORT TO:</b> Joju Abraham CC: Maria Pacilla Health McCorkle <b>REQUESTED COMPLETION DATE:</b> IP# #: GPC10684198		<b>PROJECT NAME/STATE:</b> Plant Mitchell GA <b>PROJECT #:</b> Phase II SCR																
Collection DATE	Collection TIME	MATRIX CODE*	GRA B	SAMPLE IDENTIFICATION	ANALYSIS REQUESTED	CONTAINER TYPE	PRESERVATION	# of CONTAINERS	RECEIVED BY	DATE/TIME	RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME	RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME	RELINQUISHED BY	DATE/TIME
9-1-16	14:40	GW	✓	PZ-15	IC (Cl, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320	3	3	3	James R. Adams	8-7-16	James R. Adams	8-7-16	James R. Adams	8-7-16	James R. Adams	8-7-16	James R. Adams	8-7-16	James R. Adams	8-7-16
9-1-16	15:48	GW	✓	DUP-01	IC (Cl, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320	3	3	3	James R. Adams	8-7-16	James R. Adams	8-7-16	James R. Adams	8-7-16	James R. Adams	8-7-16	James R. Adams	8-7-16	James R. Adams	8-7-16
9-1-16	15:48	GW	✓	PZ-7D	IC (Cl, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320	3	3	3	James R. Adams	8-7-16	James R. Adams	8-7-16	James R. Adams	8-7-16	James R. Adams	8-7-16	James R. Adams	8-7-16	James R. Adams	8-7-16

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

**PRESERVATION**  
 1 - HCl, 56°C  
 2 - H<sub>2</sub>SO<sub>4</sub>, 56°C  
 3 - HNO<sub>3</sub>  
 4 - NaOH, 56°C  
 5 - NaOH/ZnAc, 56°C  
 6 - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, 56°C  
 7 - 56°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**

FOR LAB USE ONLY  
 LAB # 9-2-16 AZ10057  
 Entered into LIMS: [Signature]  
 Tracking #: [Signature]

DATE/TIME: 8-7-16 14:40  
 DATE/TIME: 8-7-16 14:40  
 DATE/TIME: 8-7-16 10:30  
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**PACE ANALYTICAL SERVICES, INC.**

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

**LOG-IN CHECKLIST**

**Printed: 9/13/2016 10:56:53AM**

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 09/02/16 10:30

**Work Order:** AZI0057

**Logged In By:** Mohammad M. Rahman

**OBSERVATIONS**

**#Samples:** 3

**#Containers:** 9

**Minimum Temp(C):** 4.0

**Maximum Temp(C):** 4.0

**Custody Seal(s) Used:** Yes

**CHECKLIST ITEMS**

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

**Comments:**



October 04, 2016

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: Plant Mitchell/GA Phase II CCR  
Pace Project No.: 30195125

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on September 06, 2016. 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,

Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell/GA Phase II CCR  
Pace Project No.: 30195125

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: Plant Mitchell/GA Phase II CCR  
Pace Project No.: 30195125

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30195125001	PZ-15	Water	09/01/16 14:40	09/06/16 08:50
30195125002	DUP-01	Water	09/01/16 00:01	09/06/16 08:50
30195125003	PZ-7D	Water	09/01/16 15:48	09/06/16 08:50

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell/GA Phase II CCR  
Pace Project No.: 30195125

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30195125001	PZ-15	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195125002	DUP-01	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195125003	PZ-7D	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

### REPORT OF LABORATORY ANALYSIS

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: Plant Mitchell/GA Phase II CCR  
 Pace Project No.: 30195125

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-15</b>		<b>Lab ID: 30195125001</b>	Collected: 09/01/16 14:40	Received: 09/06/16 08:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	<b>0.306 ± 0.161 (0.251)</b> C:76% T:NA	pCi/L	09/16/16 08:20	13982-63-3		
Radium-228	EPA 9320	<b>0.879 ± 0.392 (0.648)</b> C:81% T:79%	pCi/L	09/23/16 01:58	15262-20-1		
Total Radium	Total Radium Calculation	<b>1.19 ± 0.553 (0.899)</b>	pCi/L	10/03/16 15:46	7440-14-4		

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: DUP-01</b>		<b>Lab ID: 30195125002</b>	Collected: 09/01/16 00:01	Received: 09/06/16 08:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	<b>0.276 ± 0.207 (0.361)</b> C:90% T:NA	pCi/L	09/16/16 08:20	13982-63-3		
Radium-228	EPA 9320	<b>1.55 ± 0.549 (0.773)</b> C:81% T:75%	pCi/L	09/23/16 01:46	15262-20-1		
Total Radium	Total Radium Calculation	<b>1.83 ± 0.756 (1.13)</b>	pCi/L	10/03/16 15:46	7440-14-4		

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-7D</b>		<b>Lab ID: 30195125003</b>	Collected: 09/01/16 15:48	Received: 09/06/16 08:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	<b>-0.0509 ± 0.106 (0.312)</b> C:81% T:NA	pCi/L	09/28/16 09:31	13982-63-3		
Radium-228	EPA 9320	<b>0.880 ± 0.509 (0.942)</b> C:66% T:82%	pCi/L	09/23/16 12:35	15262-20-1		
Total Radium	Total Radium Calculation	<b>0.880 ± 0.615 (1.25)</b>	pCi/L	10/03/16 15:46	7440-14-4		

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: Plant Mitchell/GA Phase II CCR  
 Pace Project No.: 30195125

---

QC Batch: 232984	Analysis Method: EPA 9320
QC Batch Method: EPA 9320	Analysis Description: 9320 Radium 228
Associated Lab Samples: 30195125003	

---

METHOD BLANK: 1141814	Matrix: Water
Associated Lab Samples: 30195125003	

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.756 ± 0.402 (0.705) C:77% T:82%	pCi/L	09/23/16 12:40	

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 Mitchell/GA Phase II CCR  
 Pace Project No.: 30195125

---

QC Batch: 232977 Analysis Method: EPA 9315  
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium  
 Associated Lab Samples: 30195125001, 30195125002

---

METHOD BLANK: 1141794 Matrix: Water  
 Associated Lab Samples: 30195125001, 30195125002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.177 ± 0.109 (0.163) C:88% T:NA	pCi/L	09/16/16 08:18	

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 Mitchell/GA Phase II CCR  
 Pace Project No.: 30195125

---

QC Batch: 232983 Analysis Method: EPA 9320  
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228  
 Associated Lab Samples: 30195125001, 30195125002

---

METHOD BLANK: 1141811 Matrix: Water  
 Associated Lab Samples: 30195125001, 30195125002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.562 ± 0.343 (0.628) C:77% T:84%	pCi/L	09/23/16 01:56	

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

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell/GA Phase II CCR  
Pace Project No.: 30195125

---

QC Batch: 232978                      Analysis Method: EPA 9315  
QC Batch Method: EPA 9315              Analysis Description: 9315 Total Radium  
Associated Lab Samples: 30195125003

---

METHOD BLANK: 1141797                      Matrix: Water  
Associated Lab Samples: 30195125003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0236 ± 0.0605 (0.149) C:91% T:NA	pCi/L	09/28/16 09:31	

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 Mitchell/GA Phase II CCR  
Pace Project No.: 30195125

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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WO#: 30195125



30195125

Pace Analytical Services, Inc.  
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 3  
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com



CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power		CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		REPORT TO: Joiu Abraham	CC: Maria Padilla Heath McCorkle	PO #: GPC10684198	PROJECT NAME/STATE: Plant Mitchell / GA	PROJECT #: Phase II CCR													
Collection DATE	Collection TIME	MATRIX CODE*	C O M P	G R A B	SAMPLE IDENTIFICATION	CONTAINER TYPE	PRESEVATION	ANALYSIS REQUESTED	CONTAINER TYPE	PRESEVATION											
9-1-16	14:40	GW	✓		PZ-15	3	1	1	1	1	3	1	1	3	1	3	1	3	1	3	
9-1-16	15:48	GW	✓		DUP-01	3	1	1	1	1	3	1	1	3	1	3	1	3	1	3	
9-1-16	15:48	GW	✓		PZ-7D	3	1	1	1	1	3	1	1	3	1	3	1	3	1	3	
<p>RECEIVED BY AND TITLE: <i>James T. Patton</i> DATE/TIME: 9-1-16 / 14:40</p> <p>RECEIVED BY: <i>Williamone Pace</i> DATE/TIME: 9-1-16 / 0850</p> <p>RECEIVED BY LAB: DATE/TIME:</p>											<p>RELINQUISHED BY: <i>James T. Patton</i> DATE/TIME: 9-1-16 / 09:45</p> <p>RELINQUISHED BY: DATE/TIME:</p>		<p>FOR LAB USE ONLY</p> <p>LAB #:</p> <p>Entered into LIMS: _____</p> <p>Tracking #: _____</p>								
<p>CONTAINER TYPE: P 3</p> <p>PRESEVATION: # of</p> <p>C O N T A I N E R S</p>											<p>ANALYSIS REQUESTED: EPA 6020/7470 Metals App. III &amp; IV, EPA 300.0 IC (Cl, F, SO4), TDS, SM 2540C, Radium 226 &amp; 228, SW-846 9315/9320</p>										
<p>CONTAINER TYPE: P - PLASTIC, A - AMBER GLASS, G - CLEAR GLASS, V - VOA VIAL, S - STERILE, O - OTHER</p> <p>PRESEVATION: 1 - HCl, ≤6°C, 2 - H<sub>2</sub>SO<sub>4</sub>, ≤6°C, 3 - HNO<sub>3</sub>, 4 - NaOH, ≤6°C, 5 - NaOH/ZnAc, ≤6°C, 6 - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, ≤6°C, 7 - ≤6°C, not frozen</p>											<p>MATRIX CODES:</p> <p>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</p>										
<p>REMARKS/ADDITIONAL INFORMATION</p>											<p>001</p> <p>002</p> <p>003</p>										

Sample Condition Upon Receipt Pittsburgh

30195125



Client Name: Pace, GA Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 6812 5098 8849

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

Thermometer Used N/A Type of Ice: Wet Blue None

Cooler Temperature Observed Temp \_\_\_\_\_ °C Correction Factor: \_\_\_\_\_ °C Final Temp: \_\_\_\_\_ °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: AGR 9-6-16

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC:	X			5.
-Includes date/time/ID/Analysis Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used:		X		
Containers Intact:	X			11.
Filtered volume received for Dissolved tests			X	12.
All containers needing preservation have been checked.	X			13.
All containers needing preservation are found to be in compliance with EPA recommendation.	X			<u>PHL2</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed <u>AGR</u> Date/time of preservation _____
				Lot # of added preservative _____
Headspace in VOA Vials (>6mm):			X	14.
Trip Blank Present:		X		15.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: <u>AGR</u> Date: <u>9-6-16</u>

Client Notification/ Resolution:  
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)  
 \*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

# Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
 Analyst: WRR  
 Date: 9/21/2016  
 Worklist: 31359  
 Matrix: DW



Method Blank Assessment	
MB Sample ID	1141794
MB Concentration:	0.177
M/B Counting Uncertainty:	0.106
MB MDC:	0.163
MB Numerical Performance Indicator:	3.28
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	
LCS31359	N
LCS31359	LCS31359
Count Date:	9/16/2016
Spike I.D.:	16-026
Spike Concentration (pCi/mL):	44.677
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.498
Target Conc. (pCi/L, g, F):	8.971
Uncertainty (Calculated):	0.422
Result (pCi/L, g, F):	8.159
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.589
Numerical Performance Indicator:	-2.19
Percent Recovery:	90.96%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30195125002
Duplicate Sample I.D.:	30195125002DUP
Sample Result Counting Uncertainty (pCi/L, g, F):	0.276
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.203
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.108
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	1.049
Duplicate RPD:	87.95%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

**Comments:**

\*The method blank result is below the reporting limit for this analysis and is acceptable.

\*\*\*Batch must be re-prepped due to unacceptable precision.

*Handwritten signature: WRR*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	



# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: WRR  
Date: 9/23/2016  
Worklist: 31360  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1141797
MB concentration:	0.024
M/B Counting Uncertainty:	0.060
MB MDC:	0.149
MB Numerical Performance Indicator:	0.77
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	N
LCS31360	LCS31360
Count Date:	9/28/2016
Spike I.D.:	16-026
Spike Concentration (pCi/mL):	44.677
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.529
Target Conc. (pCi/L, g, F):	8.452
Uncertainty (Calculated):	0.398
Result (pCi/L, g, F):	7.327
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.605
Numerical Performance Indicator:	-3.05
Percent Recovery:	86.68%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30195127001
Duplicate Sample I.D.:	30195127001DUP
Sample Result (pCi/L, g, F):	1.317
Sample Result Counting Uncertainty (pCi/L, g, F):	0.301
Sample Duplicate Result (pCi/L, g, F):	1.390
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.315
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-0.329
Duplicate RPD:	5.40%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

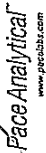
## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: JLW  
Date: 9/15/2016  
Worklist: 31364  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1141811
MB concentration:	0.562
M/B Counting Uncertainty:	0.328
MB MDC:	0.628
MB Numerical Performance Indicator:	3.36
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	9/23/2016
Spike I.D.:	16-025
Spike Concentration (pCi/mL):	25.603
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.802
Target Conc. (pCi/L, g, F):	6.385
Uncertainty (Calculated):	0.460
Result (pCi/L, g, F):	7.456
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.639
Numerical Performance Indicator:	2.67
Percent Recovery:	116.77%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Duplicate Sample I.D.:	30195125002
Duplicate Sample I.D.:	30195125002DUP
Sample Result (pCi/L, g, F):	1.548
Sample Result Counting Uncertainty (pCi/L, g, F):	0.474
Sample Duplicate Result (pCi/L, g, F):	2.200
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.545
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-1.767
Duplicate RPD:	34.76%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

# Quality Control Sample Performance Assessment



Test: Ra-228  
Analyst: JLW  
Date: 9/15/2016  
Worklist: 31365  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1141814
MB concentration:	0.756
M/B Counting Uncertainty:	0.379
MB MDC:	0.705
MB Numerical Performance Indicator:	3.91
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	
LCSID (Y or NJ)?	N
LCS31365	LCS031365
Count Date:	9/23/2016
Spike I.D.:	16-025
Spike Concentration (pCi/mL):	25.599
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.809
Target Conc. (pCi/L, g, F):	6.329
Uncertainty (Calculated):	0.456
Result (pCi/L, g, F):	7.473
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.849
Numerical Performance Indicator:	2.33
Percent Recovery:	118.07%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30195127001
Duplicate Sample I.D.:	30195127001DUP
Sample Result (pCi/L, g, F):	4.765
Sample Result Counting Uncertainty (pCi/L, g, F):	0.691
Sample Duplicate Result (pCi/L, g, F):	5.113
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.692
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	-0.699
Duplicate RPD:	7.06%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:  
\*The method blank result is below the reporting limit for this analysis and is acceptable.

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
MS Aliquot (L, g, F):	
MS Target Conc.(pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MS Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Matrix Spike Result:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	
MS/ MSD Duplicate Status vs Numerical Indicator:	
MS/ MSD Duplicate Status vs RPD:	



## PACE ANALYTICAL SERVICES, INC.

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

### Laboratory Report

Prepared For:

Georgia Power  
2480 Maner Road  
Atlanta, GA 30339

Attention: Mr. Joju Abraham

Report Number: AZI0211

September 16, 2016

Project: CCR Event

Project #: Plant Mitchell

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

Approved:

A handwritten signature in black ink, appearing to read "Maya Farko", written over a horizontal line.

Project Manager

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All test results relate only to the samples analyzed.



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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
PZ-16	AZI0211-01	Ground Water	09/06/16 16:35	09/08/16 09:20
Dup-02	AZI0211-02	Ground Water	09/06/16 00:00	09/08/16 09:20
EB-02	AZI0211-03	DI Water	09/07/16 08:15	09/08/16 09:20
PZ-17	AZI0211-04	Ground Water	09/07/16 10:35	09/08/16 09:20
PZ-18	AZI0211-05	Ground Water	09/07/16 14:40	09/08/16 09:20
PZ-19	AZI0211-06	Ground Water	09/07/16 15:55	09/08/16 09:20



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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

**Report No.: AZI0211**

**Project: CCR Event**

**Client ID: PZ-16**

**Lab Number ID: AZI0211-01**

**Date/Time Sampled: 9/6/2016 4:35:00PM**

**Date/Time Received: 9/8/2016 9:20:00AM**

**Matrix: Ground Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	257	25	10	mg/L	SM 2540 C		1	09/09/16 16:50	09/09/16 16:50	6090220	JPT
<b>Inorganic Anions</b>											
Chloride	7.9	0.25	0.01	mg/L	EPA 300.0	B-01	1	09/12/16 09:25	09/12/16 19:47	6090259	RLC
Fluoride	0.09	0.30	0.02	mg/L	EPA 300.0	J	1	09/12/16 09:25	09/12/16 19:47	6090259	RLC
Sulfate	49	1.0	0.05	mg/L	EPA 300.0		1	09/12/16 09:25	09/12/16 19:47	6090259	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:08	6090293	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:08	6090293	CSW
Barium	0.0794	0.0100	0.0004	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:08	6090293	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:08	6090293	CSW
Boron	0.170	0.100	0.0064	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:08	6090293	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:08	6090293	CSW
Calcium	74.6	5.00	0.311	mg/L	EPA 6020B		10	09/13/16 08:30	09/15/16 13:16	6090293	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:08	6090293	CSW
Cobalt	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/13/16 08:30	09/14/16 12:08	6090293	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:08	6090293	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:08	6090293	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:08	6090293	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:08	6090293	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:08	6090293	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/09/16 09:20	09/09/16 14:53	6090210	MTC



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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

**Report No.:** AZI0211

**Project:** CCR Event

**Client ID:** Dup-02

**Lab Number ID:** AZI0211-02

**Date/Time Sampled:** 9/6/2016 12:00:00AM

**Date/Time Received:** 9/8/2016 9:20:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	280	25	10	mg/L	SM 2540 C		1	09/09/16 16:50	09/09/16 16:50	6090220	JPT
<b>Inorganic Anions</b>											
Chloride	7.9	0.25	0.01	mg/L	EPA 300.0	B-01	1	09/12/16 09:25	09/12/16 20:08	6090259	RLC
Fluoride	0.09	0.30	0.02	mg/L	EPA 300.0	J	1	09/12/16 09:25	09/12/16 20:08	6090259	RLC
Sulfate	49	1.0	0.05	mg/L	EPA 300.0		1	09/12/16 09:25	09/12/16 20:08	6090259	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:14	6090293	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:14	6090293	CSW
Barium	0.0759	0.0100	0.0004	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:14	6090293	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:14	6090293	CSW
Boron	0.159	0.100	0.0064	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:14	6090293	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:14	6090293	CSW
Calcium	72.9	5.00	0.311	mg/L	EPA 6020B		10	09/13/16 08:30	09/15/16 13:21	6090293	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:14	6090293	CSW
Cobalt	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/13/16 08:30	09/14/16 12:14	6090293	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:14	6090293	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:14	6090293	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:14	6090293	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:14	6090293	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:14	6090293	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/09/16 09:20	09/09/16 14:55	6090210	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

**Report No.: AZI0211**

**Project: CCR Event**

**Client ID: EB-02**

**Lab Number ID: AZI0211-03**

**Date/Time Sampled: 9/7/2016 8:15:00AM**

**Date/Time Received: 9/8/2016 9:20:00AM**

**Matrix: DI Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	09/09/16 16:50	09/09/16 16:50	6090220	JPT
<b>Inorganic Anions</b>											
Chloride	0.03	0.25	0.01	mg/L	EPA 300.0	B-01, J	1	09/12/16 09:25	09/12/16 21:10	6090259	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/12/16 09:25	09/12/16 21:10	6090259	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	09/12/16 09:25	09/12/16 21:10	6090259	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:20	6090293	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:20	6090293	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:20	6090293	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:20	6090293	CSW
Boron	ND	0.100	0.0064	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:20	6090293	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:20	6090293	CSW
Calcium	0.0525	0.500	0.0311	mg/L	EPA 6020B	J	1	09/13/16 08:30	09/14/16 12:20	6090293	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:20	6090293	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:20	6090293	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:20	6090293	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:20	6090293	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:20	6090293	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:20	6090293	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:20	6090293	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/09/16 09:20	09/09/16 14:58	6090210	MTC





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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

**Report No.:** AZI0211

**Project:** CCR Event

**Client ID:** PZ-17

**Lab Number ID:** AZI0211-04

**Date/Time Sampled:** 9/7/2016 10:35:00AM

**Date/Time Received:** 9/8/2016 9:20:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	392	25	10	mg/L	SM 2540 C		1	09/12/16 15:25	09/12/16 15:25	6090265	JPT
<b>Inorganic Anions</b>											
Chloride	7.7	0.25	0.01	mg/L	EPA 300.0	B-01	1	09/12/16 09:25	09/12/16 21:31	6090259	RLC
Fluoride	0.03	0.30	0.02	mg/L	EPA 300.0	J	1	09/12/16 09:25	09/12/16 21:31	6090259	RLC
Sulfate	99	5.0	0.26	mg/L	EPA 300.0		5	09/12/16 09:25	09/13/16 15:24	6090259	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:25	6090293	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:25	6090293	CSW
Barium	0.0823	0.0100	0.0004	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:25	6090293	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:25	6090293	CSW
Boron	0.276	0.100	0.0064	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:25	6090293	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:25	6090293	CSW
Calcium	100	25.0	1.55	mg/L	EPA 6020B		50	09/13/16 08:30	09/15/16 13:27	6090293	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:25	6090293	CSW
Cobalt	0.0011	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/13/16 08:30	09/14/16 12:25	6090293	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:25	6090293	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:25	6090293	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:25	6090293	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:25	6090293	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:25	6090293	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/09/16 09:20	09/09/16 15:00	6090210	MTC



**PACE ANALYTICAL SERVICES, INC.**

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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

**Report No.:** AZI0211

**Project:** CCR Event

**Client ID:** PZ-18

**Lab Number ID:** AZI0211-05

**Date/Time Sampled:** 9/7/2016 2:40:00PM

**Date/Time Received:** 9/8/2016 9:20:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	415	25	10	mg/L	SM 2540 C		1	09/12/16 15:25	09/12/16 15:25	6090265	JPT
<b>Inorganic Anions</b>											
Chloride	6.9	0.25	0.01	mg/L	EPA 300.0	B-01	1	09/12/16 09:25	09/12/16 21:51	6090259	RLC
Fluoride	0.12	0.30	0.02	mg/L	EPA 300.0	J	1	09/12/16 09:25	09/12/16 21:51	6090259	RLC
Sulfate	96	5.0	0.26	mg/L	EPA 300.0		5	09/12/16 09:25	09/13/16 15:45	6090259	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:31	6090293	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:31	6090293	CSW
Barium	0.0717	0.0100	0.0004	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:31	6090293	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:31	6090293	CSW
Boron	0.355	0.100	0.0064	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:31	6090293	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:31	6090293	CSW
Calcium	112	25.0	1.55	mg/L	EPA 6020B		50	09/13/16 08:30	09/15/16 13:33	6090293	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:31	6090293	CSW
Cobalt	0.0011	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/13/16 08:30	09/14/16 12:31	6090293	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:31	6090293	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:31	6090293	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:31	6090293	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:31	6090293	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:31	6090293	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/12/16 08:55	09/12/16 15:01	6090243	MTC



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Attention: Mr. Joju Abraham

September 16, 2016

**Report No.: AZI0211**

**Project: CCR Event**

**Client ID: PZ-19**

**Lab Number ID: AZI0211-06**

**Date/Time Sampled: 9/7/2016 3:55:00PM**

**Date/Time Received: 9/8/2016 9:20:00AM**

**Matrix: Ground Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	508	25	10	mg/L	SM 2540 C		1	09/12/16 15:25	09/12/16 15:25	6090265	JPT
<b>Inorganic Anions</b>											
Chloride	6.8	0.25	0.01	mg/L	EPA 300.0	B-01	1	09/12/16 09:25	09/12/16 22:12	6090259	RLC
Fluoride	0.15	0.30	0.02	mg/L	EPA 300.0	J	1	09/12/16 09:25	09/12/16 22:12	6090259	RLC
Sulfate	87	5.0	0.26	mg/L	EPA 300.0		5	09/12/16 09:25	09/13/16 16:06	6090259	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:37	6090293	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:37	6090293	CSW
Barium	0.0670	0.0100	0.0004	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:37	6090293	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:37	6090293	CSW
Boron	0.573	0.100	0.0064	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:37	6090293	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:37	6090293	CSW
Calcium	138	25.0	1.55	mg/L	EPA 6020B		50	09/13/16 08:30	09/15/16 13:39	6090293	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:37	6090293	CSW
Cobalt	0.0012	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/13/16 08:30	09/14/16 12:37	6090293	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:37	6090293	CSW
Molybdenum	0.0027	0.0100	0.0017	mg/L	EPA 6020B	J	1	09/13/16 08:30	09/14/16 12:37	6090293	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:37	6090293	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/13/16 08:30	09/14/16 12:37	6090293	CSW
Lithium	0.0082	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/13/16 08:30	09/14/16 12:37	6090293	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/12/16 08:55	09/12/16 15:03	6090243	MTC



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Attention: Mr. Joju Abraham

September 16, 2016

**Report No.: AZI0211**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090220 - SM 2540 C</b>											
<b>Blank (6090220-BLK1)</b>						Prepared & Analyzed: 09/09/16					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (6090220-BS1)</b>						Prepared & Analyzed: 09/09/16					
Total Dissolved Solids	388	25	10	mg/L	400.00		97	84-108			
<b>Duplicate (6090220-DUP1)</b>						Source: AZI0022-04RE1 Prepared & Analyzed: 09/09/16					
Total Dissolved Solids	43	25	10	mg/L		58			30	10	QR-03
<b>Duplicate (6090220-DUP2)</b>						Source: AZI0174-01 Prepared & Analyzed: 09/09/16					
Total Dissolved Solids	150	25	10	mg/L		146			3	10	
<b>Batch 6090265 - SM 2540 C</b>											
<b>Blank (6090265-BLK1)</b>						Prepared & Analyzed: 09/12/16					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (6090265-BS1)</b>						Prepared & Analyzed: 09/12/16					
Total Dissolved Solids	403	25	10	mg/L	400.00		101	84-108			
<b>Duplicate (6090265-DUP1)</b>						Source: AZI0226-03 Prepared & Analyzed: 09/12/16					
Total Dissolved Solids	450	25	10	mg/L		443			2	10	
<b>Duplicate (6090265-DUP2)</b>						Source: AZI0226-07 Prepared & Analyzed: 09/12/16					
Total Dissolved Solids	313	25	10	mg/L		324			3	10	



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**Report No.: AZI0211**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090259 - EPA 300.0</b>											
<b>Blank (6090259-BLK1)</b>						Prepared & Analyzed: 09/12/16					
Chloride	0.05	0.25	0.01	mg/L							J
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
<b>LCS (6090259-BS1)</b>						Prepared & Analyzed: 09/12/16					
Chloride	10.2	0.25	0.01	mg/L	10.010		102	90-110			
Fluoride	10.6	0.30	0.02	mg/L	10.010		106	90-110			
Sulfate	10.3	1.0	0.05	mg/L	10.010		103	90-110			
<b>Matrix Spike (6090259-MS1)</b>						<b>Source: AZI0211-02</b>			Prepared & Analyzed: 09/12/16		
Chloride	17.0	0.25	0.01	mg/L	10.010	7.86	91	90-110			
Fluoride	9.71	0.30	0.02	mg/L	10.010	0.09	96	90-110			
Sulfate	53.3	1.0	0.05	mg/L	10.010	48.5	48	90-110			QM-05
<b>Matrix Spike (6090259-MS2)</b>						<b>Source: AZI0226-07</b>			Prepared: 09/12/16 Analyzed: 09/13/16		
Chloride	11.9	0.25	0.01	mg/L	10.010	1.96	99	90-110			
Fluoride	10.6	0.30	0.02	mg/L	10.010	0.08	105	90-110			
Sulfate	98.2	1.0	0.05	mg/L	10.010	98.5	NR	90-110			QM-05
<b>Matrix Spike Dup (6090259-MSD1)</b>						<b>Source: AZI0211-02</b>			Prepared & Analyzed: 09/12/16		
Chloride	17.5	0.25	0.01	mg/L	10.010	7.86	96	90-110	3	15	
Fluoride	10.4	0.30	0.02	mg/L	10.010	0.09	103	90-110	7	15	
Sulfate	53.6	1.0	0.05	mg/L	10.010	48.5	51	90-110	0.5	15	QM-05



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September 16, 2016

**Report No.: AZI0211**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090210 - EPA 7470A</b>											
<b>Blank (6090210-BLK1)</b>						Prepared & Analyzed: 09/09/16					
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (6090210-BS1)</b>						Prepared & Analyzed: 09/09/16					
Mercury	0.00234	0.00050	0.000041	mg/L	2.5000E-3		94	80-120			
<b>Matrix Spike (6090210-MS1)</b>						Source: AZI0207-01 Prepared & Analyzed: 09/09/16					
Mercury	0.00233	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125			
<b>Matrix Spike Dup (6090210-MSD1)</b>						Source: AZI0207-01 Prepared & Analyzed: 09/09/16					
Mercury	0.00231	0.00050	0.000041	mg/L	2.5000E-3	ND	92	75-125	1	20	
<b>Post Spike (6090210-PS1)</b>						Source: AZI0207-01 Prepared & Analyzed: 09/09/16					
Mercury	1.69			ug/L	1.6667	-0.00477	102	80-120			
<b>Batch 6090243 - EPA 7470A</b>											
<b>Blank (6090243-BLK1)</b>						Prepared & Analyzed: 09/12/16					
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (6090243-BS1)</b>						Prepared & Analyzed: 09/12/16					
Mercury	0.00249	0.00050	0.000041	mg/L	2.5000E-3		100	80-120			
<b>Matrix Spike (6090243-MS1)</b>						Source: AZI0211-05 Prepared & Analyzed: 09/12/16					
Mercury	0.00237	0.00050	0.000041	mg/L	2.5000E-3	ND	95	75-125			
<b>Matrix Spike Dup (6090243-MSD1)</b>						Source: AZI0211-05 Prepared & Analyzed: 09/12/16					
Mercury	0.00241	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125	2	20	



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**Report No.: AZI0211**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6090243 - EPA 7470A**

Post Spike (6090243-PS1)	Source: AZI0211-05				Prepared & Analyzed: 09/12/16						
Mercury	1.77			ug/L	1.6667	0.0125	105	80-120			

**Batch 6090293 - EPA 3005A**

Blank (6090293-BLK1)	Prepared: 09/13/16 Analyzed: 09/14/16										
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Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.100	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0050	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0050	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0050	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							

**LCS (6090293-BS1)**

Prepared: 09/13/16 Analyzed: 09/14/16

Antimony	0.0987	0.0030	0.0008	mg/L	0.10000		99	80-120			
Arsenic	0.0983	0.0050	0.0016	mg/L	0.10000		98	80-120			
Barium	0.0993	0.0100	0.0004	mg/L	0.10000		99	80-120			
Beryllium	0.0985	0.0030	0.00008	mg/L	0.10000		99	80-120			
Boron	0.958	0.100	0.0064	mg/L	1.0000		96	80-120			
Cadmium	0.0974	0.0010	0.00007	mg/L	0.10000		97	80-120			
Calcium	0.935	0.500	0.0311	mg/L	1.0000		94	80-120			
Chromium	0.105	0.0100	0.0009	mg/L	0.10000		105	80-120			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000		102	80-120			
Copper	0.102	0.0050	0.0005	mg/L	0.10000		102	80-120			
Lead	0.0991	0.0050	0.0001	mg/L	0.10000		99	80-120			
Molybdenum	0.0946	0.0100	0.0017	mg/L	0.10000		95	80-120			
Nickel	0.105	0.0050	0.0006	mg/L	0.10000		105	80-120			
Selenium	0.101	0.0100	0.0010	mg/L	0.10000		101	80-120			
Silver	0.0975	0.0050	0.0005	mg/L	0.10000		98	80-120			



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**Report No.: AZI0211**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090293 - EPA 3005A</b>											
<b>LCS (6090293-BS1)</b>						Prepared: 09/13/16 Analyzed: 09/14/16					
Thallium	0.100	0.0010	0.0002	mg/L	0.10000		100	80-120			
Vanadium	0.100	0.0100	0.0071	mg/L	0.10000		100	80-120			
Zinc	0.104	0.0100	0.0021	mg/L	0.10000		104	80-120			
Lithium	0.0937	0.0500	0.0021	mg/L	0.10000		94	80-120			
<b>Matrix Spike (6090293-MS1)</b>						Source: AZI0207-01 Prepared: 09/13/16 Analyzed: 09/14/16					
Antimony	0.102	0.0030	0.0008	mg/L	0.10000	0.0039	98	75-125			
Arsenic	0.100	0.0050	0.0016	mg/L	0.10000	ND	100	75-125			
Barium	0.108	0.0100	0.0004	mg/L	0.10000	0.0095	99	75-125			
Beryllium	0.103	0.0030	0.00008	mg/L	0.10000	ND	103	75-125			
Boron	1.05	0.100	0.0064	mg/L	1.0000	0.0084	104	75-125			
Cadmium	0.0968	0.0010	0.00007	mg/L	0.10000	ND	97	75-125			
Calcium	1.80	0.500	0.0311	mg/L	1.0000	0.858	94	75-125			
Chromium	0.0969	0.0100	0.0009	mg/L	0.10000	ND	97	75-125			
Cobalt	0.0971	0.0100	0.0005	mg/L	0.10000	0.0009	96	75-125			
Copper	0.106	0.0050	0.0005	mg/L	0.10000	0.0097	96	75-125			
Lead	0.0990	0.0050	0.0001	mg/L	0.10000	0.0001	99	75-125			
Molybdenum	0.0974	0.0100	0.0017	mg/L	0.10000	ND	97	75-125			
Nickel	0.108	0.0050	0.0006	mg/L	0.10000	0.0090	99	75-125			
Selenium	0.0968	0.0100	0.0010	mg/L	0.10000	ND	97	75-125			
Silver	0.0985	0.0050	0.0005	mg/L	0.10000	ND	99	75-125			
Thallium	0.0990	0.0010	0.0002	mg/L	0.10000	ND	99	75-125			
Vanadium	0.0973	0.0100	0.0071	mg/L	0.10000	ND	97	75-125			
Zinc	0.102	0.0100	0.0021	mg/L	0.10000	0.0052	97	75-125			
Lithium	0.103	0.0500	0.0021	mg/L	0.10000	0.0050	98	75-125			
<b>Matrix Spike Dup (6090293-MSD1)</b>						Source: AZI0207-01 Prepared: 09/13/16 Analyzed: 09/14/16					
Antimony	0.0985	0.0030	0.0008	mg/L	0.10000	0.0039	95	75-125	4	20	
Arsenic	0.0976	0.0050	0.0016	mg/L	0.10000	ND	98	75-125	3	20	
Barium	0.104	0.0100	0.0004	mg/L	0.10000	0.0095	94	75-125	4	20	
Beryllium	0.101	0.0030	0.00008	mg/L	0.10000	ND	101	75-125	2	20	
Boron	1.00	0.100	0.0064	mg/L	1.0000	0.0084	99	75-125	4	20	
Cadmium	0.0984	0.0010	0.00007	mg/L	0.10000	ND	98	75-125	2	20	
Calcium	1.73	0.500	0.0311	mg/L	1.0000	0.858	87	75-125	4	20	
Chromium	0.0971	0.0100	0.0009	mg/L	0.10000	ND	97	75-125	0.2	20	
Cobalt	0.0967	0.0100	0.0005	mg/L	0.10000	0.0009	96	75-125	0.4	20	
Copper	0.107	0.0050	0.0005	mg/L	0.10000	0.0097	97	75-125	1	20	
Lead	0.0969	0.0050	0.0001	mg/L	0.10000	0.0001	97	75-125	2	20	
Molybdenum	0.0967	0.0100	0.0017	mg/L	0.10000	ND	97	75-125	0.6	20	
Nickel	0.109	0.0050	0.0006	mg/L	0.10000	0.0090	100	75-125	0.9	20	





**PACE ANALYTICAL SERVICES, INC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

**Report No.: AZI0211**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090293 - EPA 3005A</b>											
<b>Matrix Spike Dup (6090293-MSD1)</b>			<b>Source: AZI0207-01</b>			<b>Prepared: 09/13/16 Analyzed: 09/14/16</b>					
Selenium	0.0958	0.0100	0.0010	mg/L	0.10000	ND	96	75-125	1	20	
Silver	0.0961	0.0050	0.0005	mg/L	0.10000	ND	96	75-125	3	20	
Thallium	0.0962	0.0010	0.0002	mg/L	0.10000	ND	96	75-125	3	20	
Vanadium	0.0990	0.0100	0.0071	mg/L	0.10000	ND	99	75-125	2	20	
Zinc	0.105	0.0100	0.0021	mg/L	0.10000	0.0052	100	75-125	3	20	
Lithium	0.103	0.0500	0.0021	mg/L	0.10000	0.0050	98	75-125	0.3	20	
<b>Post Spike (6090293-PS1)</b>			<b>Source: AZI0207-01</b>			<b>Prepared: 09/13/16 Analyzed: 09/14/16</b>					
Antimony	91.5			ug/L	100.00	3.87	88	80-120			
Arsenic	97.4			ug/L	100.00	0.213	97	80-120			
Barium	108			ug/L	100.00	9.47	99	80-120			
Beryllium	103			ug/L	100.00	0.0497	103	80-120			
Boron	1020			ug/L	1000.0	8.37	101	80-120			
Cadmium	101			ug/L	100.00	0.0611	100	80-120			
Calcium	1790			ug/L	1000.0	858	93	80-120			
Chromium	104			ug/L	100.00	0.391	103	80-120			
Cobalt	99.3			ug/L	100.00	0.850	98	80-120			
Copper	112			ug/L	100.00	9.69	102	80-120			
Lead	98.3			ug/L	100.00	0.131	98	80-120			
Molybdenum	96.4			ug/L	100.00	0.182	96	80-120			
Nickel	111			ug/L	100.00	9.02	102	80-120			
Selenium	96.9			ug/L	100.00	0.0385	97	80-120			
Silver	99.3			ug/L	100.00	0.0257	99	80-120			
Thallium	100			ug/L	100.00	0.131	100	80-120			
Vanadium	102			ug/L	100.00	0.227	102	80-120			
Zinc	105			ug/L	100.00	5.19	100	80-120			
Lithium	107			ug/L	100.00	5.01	102	80-120			



## PACE ANALYTICAL SERVICES, INC.

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

Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

## Legend

### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

### Definition of Qualifiers

- QR-03** The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to suspected matrix interference and/or non-homogeneous sample matrix.
- QM-05** The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).
- B-01** Analyte was detected in the associated method blank at an estimated level equal to or greater than the MDL. Sample values reported as greater than the MDL and less than 10x the method blank value are reported as estimated values.

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



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

**CHAIN OF CUSTODY RECORD**

PAGE: 1 OF 1

<b>CLIENT NAME:</b> Georgia Power		<b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Joju Abraham		<b>CC:</b> Maria Padilla Health McCorkle		<b>PO #:</b> GPC10884198	
<b>PROJECT NAME/STATE:</b> Plant Mitchell/GA									
<b>PROJECT #:</b> Phase II CCR									
Collection DATE	Collection TIME	MATRIX CODE	C O M P	G R A B	SAMPLE IDENTIFICATION	CONTAINER TYPE	PRESERVATION	ANALYSIS REQUESTED	L A B N U M B E R
9-6-16	16:35	GW	✓		PZ-16	3	1	Metals App. III & IV EPA 6020/7470	1
9-6-16	—	GW	✓		DWP-02	3	1	IC (CLT, 804) EPA 300.0	2
9-7-16	08:15	W	✓		EB-02	3	1	TDS SM 2540C Radium 226 & 228 SW-846 9315/9320	3
<b>RECEIVED BY:</b> James T. Parker, Field Manager <b>DATE/TIME:</b> 9-6-16/16:35 <b>RECEIVED BY:</b> Maria Padilla <b>DATE/TIME:</b> 9-7-16/16:30									
<b>RECEIVED BY LAB:</b> Charles Hunt <b>DATE/TIME:</b> 9-10-16 09:20 <b>LAB #:</b> 8102 9462 4418 <b>TRACKING #:</b> 8102 9462 4418 <b>COOLERS #:</b>									







**PACE ANALYTICAL SERVICES, INC.**

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

**LOG-IN CHECKLIST**

**Printed: 9/16/2016 6:52:03PM**

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 09/08/16 09:20

**Work Order:** AZI0211

**Logged In By:** Charles Hawks

**OBSERVATIONS**

**#Samples:** 6

**#Containers:** 19

**Minimum Temp(C):** 2.0

**Maximum Temp(C):** 2.0

**Custody Seal(s) Used:** Yes

**CHECKLIST ITEMS**

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

**Comments:**



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

October 07, 2016

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: Plant Mitchell/GA  
Pace Project No.: 30195541

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on September 09, 2016. 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,

Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell/GA  
Pace Project No.: 30195541

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: Plant Mitchell/GA  
Pace Project No.: 30195541

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30195541001	PZ-16	Water	09/06/16 16:35	09/09/16 09:50
30195541002	DUP-02	Water	09/06/16 00:01	09/09/16 09:50
30195541003	EB-02	Water	09/07/16 08:15	09/09/16 09:50

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell/GA  
Pace Project No.: 30195541

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30195541001	PZ-16	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30195541002	DUP-02	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30195541003	EB-02	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

### REPORT OF LABORATORY ANALYSIS

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: Plant Mitchell/GA  
 Pace Project No.: 30195541

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-16</b>		<b>Lab ID: 30195541001</b>	Collected: 09/06/16 16:35	Received: 09/09/16 09:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	<b>0.213 ± 0.170 (0.293)</b> C:84% T:NA	pCi/L	09/28/16 13:37	13982-63-3		
Radium-228	EPA 9320	<b>0.902 ± 0.375 (0.605)</b> C:106% T:78%	pCi/L	09/27/16 22:04	15262-20-1		
Total Radium	Total Radium Calculation	<b>1.12 ± 0.545 (0.898)</b>	pCi/L	10/07/16 15:29	7440-14-4		

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: DUP-02</b>		<b>Lab ID: 30195541002</b>	Collected: 09/06/16 00:01	Received: 09/09/16 09:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	<b>0.476 ± 0.265 (0.414)</b> C:76% T:NA	pCi/L	09/28/16 13:37	13982-63-3		
Radium-228	EPA 9320	<b>1.28 ± 0.495 (0.776)</b> C:69% T:83%	pCi/L	09/28/16 02:26	15262-20-1		
Total Radium	Total Radium Calculation	<b>1.76 ± 0.760 (1.19)</b>	pCi/L	10/07/16 15:29	7440-14-4		

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: EB-02</b>		<b>Lab ID: 30195541003</b>	Collected: 09/07/16 08:15	Received: 09/09/16 09:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	<b>0.0689 ± 0.135 (0.310)</b> C:89% T:NA	pCi/L	09/28/16 13:37	13982-63-3		
Radium-228	EPA 9320	<b>0.982 ± 0.459 (0.779)</b> C:68% T:78%	pCi/L	09/28/16 02:26	15262-20-1		
Total Radium	Total Radium Calculation	<b>1.05 ± 0.594 (1.09)</b>	pCi/L	10/07/16 15:29	7440-14-4		

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: Plant Mitchell/GA  
 Pace Project No.: 30195541

---

QC Batch: 232982 Analysis Method: EPA 9315  
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium  
 Associated Lab Samples: 30195541001, 30195541002, 30195541003

---

METHOD BLANK: 1141808 Matrix: Water  
 Associated Lab Samples: 30195541001, 30195541002, 30195541003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0285 ± 0.105 (0.269) C:84% T:NA	pCi/L	09/28/16 11:40	

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 Mitchell/GA  
 Pace Project No.: 30195541

---

QC Batch: 232988 Analysis Method: EPA 9320  
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228  
 Associated Lab Samples: 30195541001, 30195541002, 30195541003

---

METHOD BLANK: 1141826 Matrix: Water  
 Associated Lab Samples: 30195541001, 30195541002, 30195541003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.265 ± 0.327 (0.690) C:78% T:84%	pCi/L	09/27/16 16:16	

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

**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: Plant Mitchell/GA  
Pace Project No.: 30195541

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092  
 (770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

**CHAIN OF CUSTODY RECORD**

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Joju Abraham <b>CC:</b> Maria Padilla Heath McCorkle <b>PO #:</b> GPC10684198		<b>PROJECT NAME/STATE:</b> Plant Mitchell/GA <b>PROJECT #:</b> Phase II CCR	
<b>CONTAINER TYPE:</b> PRESERVATION: # of CONTAINERS →	<b>ANALYSIS REQUESTED</b> P P P P 3 7 7 3 Metals App. III & IV EPA 6020/470 IC (Cl, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320	<b>CONTAINER TYPE</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	<b>PRESERVATION</b> 1 - HCl, ≤6°C 2 - H <sub>2</sub> SO <sub>4</sub> , ≤6°C 3 - HNO <sub>3</sub> 4 - NaOH, ≤6°C 5 - NaOH/H <sub>2</sub> NO <sub>3</sub> , ≤6°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , ≤6°C 7 - ≤6°C not frozen	<b>*MATRIX CODES:</b> 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	
<b>RECEIVED BY LAB:</b> [Signature] <b>DATE/TIME:</b> 9-9-16 9:50 <b>TEMPERATURE:</b> 95° <b>pH checked:</b> [Initials]	<b>RECEIVED BY:</b> [Signature] <b>DATE/TIME:</b> 9-6-16/16:35 <b>TEMPERATURE:</b> [Blank]	<b>RELINQUISHED BY:</b> [Signature] <b>DATE/TIME:</b> 9-7-16/16:30	<b>RELINQUISHED BY:</b> [Signature] <b>DATE/TIME:</b> [Blank]	<b>LAB #:</b> [Blank]	<b>ENTERED INTO LIMS:</b> [Blank]
<b>RECEIVED BY:</b> [Signature] <b>DATE/TIME:</b> 9-6-16 16:35 <b>TEMPERATURE:</b> [Blank]	<b>RECEIVED BY:</b> [Signature] <b>DATE/TIME:</b> 9-6-16 16:35 <b>TEMPERATURE:</b> [Blank]	<b>RELINQUISHED BY:</b> [Signature] <b>DATE/TIME:</b> 9-7-16/16:30	<b>RELINQUISHED BY:</b> [Signature] <b>DATE/TIME:</b> [Blank]	<b>LAB #:</b> [Blank]	<b>ENTERED INTO LIMS:</b> [Blank]

WO#: 30195541



Sample Condition Upon Receipt Pittsburgh



Client Name: Georgia Power

Project # 30195541

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 6812 5099 0058

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

Thermometer Used N/A    Type of Ice: Wet Blue None

Cooler Temperature    Observed Temp \_\_\_\_\_ °C    Correction Factor \_\_\_\_\_ °C    Final Temp: \_\_\_\_\_ °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: ML 9-9-16

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC:	X			5.
-Includes date/time/ID/Analysis    Matrix <u>GW</u>				
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used:		X		
Containers Intact:	X			11.
Filtered volume received for Dissolved tests				12.
All containers needing preservation have been checked.	X			13.
All containers needing preservation are found to be in compliance with EPA recommendation.	X			<u>PH &lt; 2</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed <u>ML</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			X	14.
Trip Blank Present:		X		15.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: <u>ML</u> Date: <u>9-9-16</u>

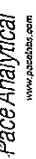
Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e. out of hold, incorrect preservative, out of temp, incorrect containers)  
 \*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: WRR  
Date: 9/26/2016  
Worklist: 31363  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1141808
MB concentration:	0.028
MB Counting Uncertainty:	0.105
MB MDC:	0.269
MB Numerical Performance Indicator:	0.53
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	9/28/2016
Spike I.D.:	16-026
Spike Concentration (pCi/mL):	44.677
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.488
Target Conc. (pCi/L, g, F):	8.972
Result (pCi/L, g, F):	8.112
Uncertainty (Calculated):	0.422
Result (pCi/L, g, F):	0.797
Uncertainty (Calculated):	-1.87
Percent Recovery:	90.41%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30195375005
Duplicate Sample I.D.:	30195375005DUP
Duplicate Result (pCi/L, g, F):	0.007
Sample Result (pCi/L, g, F):	0.180
Sample Duplicate Result (pCi/L, g, F):	-0.021
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.173
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	0.222
Duplicate RPD:	-394.78%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

*Amc 10/16/16*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
MS Aliquot (L, g, F):	
MSD Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	



# Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-228  
Analyst: JLW  
Date: 9/15/2016  
Worklist: 31368  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1141826
MB concentration:	0.285
M/B Counting Uncertainty:	0.323
MB MDC:	0.680
MB Numerical Performance Indicator:	1.61
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	9/27/2016
Spike I.D.:	18-025
Spike Concentration (pCi/mL):	25.564
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.800
Target Conc. (pCi/L, g, F):	6.390
Uncertainty (Calculated):	0.460
Result (pCi/L, g, F):	6.293
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.734
Numerical Performance Indicator:	-0.22
Percent Recovery:	98.49%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30195543001
Duplicate Sample I.D.:	30195543001DUP
Duplicate Result (pCi/L, g, F):	0.224
Sample Result Counting Uncertainty (pCi/L, g, F):	0.332
Sample Duplicate Result (pCi/L, g, F):	0.235
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.330
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-0.046
Duplicate RPD:	4.75%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spiker/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	



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

October 07, 2016

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: Plant Mitchell/GA  
Pace Project No.: 30195540

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on September 09, 2016. 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,

Jacquelyn Collins  
[jacquelyn.collins@pacelabs.com](mailto:jacquelyn.collins@pacelabs.com)  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell/GA  
Pace Project No.: 30195540

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: Plant Mitchell/GA  
Pace Project No.: 30195540

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30195540001	PZ-17	Water	09/07/16 10:35	09/09/16 09:50
30195540002	PZ-18	Water	09/07/16 14:40	09/09/16 09:50
30195540003	PZ-19	Water	09/07/16 15:55	09/09/16 09:50

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell/GA  
Pace Project No.: 30195540

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30195540001	PZ-17	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30195540002	PZ-18	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30195540003	PZ-19	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

### REPORT OF LABORATORY ANALYSIS

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: Plant Mitchell/GA  
 Pace Project No.: 30195540

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-17</b>		<b>Lab ID: 30195540001</b>	Collected: 09/07/16 10:35	Received: 09/09/16 09:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	<b>0.467 ± 0.266 (0.402)</b>	pCi/L	09/30/16 08:09	13982-63-3		
Radium-228	EPA 9320	<b>0.597 ± 0.391 (0.737)</b> C:74% T:NA	pCi/L	09/28/16 12:21	15262-20-1		
Total Radium	Total Radium Calculation	<b>1.06 ± 0.657 (1.14)</b> C:78% T:78%	pCi/L	10/07/16 15:29	7440-14-4		

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-18</b>		<b>Lab ID: 30195540002</b>	Collected: 09/07/16 14:40	Received: 09/09/16 09:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	<b>0.265 ± 0.188 (0.304)</b>	pCi/L	09/30/16 08:09	13982-63-3		
Radium-228	EPA 9320	<b>1.24 ± 0.468 (0.701)</b> C:88% T:NA	pCi/L	09/28/16 12:21	15262-20-1		
Total Radium	Total Radium Calculation	<b>1.51 ± 0.656 (1.01)</b> C:81% T:83%	pCi/L	10/07/16 15:29	7440-14-4		

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-19</b>		<b>Lab ID: 30195540003</b>	Collected: 09/07/16 15:55	Received: 09/09/16 09:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	<b>0.328 ± 0.219 (0.375)</b>	pCi/L	09/30/16 08:09	13982-63-3		
Radium-228	EPA 9320	<b>0.896 ± 0.439 (0.748)</b> C:93% T:NA	pCi/L	09/28/16 16:14	15262-20-1		
Total Radium	Total Radium Calculation	<b>1.22 ± 0.658 (1.12)</b> C:71% T:84%	pCi/L	10/07/16 15:29	7440-14-4		

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: Plant Mitchell/GA  
 Pace Project No.: 30195540

---

QC Batch: 233308 Analysis Method: EPA 9320  
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228  
 Associated Lab Samples: 30195540001, 30195540002, 30195540003

---

METHOD BLANK: 1143415 Matrix: Water  
 Associated Lab Samples: 30195540001, 30195540002, 30195540003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0884 ± 0.332 (0.753) C:77% T:77%	pCi/L	09/28/16 12:21	

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 Mitchell/GA  
 Pace Project No.: 30195540

---

QC Batch: 233313 Analysis Method: EPA 9315  
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium  
 Associated Lab Samples: 30195540001, 30195540002, 30195540003

---

METHOD BLANK: 1143427 Matrix: Water  
 Associated Lab Samples: 30195540001, 30195540002, 30195540003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0767 ± 0.109 (0.226) C:95% T:NA	pCi/L	09/30/16 08:08	

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.

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## QUALIFIERS

Project: Plant Mitchell/GA  
Pace Project No.: 30195540

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.  
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092  
 (770) 734-4200 • FAX (770) 734-4201 • www.asi-lab.com

**CHAIN OF CUSTODY RECORD**

<b>CLIENT NAME:</b> Georgia Power		<b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Joju Abraham		<b>CC:</b> Maria Padilla Heath McCorkle		<b>PO #:</b> GPC10684198	
<b>PROJECT NAME/STATE:</b> Plant Mitchell / GA		<b>PROJECT #:</b> Phase II CCR							
Collection DATE	Collection TIME	MATRIX CODE*	COM P	GR A B	SAMPLE IDENTIFICATION	CONTAINER TYPE:	ANALYSIS REQUESTED	CONTAINER TYPE:	PRESERVATION
9-7-16	10:35	GW	✓		PZ-17	4	Metals App. III & IV EPA 6020/7470	3	1- HCl, 56°C
9-7-16	14:40	GW	✓		PZ-18	3	IC (Cl, F, SO4) EPA 300.0	7	2- H <sub>2</sub> SO <sub>4</sub> , 56°C
9-7-16	15:55	GW	✓		PZ-19	3	TDS SM 2540C	3	3- HNO <sub>3</sub>
							Radum 226 & 228 SW-846 9315/9320	7	4- NaOH, 56°C
									5- NaOH/ZnAc, 56°C
									6- Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C
									7- 56°C not frozen
<b>CONTAINER TYPE:</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER									
<b>PRESERVATION:</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C 7 - 56°C not frozen									
<b>MATRIX CODES:</b> 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									
<b>REMARKS/ADDITIONAL INFORMATION:</b> 2 x 1/2 gal for Radium lab									
<b>WO#: 30195540</b>									
<b>LAB #:</b> FOR LAB USE ONLY									
<b>ENTERED INTO LIMS:</b> Tracking #: 81029462 4429 COOLERS #3									

Sample Condition Upon Receipt Pittsburgh

30195540



Client Name: Georgia Power Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 6812 5099 0058

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

Thermometer Used N/A Type of Ice: Wet Blue None

Cooler Temperature Observed Temp \_\_\_\_\_ °C Correction Factor \_\_\_\_\_ °C Final Temp: \_\_\_\_\_ °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: ML 9-9-16

Comments:	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
-Includes date/time/ID/Analysis Matrix <u>aw</u>				
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
-Pace Containers Used:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>PH 22</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed <u>ML</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
Trip Blank Present:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	15.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rad Aqueous Samples Screened > 0.5 mrem/hr	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>ML</u> Date: <u>9-9-16</u>

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e. out of hold, incorrect preservative, out of temp, incorrect containers)  
 \*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

# Quality Control Sample Performance Assessment

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



Test: Ra-228  
Analyst: J.L.W.  
Date: 9/21/2016  
Worklist: 31428  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1143415
MB Concentration:	0.088
MB Counting Uncertainty:	0.331
MB MDC:	0.753
MB Numerical Performance Indicator:	0.52
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?
		N
		LCSD31428
Count Date:	9/28/2016	
Spike I.D.:	16-025	
Spike Concentration (pCi/mL):	25.557	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.807	
Target Conc. (pCi/L, g, F):	6.336	
Uncertainty (Calculated):	0.456	
Result (pCi/L, g, F):	7.183	
LCSD Counting Uncertainty (pCi/L, g, F):	0.821	
Numerical Performance Indicator:	1.79	
Percent Recovery:	113.54%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30195540001	
Duplicate Sample I.D.:	30195540001DUP	
Sample Result (pCi/L, g, F):	0.597	
Sample Duplicate Result (pCi/L, g, F):	0.376	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.139	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.496	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-1.706	
Duplicate RPD:	62.40%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail**	

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

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision.

*Handwritten signature and initials*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: LAL  
Date: 9/28/2016  
Worklist: 31430  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1143427
MB concentration:	0.077
M/B Counting Uncertainty:	0.108
MB MDC:	0.226
MB Numerical Performance Indicator:	1.39
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	9/30/2016
Spike I.D.:	18-028
Spike Concentration (pCi/mL):	44.677
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.511
Target Conc. (pCi/L, g, F):	8.751
Uncertainty (Calculated):	0.412
Result (pCi/L, g, F):	7.365
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.742
Numerical Performance Indicator:	-3.20
Percent Recovery:	84.17%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30195376002
Duplicate Sample I.D.:	30195376002DUP
Sample Result (pCi/L, g, F):	0.428
Sample Result Counting Uncertainty (pCi/L, g, F):	0.216
Sample Duplicate Result (pCi/L, g, F):	0.117
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.181
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	2.170
Duplicate RPD:	114.41%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision.

*Qualify*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
MS Allquot (L, g, F):	
MS Target Conc (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	



## PACE ANALYTICAL SERVICES, INC.

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

### Laboratory Report

Prepared For:

Georgia Power  
2480 Maner Road  
Atlanta, GA 30339

Attention: Mr. Joju Abraham

Report Number: AZI0282

September 16, 2016

Project: CCR Event

Project #: Plant Mitchell

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

Approved:

A handwritten signature in black ink, appearing to read "Maya Farko", written over a horizontal line.

Project Manager

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All test results relate only to the samples analyzed.



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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
FB-02	AZI0282-01	DI Water	09/08/16 07:50	09/09/16 09:05
PZ-25	AZI0282-02	Ground Water	09/08/16 10:55	09/09/16 09:05
PZ-24	AZI0282-03	Ground Water	09/08/16 15:30	09/09/16 09:05



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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

**Report No.: AZI0282**

**Project: CCR Event**

**Client ID: FB-02**

**Lab Number ID: AZI0282-01**

**Date/Time Sampled: 9/8/2016 7:50:00AM**

**Date/Time Received: 9/9/2016 9:05:00AM**

**Matrix: DI Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	09/13/16 18:10	09/13/16 18:10	6090305	JPT
<b>Inorganic Anions</b>											
Chloride	0.03	0.25	0.01	mg/L	EPA 300.0	J	1	09/13/16 11:52	09/14/16 05:47	6090316	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/13/16 11:52	09/14/16 05:47	6090316	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	09/13/16 11:52	09/14/16 05:47	6090316	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:05	6090322	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:05	6090322	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:05	6090322	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/14/16 09:20	09/16/16 15:38	6090322	CSW
Boron	0.0083	0.100	0.0064	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 01:05	6090322	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:05	6090322	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:05	6090322	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:05	6090322	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:05	6090322	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:05	6090322	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:05	6090322	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:05	6090322	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:05	6090322	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:05	6090322	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/12/16 08:55	09/12/16 17:07	6090244	MTC





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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

**Report No.: AZI0282**

**Project: CCR Event**

**Client ID: PZ-25**

**Lab Number ID: AZI0282-02**

**Date/Time Sampled: 9/8/2016 10:55:00AM**

**Date/Time Received: 9/9/2016 9:05:00AM**

**Matrix: Ground Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	293	25	10	mg/L	SM 2540 C		1	09/13/16 18:10	09/13/16 18:10	6090305	JPT
<b>Inorganic Anions</b>											
Chloride	4.0	0.25	0.01	mg/L	EPA 300.0		1	09/13/16 11:52	09/14/16 06:30	6090316	RLC
Fluoride	0.25	0.30	0.02	mg/L	EPA 300.0	J	1	09/13/16 11:52	09/14/16 06:30	6090316	RLC
Sulfate	48	1.0	0.05	mg/L	EPA 300.0		1	09/13/16 11:52	09/14/16 06:30	6090316	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:11	6090322	CSW
Arsenic	0.0017	0.0050	0.0016	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 01:11	6090322	CSW
Barium	0.102	0.0100	0.0004	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:11	6090322	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/14/16 09:20	09/16/16 15:42	6090322	CSW
Boron	0.204	0.100	0.0064	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:11	6090322	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:11	6090322	CSW
Calcium	85.2	5.00	0.311	mg/L	EPA 6020B		10	09/14/16 09:20	09/16/16 16:24	6090322	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:11	6090322	CSW
Cobalt	0.0008	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 01:11	6090322	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:11	6090322	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:11	6090322	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:11	6090322	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:11	6090322	CSW
Lithium	0.0038	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 01:11	6090322	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/12/16 08:55	09/12/16 17:09	6090244	MTC



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Attention: Mr. Joju Abraham

September 16, 2016

**Report No.: AZI0282**

**Project: CCR Event**

**Client ID: PZ-24**

**Lab Number ID: AZI0282-03**

**Date/Time Sampled: 9/8/2016 3:30:00PM**

**Date/Time Received: 9/9/2016 9:05:00AM**

**Matrix: Ground Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	337	25	10	mg/L	SM 2540 C		1	09/13/16 18:10	09/13/16 18:10	6090305	JPT
<b>Inorganic Anions</b>											
Chloride	7.2	0.25	0.01	mg/L	EPA 300.0		1	09/13/16 11:52	09/14/16 06:52	6090316	RLC
Fluoride	0.22	0.30	0.02	mg/L	EPA 300.0	J	1	09/13/16 11:52	09/14/16 06:52	6090316	RLC
Sulfate	13	1.0	0.05	mg/L	EPA 300.0		1	09/13/16 11:52	09/14/16 06:52	6090316	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:17	6090322	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:17	6090322	CSW
Barium	0.0931	0.0100	0.0004	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:17	6090322	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/14/16 09:20	09/16/16 15:47	6090322	CSW
Boron	0.0261	0.100	0.0064	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 01:17	6090322	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:17	6090322	CSW
Calcium	85.4	5.00	0.311	mg/L	EPA 6020B		10	09/14/16 09:20	09/16/16 16:29	6090322	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:17	6090322	CSW
Cobalt	0.0015	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/14/16 09:20	09/15/16 01:17	6090322	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:17	6090322	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:17	6090322	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:17	6090322	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:17	6090322	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/14/16 09:20	09/15/16 01:17	6090322	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/12/16 08:55	09/12/16 17:11	6090244	MTC



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Attention: Mr. Joju Abraham

September 16, 2016

**Report No.: AZI0282**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090305 - SM 2540 C</b>											
<b>Blank (6090305-BLK1)</b>						Prepared & Analyzed: 09/13/16					
Total Dissolved Solids	ND	10	10	mg/L							
<b>LCS (6090305-BS1)</b>						Prepared & Analyzed: 09/13/16					
Total Dissolved Solids	388	10	10	mg/L	400.00		97	84-108			
<b>Duplicate (6090305-DUP1)</b>						<b>Source: AZI0282-02</b>			Prepared & Analyzed: 09/13/16		
Total Dissolved Solids	295	10	10	mg/L		293			0.7	10	
<b>Duplicate (6090305-DUP2)</b>						<b>Source: AZI0284-05</b>			Prepared & Analyzed: 09/13/16		
Total Dissolved Solids	216	10	10	mg/L		201			7	10	



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September 16, 2016

**Report No.: AZI0282**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090316 - EPA 300.0</b>											
<b>Blank (6090316-BLK1)</b>						Prepared & Analyzed: 09/13/16					
Chloride	ND	1.0	0.01	mg/L							
Fluoride	ND	0.10	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
<b>LCS (6090316-BS1)</b>						Prepared & Analyzed: 09/13/16					
Chloride	10.4	0.25	0.01	mg/L	10.010		104	90-110			
Fluoride	10.8	0.30	0.02	mg/L	10.010		108	90-110			
Sulfate	10.5	1.0	0.05	mg/L	10.010		104	90-110			
<b>Matrix Spike (6090316-MS1)</b>						Source: AZI0245-02 Prepared & Analyzed: 09/13/16					
Chloride	13.6	0.25	0.01	mg/L	10.010	5.83	78	90-110			QM-05
Fluoride	12.1	0.30	0.02	mg/L	10.010	0.66	114	90-110			QM-05
Sulfate	298	1.0	0.05	mg/L	10.010	297	11	90-110			QM-05
<b>Matrix Spike (6090316-MS2)</b>						Source: AZI0282-01 Prepared: 09/13/16 Analyzed: 09/14/16					
Chloride	8.79	0.25	0.01	mg/L	10.010	0.03	88	90-110			QM-05
Fluoride	9.42	0.30	0.02	mg/L	10.010	ND	94	90-110			
Sulfate	9.03	1.0	0.05	mg/L	10.010	ND	90	90-110			
<b>Matrix Spike Dup (6090316-MSD1)</b>						Source: AZI0245-02 Prepared & Analyzed: 09/13/16					
Chloride	14.5	0.25	0.01	mg/L	10.010	5.83	86	90-110	6	15	QM-05
Fluoride	12.9	0.30	0.02	mg/L	10.010	0.66	122	90-110	6	15	QM-05
Sulfate	296	1.0	0.05	mg/L	10.010	297	NR	90-110	0.5	15	QM-05



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September 16, 2016

**Report No.: AZI0282**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090244 - EPA 7470A</b>											
<b>Blank (6090244-BLK1)</b>						Prepared & Analyzed: 09/12/16					
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (6090244-BS1)</b>						Prepared & Analyzed: 09/12/16					
Mercury	0.00235	0.00050	0.000041	mg/L	2.5000E-3		94	80-120			
<b>Matrix Spike (6090244-MS1)</b>						Source: AZI0269-04 Prepared & Analyzed: 09/12/16					
Mercury	0.00242	0.00050	0.000041	mg/L	2.5000E-3	ND	97	75-125			
<b>Matrix Spike Dup (6090244-MSD1)</b>						Source: AZI0269-04 Prepared & Analyzed: 09/12/16					
Mercury	0.00242	0.00050	0.000041	mg/L	2.5000E-3	ND	97	75-125	0.06	20	
<b>Post Spike (6090244-PS1)</b>						Source: AZI0269-04 Prepared & Analyzed: 09/12/16					
Mercury	1.78			ug/L	1.6667	0.0139	106	80-120			
<b>Batch 6090322 - EPA 3005A</b>											
<b>Blank (6090322-BLK1)</b>						Prepared & Analyzed: 09/14/16					
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.100	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0100	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							



**PACE ANALYTICAL SERVICES, INC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

**Report No.: AZI0282**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090322 - EPA 3005A</b>											
<b>LCS (6090322-BS1)</b>						Prepared & Analyzed: 09/14/16					
Antimony	0.106	0.0030	0.0008	mg/L	0.10000		106	80-120			
Arsenic	0.0992	0.0050	0.0016	mg/L	0.10000		99	80-120			
Barium	0.0991	0.0100	0.0004	mg/L	0.10000		99	80-120			
Beryllium	0.0963	0.0030	0.00008	mg/L	0.10000		96	80-120			
Boron	1.04	0.100	0.0064	mg/L	1.0000		104	80-120			
Cadmium	0.0975	0.0010	0.00007	mg/L	0.10000		97	80-120			
Calcium	1.08	0.500	0.0311	mg/L	1.0000		108	80-120			
Chromium	0.0960	0.0100	0.0009	mg/L	0.10000		96	80-120			
Cobalt	0.0964	0.0100	0.0005	mg/L	0.10000		96	80-120			
Copper	0.0942	0.0250	0.0005	mg/L	0.10000		94	80-120			
Lead	0.0979	0.0050	0.0001	mg/L	0.10000		98	80-120			
Molybdenum	0.101	0.0100	0.0017	mg/L	0.10000		101	80-120			
Nickel	0.0968	0.0100	0.0006	mg/L	0.10000		97	80-120			
Selenium	0.103	0.0100	0.0010	mg/L	0.10000		103	80-120			
Silver	0.0980	0.0100	0.0005	mg/L	0.10000		98	80-120			
Thallium	0.0974	0.0010	0.0002	mg/L	0.10000		97	80-120			
Vanadium	0.0962	0.0100	0.0071	mg/L	0.10000		96	80-120			
Zinc	0.104	0.0100	0.0021	mg/L	0.10000		104	80-120			
Lithium	0.103	0.0500	0.0021	mg/L	0.10000		103	80-120			
<b>Matrix Spike (6090322-MS1)</b>						Source: AZI0269-05 Prepared & Analyzed: 09/14/16					
Antimony	0.105	0.0030	0.0008	mg/L	0.10000	ND	105	75-125			
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000	ND	102	75-125			
Barium	0.120	0.0100	0.0004	mg/L	0.10000	0.0242	96	75-125			
Beryllium	0.0890	0.0030	0.00008	mg/L	0.10000	ND	89	75-125			
Boron	0.968	0.100	0.0064	mg/L	1.0000	ND	97	75-125			
Cadmium	0.0982	0.0010	0.00007	mg/L	0.10000	ND	98	75-125			
Calcium	27.6	0.500	0.155	mg/L	1.0000	26.8	84	75-125			
Chromium	0.0959	0.0100	0.0009	mg/L	0.10000	ND	96	75-125			
Cobalt	0.0943	0.0100	0.0005	mg/L	0.10000	ND	94	75-125			
Copper	0.0933	0.0250	0.0005	mg/L	0.10000	ND	93	75-125			
Lead	0.0970	0.0050	0.0001	mg/L	0.10000	ND	97	75-125			
Molybdenum	0.101	0.0100	0.0017	mg/L	0.10000	ND	101	75-125			
Nickel	0.0938	0.0100	0.0006	mg/L	0.10000	ND	94	75-125			
Selenium	0.102	0.0100	0.0010	mg/L	0.10000	ND	102	75-125			
Silver	0.0948	0.0100	0.0005	mg/L	0.10000	ND	95	75-125			
Thallium	0.0969	0.0010	0.0002	mg/L	0.10000	ND	97	75-125			
Vanadium	0.0966	0.0100	0.0071	mg/L	0.10000	ND	97	75-125			
Zinc	0.101	0.0100	0.0021	mg/L	0.10000	ND	101	75-125			
Lithium	0.0939	0.0500	0.0021	mg/L	0.10000	ND	94	75-125			



**PACE ANALYTICAL SERVICES, INC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

**Report No.: AZI0282**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6090322 - EPA 3005A</b>											
<b>Matrix Spike Dup (6090322-MSD1)</b>			<b>Source: AZI0269-05</b>			<b>Prepared &amp; Analyzed: 09/14/16</b>					
Antimony	0.104	0.0030	0.0008	mg/L	0.10000	ND	104	75-125	0.6	20	
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000	ND	102	75-125	0.005	20	
Barium	0.122	0.0100	0.0004	mg/L	0.10000	0.0242	97	75-125	2	20	
Beryllium	0.0918	0.0030	0.00008	mg/L	0.10000	ND	92	75-125	3	20	
Boron	0.986	0.100	0.0064	mg/L	1.0000	ND	99	75-125	2	20	
Cadmium	0.0965	0.0010	0.00007	mg/L	0.10000	ND	97	75-125	2	20	
Calcium	26.6	0.500	0.155	mg/L	1.0000	26.8	NR	75-125	4	20	QM-02
Chromium	0.0975	0.0100	0.0009	mg/L	0.10000	ND	97	75-125	2	20	
Cobalt	0.0951	0.0100	0.0005	mg/L	0.10000	ND	95	75-125	0.9	20	
Copper	0.0930	0.0250	0.0005	mg/L	0.10000	ND	93	75-125	0.3	20	
Lead	0.0965	0.0050	0.0001	mg/L	0.10000	ND	97	75-125	0.5	20	
Molybdenum	0.102	0.0100	0.0017	mg/L	0.10000	ND	102	75-125	0.7	20	
Nickel	0.0941	0.0100	0.0006	mg/L	0.10000	ND	94	75-125	0.3	20	
Selenium	0.0988	0.0100	0.0010	mg/L	0.10000	ND	99	75-125	3	20	
Silver	0.0970	0.0100	0.0005	mg/L	0.10000	ND	97	75-125	2	20	
Thallium	0.0967	0.0010	0.0002	mg/L	0.10000	ND	97	75-125	0.2	20	
Vanadium	0.0955	0.0100	0.0071	mg/L	0.10000	ND	95	75-125	1	20	
Zinc	0.101	0.0100	0.0021	mg/L	0.10000	ND	101	75-125	0.4	20	
Lithium	0.0960	0.0500	0.0021	mg/L	0.10000	ND	96	75-125	2	20	
<b>Post Spike (6090322-PS1)</b>			<b>Source: AZI0269-05</b>			<b>Prepared &amp; Analyzed: 09/14/16</b>					
Antimony	94.5			ug/L	100.00	0.368	94	80-120			
Arsenic	100			ug/L	100.00	0.0511	100	80-120			
Barium	122			ug/L	100.00	24.2	98	80-120			
Beryllium	92.5			ug/L	100.00	0.0060	93	80-120			
Boron	952			ug/L	1000.0	5.24	95	80-120			
Cadmium	101			ug/L	100.00	-0.0105	101	80-120			
Calcium	28000			ug/L	1000.0	26800	118	80-120			
Chromium	99.3			ug/L	100.00	0.862	98	80-120			
Cobalt	97.5			ug/L	100.00	0.0548	97	80-120			
Copper	93.7			ug/L	100.00	0.0786	94	80-120			
Lead	96.3			ug/L	100.00	0.0261	96	80-120			
Molybdenum	102			ug/L	100.00	0.784	102	80-120			
Nickel	94.5			ug/L	100.00	0.0913	94	80-120			
Selenium	96.5			ug/L	100.00	-0.0345	96	80-120			
Silver	97.1			ug/L	100.00	0.0057	97	80-120			
Thallium	96.6			ug/L	100.00	0.0625	97	80-120			
Vanadium	98.0			ug/L	100.00	0.172	98	80-120			
Zinc	103			ug/L	100.00	1.20	102	80-120			
Lithium	97.0			ug/L	100.00	0.571	96	80-120			



## PACE ANALYTICAL SERVICES, INC.

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

Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

## Legend

### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

### Definition of Qualifiers

- QM-05** The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.
- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

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





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

**CHAIN OF CUSTODY RECORD**

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

REPORT TO: Joju Abraham  
CC: Maria Padilla  
Heath McCorkle

REQUESTED COMPLETION DATE: PO #: GPC10684198

PROJECT NAME/STATE:  
**Plant Mitchell/GA**

CONTAINER TYPE (PRESERVATION)	ANALYSIS REQUESTED							DATE/TIME	DATE/TIME	REMARKS/ADDITIONAL INFORMATION
	P	P	P	P	P	P	P			
1 - HCl, ≤6°C										
2 - H <sub>2</sub> SO <sub>4</sub> , ≤6°C										
3 - HNO <sub>3</sub>										
4 - NaOH, ≤6°C										
5 - NaOH/NaAc, ≤6°C										
6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , ≤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										
CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER										
L A B I D N U M B E R										
# of CONTAINERS	3	3	4							
Metals App. III & IV EPA 6020/7470	1	1	1							
IC (Cl, F, SO <sub>4</sub> ) EPA 300.0	1	1	1							
TDS SM 2540C	1	1	1							
Radium 226 & 228 SW-846 9315/9320	1	1	2							
RELINQUISHED BY: [Signature]										
RELINQUISHED BY: [Signature]										
SAMPLED BY AND TITLE: Fred Amst Parker manager										
RECEIVED BY: [Signature]										

DATE/TIME: 9-8-16 / 07:50  
DATE/TIME: 9-8-16 / 16:15

RECEIVED BY LAB: [Signature]  
pH checked: [Signature]

LAB #: AZT0282  
Entered into LIMS: [Signature]  
Tracking #: 810294624430

FOR LAB USE ONLY



**PACE ANALYTICAL SERVICES, INC.**

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

**LOG-IN CHECKLIST**

**Printed: 9/16/2016 7:12:45PM**

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 09/09/16 09:05

**Work Order:** AZI0282

**Logged In By:** Charles Hawks

**OBSERVATIONS**

**#Samples:** 3

**#Containers:** 10

**Minimum Temp(C):** 2.0

**Maximum Temp(C):** 2.0

**Custody Seal(s) Used:** Yes

**CHECKLIST ITEMS**

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

**Comments:**



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

October 07, 2016

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: Plant Mitchell/GA  
Pace Project No.: 30195629

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on September 12, 2016. 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,

Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
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## CERTIFICATIONS

Project: Plant Mitchell/GA  
Pace Project No.: 30195629

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH-0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana DHH/TNI Certification #: LA140008  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: PA00091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification  
Missouri Certification #: 235  
Montana Certification #: Cert 0082  
Nebraska Certification #: NE-05-29-14  
Nevada Certification #: PA014572015-1  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188-14-8  
Utah/TNI Certification #: PA014572015-5  
USDA Soil Permit #: P330-14-00213  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 460198  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Certification  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: Plant Mitchell/GA  
Pace Project No.: 30195629

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30195629001	FB-02	Water	09/08/16 07:50	09/12/16 09:25
30195629002	PZ-25	Water	09/08/16 10:55	09/12/16 09:25
30195629003	PZ-24	Water	09/08/16 15:30	09/12/16 09:25

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell/GA  
Pace Project No.: 30195629

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30195629001	FB-02	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30195629002	PZ-25	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30195629003	PZ-24	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

### REPORT OF LABORATORY ANALYSIS

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: Plant Mitchell/GA  
 Pace Project No.: 30195629

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: FB-02</b>		<b>Lab ID: 30195629001</b>	Collected: 09/08/16 07:50	Received: 09/12/16 09:25	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	<b>-0.0698 ± 0.0493 (0.260)</b> C:92% T:NA	pCi/L	09/30/16 10:09	13982-63-3		
Radium-228	EPA 9320	<b>0.671 ± 0.505 (0.994)</b> C:59% T:84%	pCi/L	09/30/16 16:39	15262-20-1		
Total Radium	Total Radium Calculation	<b>0.671 ± 0.554 (1.25)</b>	pCi/L	10/07/16 15:58	7440-14-4		

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-25</b>		<b>Lab ID: 30195629002</b>	Collected: 09/08/16 10:55	Received: 09/12/16 09:25	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	<b>0.275 ± 0.182 (0.275)</b> C:89% T:NA	pCi/L	09/30/16 10:09	13982-63-3		
Radium-228	EPA 9320	<b>1.13 ± 0.569 (0.987)</b> C:58% T:81%	pCi/L	09/30/16 16:40	15262-20-1		
Total Radium	Total Radium Calculation	<b>1.41 ± 0.751 (1.26)</b>	pCi/L	10/07/16 15:58	7440-14-4		

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-24</b>		<b>Lab ID: 30195629003</b>	Collected: 09/08/16 15:30	Received: 09/12/16 09:25	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	<b>0.436 ± 0.218 (0.272)</b> C:88% T:NA	pCi/L	09/30/16 10:09	13982-63-3		
Radium-228	EPA 9320	<b>0.0498 ± 0.374 (0.861)</b> C:76% T:84%	pCi/L	09/30/16 12:31	15262-20-1		
Total Radium	Total Radium Calculation	<b>0.486 ± 0.592 (1.13)</b>	pCi/L	10/07/16 15:58	7440-14-4		

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: Plant Mitchell/GA  
 Pace Project No.: 30195629

---

QC Batch: 233314 Analysis Method: EPA 9315  
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium  
 Associated Lab Samples: 30195629001, 30195629002, 30195629003

---

METHOD BLANK: 1143428 Matrix: Water  
 Associated Lab Samples: 30195629001, 30195629002, 30195629003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0373 ± 0.118 (0.296) C:84% T:NA	pCi/L	09/30/16 08:10	

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 - RADIOCHEMISTRY**

Project: Plant Mitchell/GA  
 Pace Project No.: 30195629

---

QC Batch: 233309 Analysis Method: EPA 9320  
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228  
 Associated Lab Samples: 30195629001, 30195629002, 30195629003

---

METHOD BLANK: 1143416 Matrix: Water  
 Associated Lab Samples: 30195629001, 30195629002, 30195629003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.822 ± 0.468 (0.855) C:65% T:89%	pCi/L	09/30/16 12:30	

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 Mitchell/GA  
Pace Project No.: 30195629

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt Pittsburgh

30195629



Client Name: Pace, Georgia Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 6812 5099 0481

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

Thermometer Used NIA Type of Ice: Wet Blue None

Cooler Temperature Observed Temp NIA °C Correction Factor: NIA °C Final Temp: NIA °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: KK 9-12-14

Comments:	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
-Includes date/time/ID/Analysis Matrix: <u>W+</u>				
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
-Pace Containers Used:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Filtered volume received for Dissolved tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>KK</u> Date/time of preservation: _____
				Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
Trip Blank Present:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rad Aqueous Samples Screened > 0.5 mrem/hr	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>KK</u> Date: <u>9-12-14</u>

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e. out of hold, incorrect preservative, out of temp, incorrect containers)  
 \*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: LAL  
Date: 9/28/2016  
Worklist: 31431  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1143428
MB Concentration:	0.037
MB Counting Uncertainty:	0.118
MB MDC:	0.286
MB Numerical Performance Indicator:	0.62
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	9/30/2016
Spike I.D.:	18-026
Spike Concentration (pCi/mL):	44.677
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.500
Target Conc. (pCi/L, g, F):	8.927
Uncertainty (Calculated):	0.420
Result (pCi/L, g, F):	7.175
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.760
Numerical Performance Indicator:	-3.96
Percent Recovery:	80.37%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30195628007
Duplicate Sample I.D.:	30195628007DUP
Sample Result (pCi/L, g, F):	0.002
Sample Result Counting Uncertainty (pCi/L, g, F):	0.094
Sample Duplicate Result (pCi/L, g, F):	0.118
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.136
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	-1.386
Duplicate RPD:	193.89%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision.

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Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228  
Analyst: JILW  
Date: 9/30/2016  
Worklist: 31421  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1143403
MB concentration:	0.776
M/B Counting Uncertainty:	0.401
MB MDC:	0.778
MB Numerical Performance Indicator:	3.80
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS (Y or N)?	
LCS31421	N
LCSD31421	
Count Date:	10/3/2016
Spike I.D.:	16-025
Spike Concentration (pCi/mL):	25.514
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.804
Target Conc. (pCi/L, g, F):	6.347
Result (pCi/L, g, F):	0.457
Uncertainty (Calculated):	8.268
Percent Recovery:	0.739
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	4.34
Numerical Performance Indicator:	130.28%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	
Sample Result (pCi/L, g, F):	
Sample Duplicate Result (pCi/L, g, F):	
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	
Duplicate RPD:	
Duplicate Status vs Numerical Indicator:	
Duplicate Status vs RPD:	

Sample Matrix Spike Control Assessment	
Sample Collection Date:	9/9/2016
Sample I.D.:	60227403003
Sample MS I.D.:	60227403010
Sample MS I.D.:	60227403011
Spike I.D.:	16-025
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	25.718
Spike Volume Used in MS (mL):	0.30
MS Aliquot (L, g, F):	0.30
MS Target Conc. (pCi/L, g, F):	0.764
MSD Aliquot (L, g, F):	10.096
MSD Target Conc. (pCi/L, g, F):	0.758
Spike uncertainty (calculated):	10.184
Sample Result:	0.727
Sample Matrix Spike Result:	1.830
Sample Matrix Spike Duplicate Result:	15.341
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	1.480
Sample Matrix Spike Duplicate Result:	15.505
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	1.536
MS Numerical Performance Indicator:	3.850
MS Percent Recovery:	133.83%
MS Status vs Numerical Indicator:	134.28%
MS Status vs Recovery:	N/A
MSD Status vs Recovery:	N/A
MSD Status vs Recovery:	Pass
MSD Status vs Recovery:	Pass

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	60227403010
Sample MS I.D.:	60227403011
Spike I.D.:	16-025
Sample Matrix Spike Result:	15.341
Sample Matrix Spike Duplicate Result:	1.480
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	15.505
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	1.536
Duplicate Numerical Performance Indicator:	-0.151
Duplicate Numerical Performance Indicator:	0.34%
MS/MSD Duplicate Status vs Numerical Indicator:	N/A
MS/MSD Duplicate Status vs RPD:	Pass

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

Comments:

*Handwritten signature*



**PACE ANALYTICAL SERVICES, INC.**

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

**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AZJ0503**

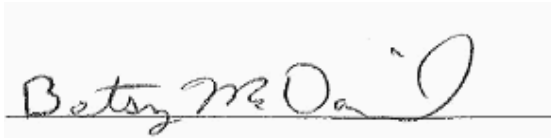
**October 26, 2016**

**Project: CCR Event**

**Project #: Plant Mitchell**

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

Approved:



Project Manager

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All test results relate only to the samples analyzed.



**PACE ANALYTICAL SERVICES, INC.**

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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 26, 2016

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
PZ-31	AZJ0503-01	Ground Water	10/18/16 10:40	10/19/16 08:50
PZ-32	AZJ0503-02	Ground Water	10/18/16 15:32	10/19/16 08:50





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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 26, 2016

Report No.: AZJ0503

Project: CCR Event

Client ID: PZ-31

Lab Number ID: AZJ0503-01

Date/Time Sampled: 10/18/2016 10:40:00AM

Date/Time Received: 10/19/2016 8:50:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	264	25	10	mg/L	SM 2540 C		1	10/20/16 17:47	10/20/16 17:47	6100518	JPT
<b>Inorganic Anions</b>											
Chloride	4.5	0.25	0.01	mg/L	EPA 300.0		1	10/21/16 11:14	10/22/16 14:13	6100567	RLC
Fluoride	0.16	0.30	0.02	mg/L	EPA 300.0	J	1	10/21/16 11:14	10/22/16 14:13	6100567	RLC
Sulfate	2.2	1.0	0.05	mg/L	EPA 300.0		1	10/21/16 11:14	10/22/16 14:13	6100567	RLC
<b>Metals, Total</b>											
Antimony	0.0018	0.0030	0.0008	mg/L	EPA 6020B	J	1	10/20/16 10:35	10/20/16 14:07	6100492	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:07	6100492	CSW
Barium	0.0257	0.0100	0.0004	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:07	6100492	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:07	6100492	CSW
Boron	0.0174	0.100	0.0064	mg/L	EPA 6020B	J	1	10/20/16 10:35	10/20/16 14:07	6100492	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:07	6100492	CSW
Calcium	88.3	25.0	1.55	mg/L	EPA 6020B		50	10/20/16 10:35	10/21/16 12:37	6100492	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:07	6100492	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:07	6100492	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:07	6100492	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:07	6100492	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:07	6100492	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:07	6100492	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:07	6100492	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/24/16 10:30	10/24/16 13:50	6100578	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 26, 2016

Report No.: AZJ0503

Project: CCR Event

Client ID: PZ-32

Lab Number ID: AZJ0503-02

Date/Time Sampled: 10/18/2016 3:32:00PM

Date/Time Received: 10/19/2016 8:50:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	152	25	10	mg/L	SM 2540 C		1	10/20/16 17:47	10/20/16 17:47	6100518	JPT
<b>Inorganic Anions</b>											
Chloride	3.5	0.25	0.01	mg/L	EPA 300.0		1	10/21/16 11:14	10/22/16 14:54	6100567	RLC
Fluoride	0.11	0.30	0.02	mg/L	EPA 300.0	J	1	10/21/16 11:14	10/22/16 14:54	6100567	RLC
Sulfate	2.3	1.0	0.05	mg/L	EPA 300.0		1	10/21/16 11:14	10/22/16 14:54	6100567	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:13	6100492	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:13	6100492	CSW
Barium	0.0248	0.0100	0.0004	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:13	6100492	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:13	6100492	CSW
Boron	0.0156	0.100	0.0064	mg/L	EPA 6020B	J	1	10/20/16 10:35	10/20/16 14:13	6100492	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:13	6100492	CSW
Calcium	57.2	5.00	0.311	mg/L	EPA 6020B		10	10/20/16 10:35	10/21/16 12:44	6100492	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:13	6100492	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:13	6100492	CSW
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	10/20/16 10:35	10/20/16 14:13	6100492	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:13	6100492	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:13	6100492	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:13	6100492	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/20/16 10:35	10/20/16 14:13	6100492	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/24/16 10:30	10/24/16 13:53	6100578	MTC



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**Report No.: AZJ0503**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6100518 - SM 2540 C</b>											
<b>Blank (6100518-BLK1)</b>						Prepared & Analyzed: 10/20/16					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (6100518-BS1)</b>						Prepared & Analyzed: 10/20/16					
Total Dissolved Solids	389	25	10	mg/L	400.00		97	84-108			
<b>Duplicate (6100518-DUP1)</b>						Source: AZJ0518-03 Prepared & Analyzed: 10/20/16					
Total Dissolved Solids	424	25	10	mg/L		415			2	10	
<b>Duplicate (6100518-DUP2)</b>						Source: AZJ0518-07 Prepared & Analyzed: 10/20/16					
Total Dissolved Solids	307	25	10	mg/L		307			0	10	



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**Report No.: AZJ0503**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6100567 - EPA 300.0</b>											
<b>Blank (6100567-BLK1)</b>						Prepared: 10/21/16 Analyzed: 10/22/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.10	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
<b>LCS (6100567-BS1)</b>						Prepared: 10/21/16 Analyzed: 10/22/16					
Chloride	9.72	1.0	0.01	mg/L	10.010		97	90-110			
Fluoride	9.80	0.10	0.02	mg/L	10.020		98	90-110			
Sulfate	9.77	5.0	0.05	mg/L	10.020		98	90-110			
<b>Matrix Spike (6100567-MS1)</b>						Source: AZJ0518-01 Prepared: 10/21/16 Analyzed: 10/22/16					
Chloride	11.1	1.0	0.01	mg/L	10.010	1.06	100	90-110			
Fluoride	10.3	0.10	0.02	mg/L	10.020	0.15	101	90-110			
Sulfate	14.4	5.0	0.05	mg/L	10.020	4.73	97	90-110			
<b>Matrix Spike (6100567-MS2)</b>						Source: AZJ0580-01 Prepared: 10/21/16 Analyzed: 10/22/16					
Chloride	15.8	1.0	0.01	mg/L	10.010	5.76	100	90-110			
Fluoride	10.5	0.10	0.02	mg/L	10.020	0.10	104	90-110			
Sulfate	51.3	5.0	0.05	mg/L	10.020	46.2	51	90-110			QM-02
<b>Matrix Spike Dup (6100567-MSD1)</b>						Source: AZJ0518-01 Prepared: 10/21/16 Analyzed: 10/22/16					
Chloride	11.1	1.0	0.01	mg/L	10.010	1.06	100	90-110	0.4	15	
Fluoride	10.3	0.10	0.02	mg/L	10.020	0.15	101	90-110	0.07	15	
Sulfate	14.5	5.0	0.05	mg/L	10.020	4.73	97	90-110	0.4	15	



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October 26, 2016

**Report No.: AZJ0503**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6100492 - EPA 3005A</b>											
<b>Blank (6100492-BLK1)</b>						Prepared & Analyzed: 10/20/16					
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.100	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0050	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0050	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0050	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							
<b>LCS (6100492-BS1)</b>						Prepared & Analyzed: 10/20/16					
Antimony	0.106	0.0030	0.0008	mg/L	0.10000		106	80-120			
Arsenic	0.103	0.0050	0.0016	mg/L	0.10000		103	80-120			
Barium	0.0999	0.0100	0.0004	mg/L	0.10000		100	80-120			
Beryllium	0.102	0.0030	0.00008	mg/L	0.10000		102	80-120			
Boron	1.10	0.100	0.0064	mg/L	1.0000		110	80-120			
Cadmium	0.102	0.0010	0.00007	mg/L	0.10000		102	80-120			
Calcium	1.07	0.500	0.0311	mg/L	1.0000		107	80-120			
Chromium	0.106	0.0100	0.0009	mg/L	0.10000		106	80-120			
Cobalt	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			
Copper	0.103	0.0050	0.0005	mg/L	0.10000		103	80-120			
Lead	0.103	0.0050	0.0001	mg/L	0.10000		103	80-120			
Molybdenum	0.104	0.0100	0.0017	mg/L	0.10000		104	80-120			
Nickel	0.105	0.0050	0.0006	mg/L	0.10000		105	80-120			
Selenium	0.102	0.0100	0.0010	mg/L	0.10000		102	80-120			
Silver	0.104	0.0050	0.0005	mg/L	0.10000		104	80-120			
Thallium	0.104	0.0010	0.0002	mg/L	0.10000		104	80-120			
Vanadium	0.107	0.0100	0.0071	mg/L	0.10000		107	80-120			
Zinc	0.107	0.0100	0.0021	mg/L	0.10000		107	80-120			
Lithium	0.103	0.0500	0.0021	mg/L	0.10000		103	80-120			



**PACE ANALYTICAL SERVICES, INC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 26, 2016

**Report No.: AZJ0503**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6100492 - EPA 3005A</b>											
<b>Matrix Spike (6100492-MS1)</b>			<b>Source: AZJ0503-01</b>			<b>Prepared &amp; Analyzed: 10/20/16</b>					
Antimony	0.0999	0.0030	0.0008	mg/L	0.10000	0.0018	98	75-125			
Arsenic	0.105	0.0050	0.0016	mg/L	0.10000	ND	105	75-125			
Barium	0.123	0.0100	0.0004	mg/L	0.10000	0.0257	97	75-125			
Beryllium	0.0965	0.0030	0.00008	mg/L	0.10000	ND	96	75-125			
Boron	1.05	0.100	0.0064	mg/L	1.0000	0.0174	103	75-125			
Cadmium	0.0983	0.0010	0.00007	mg/L	0.10000	ND	98	75-125			
Calcium	90.7	25.0	1.55	mg/L	1.0000	88.3	241	75-125			QM-02
Chromium	0.102	0.0100	0.0009	mg/L	0.10000	ND	102	75-125			
Cobalt	0.0993	0.0100	0.0005	mg/L	0.10000	ND	99	75-125			
Copper	0.0975	0.0050	0.0005	mg/L	0.10000	0.0008	97	75-125			
Lead	0.0991	0.0050	0.0001	mg/L	0.10000	ND	99	75-125			
Molybdenum	0.104	0.0100	0.0017	mg/L	0.10000	ND	104	75-125			
Nickel	0.101	0.0050	0.0006	mg/L	0.10000	0.0011	100	75-125			
Selenium	0.103	0.0100	0.0010	mg/L	0.10000	ND	103	75-125			
Silver	0.0984	0.0050	0.0005	mg/L	0.10000	ND	98	75-125			
Thallium	0.102	0.0010	0.0002	mg/L	0.10000	ND	102	75-125			
Vanadium	0.107	0.0100	0.0071	mg/L	0.10000	ND	107	75-125			
Zinc	0.103	0.0100	0.0021	mg/L	0.10000	0.0029	100	75-125			
Lithium	0.103	0.0500	0.0021	mg/L	0.10000	ND	103	75-125			
<b>Matrix Spike Dup (6100492-MSD1)</b>			<b>Source: AZJ0503-01</b>			<b>Prepared &amp; Analyzed: 10/20/16</b>					
Antimony	0.102	0.0030	0.0008	mg/L	0.10000	0.0018	100	75-125	2	20	
Arsenic	0.101	0.0050	0.0016	mg/L	0.10000	ND	101	75-125	4	20	
Barium	0.126	0.0100	0.0004	mg/L	0.10000	0.0257	100	75-125	2	20	
Beryllium	0.0964	0.0030	0.00008	mg/L	0.10000	ND	96	75-125	0.1	20	
Boron	1.00	0.100	0.0064	mg/L	1.0000	0.0174	98	75-125	4	20	
Cadmium	0.0993	0.0010	0.00007	mg/L	0.10000	ND	99	75-125	1	20	
Calcium	91.2	25.0	1.55	mg/L	1.0000	88.3	291	75-125	0.5	20	QM-02
Chromium	0.0998	0.0100	0.0009	mg/L	0.10000	ND	100	75-125	2	20	
Cobalt	0.0949	0.0100	0.0005	mg/L	0.10000	ND	95	75-125	5	20	
Copper	0.0951	0.0050	0.0005	mg/L	0.10000	0.0008	94	75-125	3	20	
Lead	0.0975	0.0050	0.0001	mg/L	0.10000	ND	97	75-125	2	20	
Molybdenum	0.105	0.0100	0.0017	mg/L	0.10000	ND	105	75-125	0.9	20	
Nickel	0.0969	0.0050	0.0006	mg/L	0.10000	0.0011	96	75-125	4	20	
Selenium	0.103	0.0100	0.0010	mg/L	0.10000	ND	103	75-125	0.7	20	
Silver	0.101	0.0050	0.0005	mg/L	0.10000	ND	101	75-125	3	20	
Thallium	0.102	0.0010	0.0002	mg/L	0.10000	ND	102	75-125	0.1	20	
Vanadium	0.102	0.0100	0.0071	mg/L	0.10000	ND	102	75-125	5	20	
Zinc	0.106	0.0100	0.0021	mg/L	0.10000	0.0029	103	75-125	3	20	
Lithium	0.105	0.0500	0.0021	mg/L	0.10000	ND	105	75-125	1	20	



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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 26, 2016

**Report No.: AZJ0503**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6100492 - EPA 3005A</b>											
<b>Post Spike (6100492-PS1)</b>				<b>Source: AZJ0503-01</b>			<b>Prepared &amp; Analyzed: 10/20/16</b>				
Antimony	91.0			ug/L	100.00	1.80	89	80-120			
Arsenic	104			ug/L	100.00	0.0481	104	80-120			
Barium	124			ug/L	100.00	25.7	98	80-120			
Beryllium	95.7			ug/L	100.00	0.0455	96	80-120			
Boron	1010			ug/L	1000.0	17.4	99	80-120			
Cadmium	99.3			ug/L	100.00	0.0630	99	80-120			
Calcium	89000			ug/L	1000.0	88300	74	80-120			QM-02
Chromium	105			ug/L	100.00	0.884	104	80-120			
Cobalt	98.9			ug/L	100.00	0.0886	99	80-120			
Copper	96.9			ug/L	100.00	0.845	96	80-120			
Lead	100			ug/L	100.00	0.0655	100	80-120			
Molybdenum	104			ug/L	100.00	0.875	103	80-120			
Nickel	101			ug/L	100.00	1.13	99	80-120			
Selenium	99.4			ug/L	100.00	0.365	99	80-120			
Silver	103			ug/L	100.00	0.0128	102	80-120			
Thallium	103			ug/L	100.00	0.125	103	80-120			
Vanadium	105			ug/L	100.00	0.333	105	80-120			
Zinc	108			ug/L	100.00	2.91	106	80-120			
Lithium	99.8			ug/L	100.00	0.953	99	80-120			

**Batch 6100578 - EPA 7470A**

<b>Blank (6100578-BLK1)</b>				<b>Prepared &amp; Analyzed: 10/24/16</b>							
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (6100578-BS1)</b>				<b>Prepared &amp; Analyzed: 10/24/16</b>							
Mercury	0.00249	0.00050	0.000041	mg/L	2.5000E-3		100	80-120			



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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 26, 2016

**Report No.: AZJ0503**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6100578 - EPA 7470A</b>											
<b>Matrix Spike (6100578-MS1)</b>			<b>Source: AZJ0518-01</b>			<b>Prepared &amp; Analyzed: 10/24/16</b>					
Mercury	0.00245	0.00050	0.000041	mg/L	2.5000E-3	ND	98	75-125			
<b>Matrix Spike Dup (6100578-MSD1)</b>			<b>Source: AZJ0518-01</b>			<b>Prepared &amp; Analyzed: 10/24/16</b>					
Mercury	0.00245	0.00050	0.000041	mg/L	2.5000E-3	ND	98	75-125	0.2	20	
<b>Post Spike (6100578-PS1)</b>			<b>Source: AZJ0518-01</b>			<b>Prepared &amp; Analyzed: 10/24/16</b>					
Mercury	1.74			ug/L	1.6667	-0.0112	105	80-120			





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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 26, 2016

## Legend

### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

### Definition of Qualifiers

- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.  
**J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

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



Pace Analytical Services, Inc.  
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092  
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**CHAIN OF CUSTODY RECORD**

PAGE: \_\_\_\_\_ OF \_\_\_\_\_

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Joju Abraham <b>CC:</b> Maria Padilla Heath McCorkle <b>PO #:</b> GPC10584198		<b>PROJECT NAME/STATE:</b> Plant Mitchell/GA <b>PROJECT #:</b> Phase II CCR	
<b>Collection DATE</b> 10/18/16 10/18/16	<b>Collection TIME</b> 1040 1532	<b>MATRIX CODE*</b> GW GW	<b>COMPARISON</b> <input checked="" type="checkbox"/> G <input checked="" type="checkbox"/> M <input type="checkbox"/> A <input type="checkbox"/> B	<b>SAMPLE IDENTIFICATION</b> PZ-31 PZ-32	<b>CONTAINER TYPE:</b> PRESERVATION # of CONTAINERS 3 3
<b>ANALYSIS REQUESTED</b> P 3 P 7 P 3 P 7 P 3 EPA 300.0 TO (Cl, F, SO4) EPA 6020/7470 Metals App. III & IV		<b>ANALYSIS REQUESTED</b> P 7 P 3 P 7 P 3 EPA 300.0 TO (Cl, F, SO4) EPA 6020/7470 Metals App. III & IV		<b>ANALYSIS REQUESTED</b> P 7 P 3 P 7 P 3 EPA 300.0 TO (Cl, F, SO4) EPA 6020/7470 Metals App. III & IV	
<b>DATE/TIME:</b> 10/18/16 / 1532 <b>RECEIVED BY:</b> Daniel Howard / Chemist		<b>DATE/TIME:</b> 10/18/16 / 1040 <b>RECEIVED BY:</b> Daniel Howard		<b>DATE/TIME:</b> 10/18/16 / 1705 <b>RECEIVED BY:</b> Daniel Howard	
<b>DATE/TIME:</b> 10/19/16 0850 <b>RECEIVED BY:</b> Daniel Howard		<b>DATE/TIME:</b> 10/19/16 0850 <b>RECEIVED BY:</b> Daniel Howard		<b>DATE/TIME:</b> 10/18/16 / 1705 <b>RECEIVED BY:</b> Daniel Howard	
<b>LAB #:</b> AZ-20503 <b>Entered into LIMS:</b> JHT		<b>LAB #:</b> AZ-20503 <b>Entered into LIMS:</b> JHT		<b>LAB #:</b> AZ-20503 <b>Entered into LIMS:</b> JHT	
<b>CONTAINER TYPE:</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		<b>CONTAINER TYPE:</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		<b>CONTAINER TYPE:</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	
<b>PRESERVATION</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C 7 - 56°C not frozen		<b>PRESERVATION</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C 7 - 56°C not frozen		<b>PRESERVATION</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C 7 - 56°C not frozen	
<b>MATRIX CODES:</b> 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		<b>MATRIX CODES:</b> 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		<b>MATRIX CODES:</b> 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	
<b>REMARKS/ADDITIONAL INFORMATION</b> Standard Turnaround ↓ ↓		<b>REMARKS/ADDITIONAL INFORMATION</b> Standard Turnaround ↓ ↓		<b>REMARKS/ADDITIONAL INFORMATION</b> Standard Turnaround ↓ ↓	



## PACE ANALYTICAL SERVICES, INC.

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### LOG-IN CHECKLIST

Printed: 10/26/2016 3:49:37PM

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 10/19/16 08:50

**Work Order:** AZJ0503

**Logged In By:** Charles Hawks

### OBSERVATIONS

**#Samples:** 2

**#Containers:** 6

**Minimum Temp(C):** 2.0

**Maximum Temp(C):** 2.0

**Custody Seal(s) Used:** Yes

### CHECKLIST ITEMS

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

**Comments:**

November 22, 2016

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: Plant Mitchell/GA  
Pace Project No.: 30199880

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on October 20, 2016. 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,



Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell/GA  
Pace Project No.: 30199880

### **Pennsylvania Certification IDs**

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH-0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana DHH/TNI Certification #: LA140008  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: PA00091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification  
Missouri Certification #: 235

Montana Certification #: Cert 0082  
Nebraska Certification #: NE-05-29-14  
Nevada Certification #: PA014572015-1  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188-14-8  
Utah/TNI Certification #: PA014572015-5  
USDA Soil Permit #: P330-14-00213  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 460198  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Certification  
Wyoming Certification #: 8TMS-L

---

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: Plant Mitchell/GA

Pace Project No.: 30199880

<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
30199880001	PZ-31	Water	10/18/16 10:40	10/20/16 10:25
30199880002	PZ-32	Water	10/18/16 15:32	10/20/16 10:25

### REPORT OF LABORATORY ANALYSIS

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**SAMPLE ANALYTE COUNT**

Project: Plant Mitchell/GA  
Pace Project No.: 30199880

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30199880001	PZ-31	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30199880002	PZ-32	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

**REPORT OF LABORATORY ANALYSIS**

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell/GA

Pace Project No.: 30199880

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	<b>0.0311 ± 0.115 (0.294)</b> C:94% T:NA	pCi/L	11/04/16 16:15	13982-63-3	
Radium-228		EPA 9320	<b>-0.443 ± 0.462 (1.08)</b> C:61% T:78%	pCi/L	11/19/16 19:43	15262-20-1	
Total Radium		Total Radium Calculation	<b>0.0311 ± 0.577 (1.37)</b>	pCi/L	11/21/16 15:06	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	<b>0.0333 ± 0.105 (0.267)</b> C:91% T:NA	pCi/L	11/04/16 16:15	13982-63-3	
Radium-228		EPA 9320	<b>-0.282 ± 0.521 (1.18)</b> C:64% T:76%	pCi/L	11/19/16 19:44	15262-20-1	
Total Radium		Total Radium Calculation	<b>0.0333 ± 0.626 (1.45)</b>	pCi/L	11/21/16 15:06	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell/GA

Pace Project No.: 30199880

QC Batch: 238842

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 30199880001, 30199880002

METHOD BLANK: 1173698

Matrix: Water

Associated Lab Samples: 30199880001, 30199880002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0138 ± 0.0910 (0.293) C:93% T:NA	pCi/L	11/04/16 08:24	

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 Mitchell/GA

Pace Project No.: 30199880

QC Batch: 239879

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30199880001, 30199880002

METHOD BLANK: 1178545

Matrix: Water

Associated Lab Samples: 30199880001, 30199880002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.825 ± 0.519 (0.961) C:66% T:85%	pCi/L	11/19/16 19:42	

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 Mitchell/GA

Pace Project No.: 30199880

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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WO#: 30199880



Pace Analytical  
www.paceanalytical.com

Chain of Custody

Results Requested By: 11/18/2016

Workorder: AZI0503      Workorder Name: Georgia Power - CCR      Owner Received Date:   
 Report To: Subcontract To:   
 Betsy McDaniel      Pace - Pittsburgh   
 Pace Analytical Atlanta      1638 Roseytown Road   
 110 Technology Parkway      Stes. 2,3,4   
 Peachtree Corners, GA 30092      Greensburg, PA 15601   
 Phone (770)-734-4200      Phone (724) 850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		Date/Time	Received By	Date/Time	Comments
1	PZ-31	G	10/18/2016 10:40	AZI0503-01	GW						
2	PZ-32	G	10/18/2016 15:32	AZI0503-02	GW						
3											
4											
5											
6											
7											
8											
9											
10											
Transfers	Released By		Date/Time	Received By	Date/Time	Comments					
1	<i>Charles Heuler</i>		10/19/16 17:30	<i>William E. Hein</i>	10-20-16 10:25						
2											
3											

Cooler Temperature on Receipt N/A °C      Custody Seal Y or N      Received on Ice Y or N      Sample Intact Y or N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC. This chain of custody is considered complete as is since this information is available in the owner laboratory.



Price Analytical Services, Inc.  
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092  
 (770) 734-4200, FAX (770) 734-4201, www.asfhab.com

**CHAIN OF CUSTODY RECORD**

PAGE: \_\_\_\_\_ OF \_\_\_\_\_

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 (404) 526-7239 <b>REPORT TO:</b> Jim Ashpurs		<b>CC:</b> Maria Prichia Heath McCastle <b>PO #:</b> GPC10684198																																																																			
<b>REQUESTED COMPLETION DATE:</b> PROJECT NAME/STATE: Plant Mitchell, GA		<b>PROJECT #:</b> Phase IV CCR																																																																			
<b>Collection DATE:</b> 10/18/16 10/18/16	<b>Collection TIME:</b> 1040 1532	<b>MATRIX CODE:</b> GW GW	<b>SAMPLE IDENTIFICATION:</b> PZ-31 PZ-32																																																																		
<table border="1"> <thead> <tr> <th>CONTAINER TYPE</th> <th>ANALYSIS REQUESTED</th> <th>REMARKS/ADDITIONAL INFORMATION</th> </tr> </thead> <tbody> <tr> <td>1 - HCl, 50°C</td> <td></td> <td></td> </tr> <tr> <td>2 - H2SO4, 50°C</td> <td></td> <td></td> </tr> <tr> <td>3 - HNO3</td> <td></td> <td></td> </tr> <tr> <td>4 - NaOH, 40°C</td> <td></td> <td></td> </tr> <tr> <td>5 - BaCl2/HCl, 50°C</td> <td></td> <td></td> </tr> <tr> <td>6 - NaOH, 40°C</td> <td></td> <td></td> </tr> <tr> <td>7 - 50°C, not flush</td> <td></td> <td></td> </tr> <tr> <td>DW - DRINKING WATER</td> <td></td> <td></td> </tr> <tr> <td>FW - WASHIE WATER</td> <td></td> <td></td> </tr> <tr> <td>GW - GROUNDWATER</td> <td></td> <td></td> </tr> <tr> <td>SW - SURFACE WATER</td> <td></td> <td></td> </tr> <tr> <td>ST - STORM WATER</td> <td></td> <td></td> </tr> <tr> <td>W - WATER</td> <td></td> <td></td> </tr> <tr> <td>9 - SOIL</td> <td></td> <td></td> </tr> <tr> <td>SL - SLUDGE</td> <td></td> <td></td> </tr> <tr> <td>SD - SOLID</td> <td></td> <td></td> </tr> <tr> <td>A - AIR</td> <td></td> <td></td> </tr> <tr> <td>L - LIQUID</td> <td></td> <td></td> </tr> <tr> <td>P - PRODUCT</td> <td></td> <td></td> </tr> <tr> <td colspan="3">           MATRIX CODES:            DW - DRINKING WATER            FW - WASHIE WATER            GW - GROUNDWATER            SW - SURFACE WATER            ST - STORM WATER            W - WATER            9 - SOIL            SL - SLUDGE            SD - SOLID            A - AIR            L - LIQUID            P - PRODUCT         </td> </tr> <tr> <td colspan="3">           REMARKS/ADDITIONAL INFORMATION:            Standard Test method         </td> </tr> </tbody> </table>				CONTAINER TYPE	ANALYSIS REQUESTED	REMARKS/ADDITIONAL INFORMATION	1 - HCl, 50°C			2 - H2SO4, 50°C			3 - HNO3			4 - NaOH, 40°C			5 - BaCl2/HCl, 50°C			6 - NaOH, 40°C			7 - 50°C, not flush			DW - DRINKING WATER			FW - WASHIE WATER			GW - GROUNDWATER			SW - SURFACE WATER			ST - STORM WATER			W - WATER			9 - SOIL			SL - SLUDGE			SD - SOLID			A - AIR			L - LIQUID			P - PRODUCT			MATRIX CODES: DW - DRINKING WATER FW - WASHIE WATER GW - GROUNDWATER SW - SURFACE WATER ST - STORM WATER W - WATER 9 - SOIL SL - SLUDGE SD - SOLID A - AIR L - LIQUID P - PRODUCT			REMARKS/ADDITIONAL INFORMATION: Standard Test method		
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<b>DATE/TIME BY AND TITLE:</b> 10/18/16 / 10:32 AM <b>RECEIVED BY:</b>		<b>DATE/TIME:</b> 10/18/16 / 11:05 AM <b>DATE/TIME:</b>																																																																			
<b>SAMPLED BY AND TITLE:</b> Denise A. Jones / Analyst		<b>RECEIVED BY:</b>																																																																			
<b>RECEIVED BY AND TITLE:</b> [Signature] / [Title]		<b>DATE/TIME:</b> 10/18/16 / 0850 <b>TEMPERATURE:</b> 22.0°C																																																																			
<b>LAB #:</b> AZ-200503		<b>FOR LAB USE ONLY</b>																																																																			
<b>ENTERED INTO LIMS:</b> BT		<b>TRACKING #:</b> 31027472957																																																																			

Price COC Revised MSX

# Sample Condition Upon Receipt Pittsburgh

30199880



Client Name: GA Power Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 6812 5099 9000

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

Thermometer Used N/A Type of Ice: Wet Blue (None)  
Cooler Temperature Observed Temp \_\_\_\_\_ °C Correction Factor: \_\_\_\_\_ °C Final Temp: \_\_\_\_\_ °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: U97R 10-20-16

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:				2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X	X		4. <u>10/24/16</u>
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: <u>WT</u>	X			5.
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used: -Pace Containers Used:	X			10.
Containers Intact:	X			11.
Filtered volume received for Dissolved tests All containers needing preservation have been checked.			X	12.
All containers needing preservation are found to be in compliance with EPA recommendation.	X			13. <u>PHLZ</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>U97R</u> Date/time of preservation: _____ Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):			X	14.
Trip Blank Present:		X		15.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: <u>U97R</u> Date: <u>10-20-16</u>

Client Notification/ Resolution:  
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)  
 \*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JC2  
Date: 11/3/2016  
Worklist: 32221  
Matrix: DW

**Method Blank Assessment**

MB Sample ID: 1173698  
MB concentration: -0.014  
MB Counting Uncertainty: 0.091  
MB MDC: 0.293  
MB Numerical Performance Indicator: -0.30  
MB Status vs Numerical Indicator: N/A  
MB Status vs MDC: Pass

**Laboratory Control Sample Assessment**

LCSID (Y or N)? N  
LCSID: LCS032221

Count Date: 11/4/2016  
Spike I.D.: 16-026  
Spike Concentration (pCi/mL): 44.675  
Volume Used (mL): 0.10  
Aliquot Volume (L, g, F): 0.502  
Target Conc. (pCi/L, g, F): 8.897  
Uncertainty (Calculated): 0.419  
Result (pCi/L, g, F): 8.029  
LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.830  
Numerical Performance Indicator: -1.83  
Percent Recovery: 90.24%  
Status vs Numerical Indicator: N/A  
Status vs Recovery: Pass

**Duplicate Sample Assessment**

Sample I.D.: 30199878004  
Duplicate Sample I.D.: 30199878004DUP  
Sample Result (pCi/L, g, F): 0.172  
Sample Result Counting Uncertainty (pCi/L, g, F): 0.182  
Sample Duplicate Result (pCi/L, g, F): 0.078  
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.133  
Are sample and/or duplicate results below MDC? See Below #  
Duplicate Numerical Performance Indicator: 0.820  
Duplicate RPD: 75.48%  
Duplicate Status vs Numerical Indicator: N/A  
Duplicate Status vs RPD: Fail\*\*\*

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.  
30199878004  
30199878004DUP

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

Comments:  
\*\*\*Batch must be re-prepped due to unacceptable precision.

**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Spike I.D.:  
MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
Spike Volume Used in MS (mL):  
Spike Volume Used in MSD (mL):  
MS Aliquot (L, g, F):  
MS Target Conc. (pCi/L, g, F):  
MSD Aliquot (L, g, F):  
MSD Target Conc. (pCi/L, g, F):  
Spike uncertainty (calculated):  
Sample Result:  
Sample Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
MS Numerical Performance Indicator:  
MS Percent Recovery:  
MSD Percent Recovery:  
MS Status vs Numerical Indicator:  
MSD Status vs Numerical Indicator:  
MS Status vs Recovery:  
MSD Status vs Recovery:

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
Duplicate Numerical Performance Indicator:  
MS/MSD Duplicate RPD:  
MS/MSD Duplicate Status vs Numerical Indicator:  
MS/MSD Duplicate Status vs RPD:

# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228  
Analyst: JLW  
Date: 11/16/2016  
Worklist: 32404  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1178545
MB concentration:	0.825
M/B Counting Uncertainty:	0.498
MB MDC:	0.961
MB Numerical Performance Indicator:	3.25
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		N
LCS (Y or N)?		LCS032404
Count Date:	11/19/2016	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	26.037	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.803	
Target Conc. (pCi/L, g, F):	6.489	
Uncertainty (Calculated):	0.467	
Result (pCi/L, g, F):	6.876	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.889	
Numerical Performance Indicator:	0.75	
Percent Recovery:	105.96%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Duplicate Sample Assessment	
Sample I.D.:	30199878004
Duplicate Sample I.D.:	30199878004DUP
Sample Result (pCi/L, g, F):	1.237
Sample Result Counting Uncertainty (pCi/L, g, F):	0.569
Sample Duplicate Result (pCi/L, g, F):	1.514
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.603
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-0.655
Duplicate RPD:	20.15%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	





**PACE ANALYTICAL SERVICES, LLC.**

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

**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AZL0241**

**December 19, 2016**

**Project: CCR Event**

**Project #: Plant Mitchell**

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

Approved:

A handwritten signature in black ink that reads "Betsy McDaniel" written over a horizontal line.

Project Manager

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



**PACE ANALYTICAL SERVICES, LLC.**

---

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

Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
PZ-31	AZL0241-01	Ground Water	12/06/16 14:20	12/07/16 10:15
PZ-1D	AZL0241-02	Ground Water	12/06/16 15:10	12/07/16 10:15



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

December 19, 2016

Attention: Mr. Joju Abraham

Report No.: AZL0241

Project: CCR Event

Client ID: PZ-31

Lab Number ID: AZL0241-01

Date/Time Sampled: 12/6/2016 2:20:00PM

Date/Time Received: 12/7/2016 10:15:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	299	25	10	mg/L	SM 2540 C		1	12/10/16 17:30	12/10/16 17:30	6120286	JPT
<b>Inorganic Anions</b>											
Chloride	5.0	0.25	0.01	mg/L	EPA 300.0		1	12/12/16 09:29	12/12/16 11:32	6120316	RLC
Fluoride	0.15	0.30	0.02	mg/L	EPA 300.0	J	1	12/12/16 09:29	12/12/16 11:32	6120316	RLC
Sulfate	6.1	1.0	0.05	mg/L	EPA 300.0		1	12/12/16 09:29	12/12/16 11:32	6120316	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:47	6120281	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:47	6120281	CSW
Barium	0.113	0.0100	0.0004	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:47	6120281	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:47	6120281	CSW
Boron	0.0133	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/10/16 15:10	12/12/16 14:47	6120281	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:47	6120281	CSW
Calcium	83.4	5.00	0.311	mg/L	EPA 6020B		10	12/10/16 15:10	12/14/16 13:37	6120281	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:47	6120281	CSW
Cobalt	0.0018	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/10/16 15:10	12/12/16 14:47	6120281	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:47	6120281	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:47	6120281	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:47	6120281	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:47	6120281	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:47	6120281	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/13/16 09:50	12/13/16 13:29	6120352	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

December 19, 2016

Attention: Mr. Joju Abraham

Report No.: AZL0241

Project: CCR Event

Client ID: PZ-1D

Lab Number ID: AZL0241-02

Date/Time Sampled: 12/6/2016 3:10:00PM

Date/Time Received: 12/7/2016 10:15:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	207	25	10	mg/L	SM 2540 C		1	12/10/16 17:30	12/10/16 17:30	6120286	JPT
<b>Inorganic Anions</b>											
Chloride	3.4	0.25	0.01	mg/L	EPA 300.0		1	12/12/16 09:29	12/12/16 11:52	6120316	RLC
Fluoride	0.06	0.30	0.02	mg/L	EPA 300.0	J	1	12/12/16 09:29	12/12/16 11:52	6120316	RLC
Sulfate	2.4	1.0	0.05	mg/L	EPA 300.0		1	12/12/16 09:29	12/12/16 11:52	6120316	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:54	6120281	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:54	6120281	CSW
Barium	0.0311	0.0100	0.0004	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:54	6120281	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:54	6120281	CSW
Boron	0.0096	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/10/16 15:10	12/12/16 14:54	6120281	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:54	6120281	CSW
Calcium	43.3	5.00	0.311	mg/L	EPA 6020B		10	12/10/16 15:10	12/14/16 13:44	6120281	CSW
Chromium	0.0047	0.0100	0.0009	mg/L	EPA 6020B	J	1	12/10/16 15:10	12/12/16 14:54	6120281	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:54	6120281	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:54	6120281	CSW
Molybdenum	0.0019	0.0100	0.0017	mg/L	EPA 6020B	J	1	12/10/16 15:10	12/12/16 14:54	6120281	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:54	6120281	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:54	6120281	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 14:54	6120281	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/13/16 09:50	12/13/16 13:31	6120352	MTC



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Attention: Mr. Joju Abraham

December 19, 2016

**Report No.: AZL0241**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120286 - SM 2540 C</b>											
<b>Blank (6120286-BLK1)</b>						Prepared & Analyzed: 12/10/16					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (6120286-BS1)</b>						Prepared & Analyzed: 12/10/16					
Total Dissolved Solids	392	25	10	mg/L	400.00		98	84-108			
<b>Duplicate (6120286-DUP1)</b>						Source: AZL0281-03			Prepared & Analyzed: 12/10/16		
Total Dissolved Solids	605	25	10	mg/L		597			1	10	
<b>Duplicate (6120286-DUP2)</b>						Source: AZL0281-04			Prepared & Analyzed: 12/10/16		
Total Dissolved Solids	ND	25	10	mg/L		ND				10	



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December 19, 2016

**Report No.: AZL0241**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120316 - EPA 300.0</b>											
<b>Blank (6120316-BLK1)</b>						Prepared & Analyzed: 12/12/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
<b>LCS (6120316-BS1)</b>						Prepared & Analyzed: 12/12/16					
Chloride	9.84	0.25	0.01	mg/L	10.010		98	90-110			
Fluoride	10.1	0.30	0.02	mg/L	10.020		101	90-110			
Sulfate	9.92	1.0	0.05	mg/L	10.020		99	90-110			
<b>Matrix Spike (6120316-MS1)</b>						Source: AZL0281-01 Prepared & Analyzed: 12/12/16					
Chloride	10.9	0.25	0.01	mg/L	10.010	1.05	99	90-110			
Fluoride	10.3	0.30	0.02	mg/L	10.020	0.11	102	90-110			
Sulfate	14.3	1.0	0.05	mg/L	10.020	4.72	96	90-110			
<b>Matrix Spike (6120316-MS2)</b>						Source: AZL0282-01 Prepared: 12/12/16 Analyzed: 12/13/16					
Chloride	15.5	0.25	0.01	mg/L	10.010	5.38	101	90-110			
Fluoride	10.9	0.30	0.02	mg/L	10.020	0.11	108	90-110			
Sulfate	62.2	1.0	0.05	mg/L	10.020	58.4	38	90-110			QM-02
<b>Matrix Spike Dup (6120316-MSD1)</b>						Source: AZL0281-01 Prepared & Analyzed: 12/12/16					
Chloride	11.0	0.25	0.01	mg/L	10.010	1.05	100	90-110	0.7	15	
Fluoride	10.3	0.30	0.02	mg/L	10.020	0.11	101	90-110	0.3	15	
Sulfate	14.2	1.0	0.05	mg/L	10.020	4.72	95	90-110	0.4	15	



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December 19, 2016

**Report No.: AZL0241**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6120281 - EPA 3005A**

**Blank (6120281-BLK1)**

Prepared: 12/10/16 Analyzed: 12/12/16

Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.0400	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0100	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							

**LCS (6120281-BS1)**

Prepared: 12/10/16 Analyzed: 12/12/16

Antimony	0.0986	0.0030	0.0008	mg/L	0.10000		99	80-120			
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000		102	80-120			
Barium	0.0971	0.0100	0.0004	mg/L	0.10000		97	80-120			
Beryllium	0.104	0.0030	0.00008	mg/L	0.10000		104	80-120			
Boron	1.04	0.0400	0.0064	mg/L	1.0000		104	80-120			
Cadmium	0.0986	0.0010	0.00007	mg/L	0.10000		99	80-120			
Calcium	0.954	0.500	0.0311	mg/L	1.0000		95	80-120			
Chromium	0.0987	0.0100	0.0009	mg/L	0.10000		99	80-120			
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000		100	80-120			
Copper	0.100	0.0250	0.0005	mg/L	0.10000		100	80-120			
Lead	0.0987	0.0050	0.0001	mg/L	0.10000		99	80-120			
Molybdenum	0.100	0.0100	0.0017	mg/L	0.10000		100	80-120			
Nickel	0.102	0.0100	0.0006	mg/L	0.10000		102	80-120			
Selenium	0.102	0.0100	0.0010	mg/L	0.10000		102	80-120			
Silver	0.0987	0.0100	0.0005	mg/L	0.10000		99	80-120			
Thallium	0.0985	0.0010	0.0002	mg/L	0.10000		98	80-120			
Vanadium	0.102	0.0100	0.0071	mg/L	0.10000		102	80-120			
Zinc	0.101	0.0100	0.0021	mg/L	0.10000		101	80-120			
Lithium	0.102	0.0500	0.0021	mg/L	0.10000		102	80-120			



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Attention: Mr. Joju Abraham

December 19, 2016

**Report No.: AZL0241**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120281 - EPA 3005A</b>											
<b>Matrix Spike (6120281-MS1)</b>			<b>Source: AZL0230-01</b>				Prepared: 12/10/16 Analyzed: 12/12/16				
Antimony	0.103	0.0030	0.0008	mg/L	0.10000	ND	103	75-125			
Arsenic	0.108	0.0050	0.0016	mg/L	0.10000	0.0044	104	75-125			
Barium	0.161	0.0100	0.0004	mg/L	0.10000	0.0659	96	75-125			
Beryllium	0.102	0.0030	0.00008	mg/L	0.10000	ND	102	75-125			
Boron	1.54	0.0400	0.0064	mg/L	1.0000	0.515	103	75-125			
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125			
Calcium	57.3	5.00	0.311	mg/L	1.0000	55.4	186	75-125			QM-02
Chromium	0.0997	0.0100	0.0009	mg/L	0.10000	ND	100	75-125			
Cobalt	0.0972	0.0100	0.0005	mg/L	0.10000	ND	97	75-125			
Copper	0.0959	0.0250	0.0005	mg/L	0.10000	0.0007	95	75-125			
Lead	0.0951	0.0050	0.0001	mg/L	0.10000	ND	95	75-125			
Molybdenum	0.109	0.0100	0.0017	mg/L	0.10000	0.0049	104	75-125			
Nickel	0.0985	0.0100	0.0006	mg/L	0.10000	0.0032	95	75-125			
Selenium	0.0995	0.0100	0.0010	mg/L	0.10000	ND	100	75-125			
Silver	0.0992	0.0100	0.0005	mg/L	0.10000	ND	99	75-125			
Thallium	0.0951	0.0010	0.0002	mg/L	0.10000	ND	95	75-125			
Vanadium	0.100	0.0100	0.0071	mg/L	0.10000	ND	100	75-125			
Zinc	0.0984	0.0100	0.0021	mg/L	0.10000	ND	98	75-125			
Lithium	0.0996	0.0500	0.0021	mg/L	0.10000	ND	100	75-125			
<b>Matrix Spike Dup (6120281-MSD1)</b>			<b>Source: AZL0230-01</b>				Prepared: 12/10/16 Analyzed: 12/12/16				
Antimony	0.109	0.0030	0.0008	mg/L	0.10000	ND	109	75-125	6	20	
Arsenic	0.109	0.0050	0.0016	mg/L	0.10000	0.0044	104	75-125	0.3	20	
Barium	0.163	0.0100	0.0004	mg/L	0.10000	0.0659	98	75-125	1	20	
Beryllium	0.105	0.0030	0.00008	mg/L	0.10000	ND	105	75-125	3	20	
Boron	1.58	0.0400	0.0064	mg/L	1.0000	0.515	106	75-125	2	20	
Cadmium	0.108	0.0010	0.00007	mg/L	0.10000	ND	108	75-125	8	20	
Calcium	56.6	5.00	0.311	mg/L	1.0000	55.4	121	75-125	1	20	
Chromium	0.101	0.0100	0.0009	mg/L	0.10000	ND	101	75-125	2	20	
Cobalt	0.0987	0.0100	0.0005	mg/L	0.10000	ND	99	75-125	2	20	
Copper	0.0976	0.0250	0.0005	mg/L	0.10000	0.0007	97	75-125	2	20	
Lead	0.0987	0.0050	0.0001	mg/L	0.10000	ND	99	75-125	4	20	
Molybdenum	0.117	0.0100	0.0017	mg/L	0.10000	0.0049	112	75-125	7	20	
Nickel	0.100	0.0100	0.0006	mg/L	0.10000	0.0032	97	75-125	2	20	
Selenium	0.101	0.0100	0.0010	mg/L	0.10000	ND	101	75-125	1	20	
Silver	0.105	0.0100	0.0005	mg/L	0.10000	ND	105	75-125	6	20	
Thallium	0.0992	0.0010	0.0002	mg/L	0.10000	ND	99	75-125	4	20	
Vanadium	0.101	0.0100	0.0071	mg/L	0.10000	ND	101	75-125	1	20	
Zinc	0.101	0.0100	0.0021	mg/L	0.10000	ND	101	75-125	2	20	
Lithium	0.104	0.0500	0.0021	mg/L	0.10000	ND	104	75-125	4	20	





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December 19, 2016

**Report No.: AZL0241**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120281 - EPA 3005A</b>											
<b>Post Spike (6120281-PS1)</b>			<b>Source: AZL0230-01</b>			<b>Prepared: 12/10/16 Analyzed: 12/12/16</b>					
Antimony	105			ug/L	100.00	0.500	105	80-120			
Arsenic	110			ug/L	100.00	4.43	106	80-120			
Barium	163			ug/L	100.00	65.9	97	80-120			
Beryllium	108			ug/L	100.00	0.0100	108	80-120			
Boron	1600			ug/L	1000.0	515	108	80-120			
Cadmium	106			ug/L	100.00	0.0100	106	80-120			
Calcium	56500			ug/L	1000.0	55400	106	80-120			
Chromium	103			ug/L	100.00	0.510	103	80-120			
Cobalt	101			ug/L	100.00	0.370	100	80-120			
Copper	99.7			ug/L	100.00	0.740	99	80-120			
Lead	99.6			ug/L	100.00	0.0300	100	80-120			
Molybdenum	116			ug/L	100.00	4.93	111	80-120			
Nickel	103			ug/L	100.00	3.25	100	80-120			
Selenium	104			ug/L	100.00	-0.870	104	80-120			
Silver	104			ug/L	100.00	0.00	104	80-120			
Thallium	99.6			ug/L	100.00	0.0400	100	80-120			
Vanadium	103			ug/L	100.00	1.43	101	80-120			
Zinc	103			ug/L	100.00	1.98	101	80-120			
Lithium	106			ug/L	100.00	1.33	105	80-120			

**Batch 6120352 - EPA 7470A**

<b>Blank (6120352-BLK1)</b>					<b>Prepared &amp; Analyzed: 12/13/16</b>						
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (6120352-BS1)</b>					<b>Prepared &amp; Analyzed: 12/13/16</b>						
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3		96	80-120			



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**Report No.: AZL0241**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120352 - EPA 7470A</b>											
<b>Matrix Spike (6120352-MS1)</b>			<b>Source: AZL0281-07</b>			<b>Prepared &amp; Analyzed: 12/13/16</b>					
Mercury	0.00237	0.00050	0.000041	mg/L	2.5000E-3	ND	95	75-125			
<b>Matrix Spike Dup (6120352-MSD1)</b>			<b>Source: AZL0281-07</b>			<b>Prepared &amp; Analyzed: 12/13/16</b>					
Mercury	0.00246	0.00050	0.000041	mg/L	2.5000E-3	ND	98	75-125	4	20	
<b>Post Spike (6120352-PS1)</b>			<b>Source: AZL0281-07</b>			<b>Prepared &amp; Analyzed: 12/13/16</b>					
Mercury	1.67			ug/L	1.6667	0.0177	99	80-120			



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Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

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## Legend

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### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

### Definition of Qualifiers

**QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

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

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



Pace Analytical Services, Inc.  
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PAGE: 1 OF 1

**CHAIN OF CUSTODY RECORD**

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Joju Abraham Health McCorkle <b>PO #:</b> GPC10684198	
<b>PROJECT NAME/STATE:</b> STODARD TAT Plant Mitchell / GA		<b>PROJECT #:</b> Phase II CCR	
<b>Collection DATE</b> 12-6-16 12-6-16	<b>Collection TIME</b> 14:20 15:10	<b>MATRIX CODE*</b> GW GW	<b>SAMPLE IDENTIFICATION</b> ✓ PZ-31 ✓ PZ-1D
<b>ANALYSIS REQUESTED</b>			
<b>CONTAINER TYPE</b> P 3 # of CONTAINERS → 4	<b>P</b> 3 <b>P</b> 7 <b>P</b> 7 <b>P</b> 3	<b>P</b> 3 <b>P</b> 7 <b>P</b> 7 <b>P</b> 3	<b>P</b> 3 <b>P</b> 7 <b>P</b> 7 <b>P</b> 3
<b>CONTAINER TYPE</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	<b>PRESERVATION</b> 1 - HCl, ≤6°C 2 - H <sub>2</sub> SO <sub>4</sub> , ≤6°C 3 - HNO <sub>3</sub> 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , ≤6°C 7 - ≤6°C not frozen	<b>ANALYSIS REQUESTED</b> Metals App. III & IV EPA 6020/7470 IC (Cl, F, SO <sub>4</sub> ) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-646 9315/9320 2x 1L HDPE bottles	<b>CONTAINER TYPE</b> DW - DRINKING WATER WW - WASTEWATER GW - GROUNDWATER SW - SURFACE WATER ST - STORM WATER W - WATER
<b>REMARKS/ADDITIONAL INFORMATION</b> *MATRIX CODES: S - SOIL SL - SLUDGE SD - SOLID A - AIR L - LIQUID P - PRODUCT			
<b>LABORATORY USE ONLY</b> LAB #: A ZL0241 Entered into LIMS: Tracking #: 810294725050			

**SAMPLED BY AND TITLE:** JETE mca  
**RECEIVED BY:** JETE mca  
**DATE/TIME:** 12-6-16 / 14:20  
**RELINQUISHED BY:** JETE mca  
**DATE/TIME:** 12-6-16 / 15:45

**SAMPLE SHIPPED VIA:** UPS  
**USPS (FEED-EX)**  
**RELINQUISHED BY:** JETE mca  
**DATE/TIME:** 12-6-16 / 15:45

**RECEIVED BY LAB:** JETE mca  
**DATE/TIME:** 12-6-16 / 10:15  
**Temperature:** 10°C  
**Min:** 10°C  
**Max:** 10°C



**PACE ANALYTICAL SERVICES, INC.**

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

**LOG-IN CHECKLIST**

**Printed: 12/8/2016 9:26:03AM**

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 12/07/16 10:15

**Work Order:** AZL0241

**Logged In By:** Mohammad M. Rahman

**OBSERVATIONS**

**#Samples:** 2

**#Containers:** 8

**Minimum Temp(C):** 1.0

**Maximum Temp(C):** 1.0

**Custody Seal(s) Used:** Yes

**CHECKLIST ITEMS**

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

**Comments:**

January 11, 2017

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: Plant Mitchell  
Pace Project No.: 30204838

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on December 08, 2016. 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,



Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell  
Pace Project No.: 30204838

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH-0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana DHH/TNI Certification #: LA140008  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: PA00091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification  
Missouri Certification #: 235

Montana Certification #: Cert 0082  
Nebraska Certification #: NE-05-29-14  
Nevada Certification #: PA014572015-1  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188-14-8  
Utah/TNI Certification #: PA014572015-5  
USDA Soil Permit #: P330-14-00213  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 460198  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Certification  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: Plant Mitchell

Pace Project No.: 30204838

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30204838001	PZ-31	Water	12/06/16 14:20	12/08/16 10:20
30204838002	PZ-1D	Water	12/06/16 15:10	12/08/16 10:20

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell

Pace Project No.: 30204838

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30204838001	PZ-31	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204838002	PZ-1D	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell

Pace Project No.: 30204838

Sample: PZ-31		Lab ID: 30204838001	Collected: 12/06/16 14:20	Received: 12/08/16 10:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.301 ± 0.161</b>	<b>(0.221)</b>	pCi/L	12/20/16 08:36	13982-63-3	
		<b>C:88% T:NA</b>					
Radium-228	EPA 9320	<b>-0.0416 ± 0.562</b>	<b>(1.30)</b>	pCi/L	01/08/17 16:58	15262-20-1	
		<b>C:67% T:72%</b>					
Total Radium	Total Radium Calculation	<b>0.301 ± 0.723</b>	<b>(1.52)</b>	pCi/L	01/11/17 16:38	7440-14-4	

Sample: PZ-1D		Lab ID: 30204838002	Collected: 12/06/16 15:10	Received: 12/08/16 10:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.0856 ± 0.120</b>	<b>(0.259)</b>	pCi/L	12/20/16 08:36	13982-63-3	
		<b>C:90% T:NA</b>					
Radium-228	EPA 9320	<b>0.216 ± 0.443</b>	<b>(0.977)</b>	pCi/L	01/08/17 16:58	15262-20-1	
		<b>C:67% T:74%</b>					
Total Radium	Total Radium Calculation	<b>0.302 ± 0.563</b>	<b>(1.24)</b>	pCi/L	01/11/17 16:38	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell

Pace Project No.: 30204838

QC Batch: 243001

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 30204838001, 30204838002

METHOD BLANK: 1195275

Matrix: Water

Associated Lab Samples: 30204838001, 30204838002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0582 ± 0.0923 (0.202) C:97% T:NA	pCi/L	12/19/16 10:13	

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 Mitchell

Pace Project No.: 30204838

QC Batch: 243004

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30204838001, 30204838002

METHOD BLANK: 1195284

Matrix: Water

Associated Lab Samples: 30204838001, 30204838002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.135 ± 0.406 (0.913) C:65% T:77%	pCi/L	01/08/17 16:58	

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.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Plant Mitchell

Pace Project No.: 30204838

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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Chain of Custody

Results Requested By: 1/6/2017

Owner Received Date:

Workorder Name: Plant Mitchell

Workorder: AZL0241

Requested Analysis

Subcontract To:  
 Pace - Pittsburgh  
 1638 Roseytown Road  
 Stes. 2,3,4  
 Greensburg, PA 15601  
 Phone (724) 850-5600

Report To:  
 Betsy McDaniel  
 Pace Analytical Atlanta  
 110 Technology Parkway  
 Peachtree Corners, GA 30092  
 Phone (770)-734-4200

WO#: 30204838



Preserved Containers

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	CON	TH	LAB USE ONLY
1	PZ-31	G	12/6/2016 14:20	AZL0241-01	GW	2		001
2	PZ-1D	G	12/6/2016 15:10	AZL0241-02	GW	2		007
3								
4								
5								
6								
7								
8								
9								
10								

Radium 226, 228, Total

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			<i>Karen Hill</i>	12-8-16 10:20	
2					
3					

Cooler Temperature on Receipt N/A °C Custody Seal Y or (N) Received on Ice Y or (N) Sample Intact Y or N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC  
 This chain of custody is considered complete as is since this information is available in the owner laboratory.

Friday, June 17, 2016 11:01:34 AM

FMT-ALL-C-002rev.00 24March2009

Page 1 of 1

30204838

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

CHAIN OF CUSTODY RECORD

PAGE: 1 OF 1

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-508-7239		<b>REPORT TO:</b> Jolu Abraham Heath McCorkle <b>REQUESTED COMPLETION DATE:</b> STRONG TAT <b>PROJECT NAME/STATE:</b> Plant Mitchell / GA <b>PROJECT #:</b> Phase II CCR		<b>CC:</b> Maria Padilla <b>PO #:</b> GPC10684198	
<b>CONTAINER TYPE</b> PRESERVATION: # of	<b>ANALYSIS REQUESTED</b> P P P P P P P P 3 7 7 7 7 7 7 7 Metalin App. III & IV RPA 6020/7470 IC (C, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320 2X 12 HDPE bottles	<b>CONTAINER TYPE</b> PRESERVATION: # of	<b>ANALYSIS REQUESTED</b> P P P P P P P P 3 7 7 7 7 7 7 7 Metalin App. III & IV RPA 6020/7470 IC (C, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320 2X 12 HDPE bottles	<b>CONTAINER TYPE</b> PRESERVATION: # of	<b>ANALYSIS REQUESTED</b> P P P P P P P P 3 7 7 7 7 7 7 7 Metalin App. III & IV RPA 6020/7470 IC (C, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320 2X 12 HDPE bottles
<b>CONTAINER TYPE</b> PRESERVATION: # of	<b>ANALYSIS REQUESTED</b> P P P P P P P P 3 7 7 7 7 7 7 7 Metalin App. III & IV RPA 6020/7470 IC (C, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320 2X 12 HDPE bottles	<b>CONTAINER TYPE</b> PRESERVATION: # of	<b>ANALYSIS REQUESTED</b> P P P P P P P P 3 7 7 7 7 7 7 7 Metalin App. III & IV RPA 6020/7470 IC (C, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320 2X 12 HDPE bottles	<b>CONTAINER TYPE</b> PRESERVATION: # of	<b>ANALYSIS REQUESTED</b> P P P P P P P P 3 7 7 7 7 7 7 7 Metalin App. III & IV RPA 6020/7470 IC (C, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320 2X 12 HDPE bottles
<b>COLLECTION DATE</b> 12-6-16 14:20 15:10	<b>MATRIX CODE</b> GW GW	<b>GRAB</b> <input checked="" type="checkbox"/> PZ-31 <input checked="" type="checkbox"/> PZ-1D	<b>SAMPLE IDENTIFICATION</b> PZ-31 PZ-1D	<b>LAB #:</b> A2L0241 <b>Tracking #:</b> 810294725050	<b>REMARKS/ADDITIONAL INFORMATION</b> FOR LAB USE ONLY ENTERED INTO LIMS:

Pace COC Revised.xlsx

Sample Condition Upon Receipt Pittsburgh

30204838



Client Name: Pace At

Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 0812 5100 9450

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

Thermometer Used N/A    Type of Ice: Wet Blue None

Cooler Temperature Observed Temp N/A °C    Correction Factor: N/A °C    Final Temp: N/A °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: KH 12-8-14

Comments:

	Yes	No	N/A	
Chain of Custody Present:	/			1.
Chain of Custody Filled Out:	/			2.
Chain of Custody Relinquished:	/			3.
Sampler Name & Signature on COC:	/			4.
Sample Labels match COC: -Includes date/time/ID/Analysis    Matrix: <u>WT</u>	/			5.
Samples Arrived within Hold Time:	/			6.
Short Hold Time Analysis (<72hr remaining):		/		7.
Rush Turn Around Time Requested:		/		8.
Sufficient Volume:	/			9.
Correct Containers Used: -Pace Containers Used:	/			10.
Containers Intact:	/			11.
Filtered volume received for Dissolved tests All containers needing preservation have been checked.			/	12.
All containers needing preservation are found to be in compliance with EPA recommendation.	/			13. <u>PH 22</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>KH</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			/	14.
Trip Blank Present:			/	15.
Trip Blank Custody Seals Present			/	
Rad Aqueous Samples Screened > 0.5 mrem/hr		/		Initial when completed: <u>KH</u> Date: <u>12-8-14</u>

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

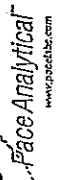
Comments/ Resolution: \_\_\_\_\_

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

\*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.



# Quality Control Sample Performance Assessment



Test: Ra-226  
 Analyst: LAL  
 Date: 12/16/2016  
 Worklist: 32910  
 Matrix: DW

**Method Blank Assessment**

MB Sample ID	1195275
MB concentration:	0.058
MB Counting Uncertainty:	0.092
MB MDC:	0.202
MB Numerical Performance Indicator:	1.24
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

**Laboratory Control Sample Assessment**

Count Date:	Count	N
12/20/2016	LCS32910	LCS032910
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.672	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.502	
Target Conc. (pCi/L, g, F):	8.904	
Uncertainty (Calculated):	0.419	
Result (pCi/L, g, F):	6.764	
LC/LCSD Counting Uncertainty (pCi/L, g, F):	0.610	
Numerical Performance Indicator:	-5.67	
Percent Recovery:	75.97%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

**Duplicate Sample Assessment**

Sample I.D.:	30204838001	Enter Duplicate sample IDs if other than LC/S/LCSD in the space below.
Duplicate Sample I.D.:	30204838001DUP	
Sample Result (pCi/L, g, F):	0.301	
Sample Duplicate Result (pCi/L, g, F):	0.155	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.462	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.192	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate RPD:	-1.279	
Duplicate Status vs Numerical Indicator:	42.22%	
Duplicate Status vs RPD:	N/A	
Duplicate Status vs Recovery:	Fail***	

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

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision.

*Handwritten signature*

**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
 Sample I.D.:  
 Sample MS I.D.:  
 Sample MSD I.D.:  
 Spike I.D.:

MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
 Spike Volume Used in MS (mL):  
 Spike Volume Used in MSD (mL):  
 MS Aliquot (L, g, F):  
 MSD Aliquot (L, g, F):  
 MS Target Conc. (pCi/L, g, F):  
 MSD Target Conc. (pCi/L, g, F):  
 Spike uncertainty (calculated):

Sample Result:  
 Sample Matrix Spike Result:  
 Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
 Sample Matrix Spike Duplicate Result:  
 Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
 MS Numerical Performance Indicator:  
 MSD Numerical Performance Indicator:  
 MS Percent Recovery:  
 MSD Percent Recovery:  
 MS Status vs Numerical Indicator:  
 MSD Status vs Numerical Indicator:  
 MS Status vs Recovery:  
 MSD Status vs Recovery:

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
 Sample MS I.D.:  
 Sample MSD I.D.:  
 Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
 Sample Matrix Spike Duplicate Result:  
 Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
 Duplicate Numerical Performance Indicator:  
 MS/MSD Duplicate Status vs Numerical Indicator:  
 MS/MSD Duplicate Status vs RPD:

# Quality Control Sample Performance Assessment

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

Test: Ra-228  
Analyst: JLW  
Date: 12/28/2016  
Worklist: 32912  
Matrix: DW



Method Blank Assessment	
MB Sample ID	1195281
MB concentration:	0.462
MB Counting Uncertainty:	0.340
MB MDC:	0.678
MB Numerical Performance Indicator:	2.56
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	1/8/2017
Spike I.D.:	16-027
Spike Concentration (pCi/mL):	25.613
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.817
Target Conc. (pCi/L, g, F):	6.269
Uncertainty (Calculated):	0.451
Result (pCi/L, g, F):	8.156
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.806
Numerical Performance Indicator:	4.00
Percent Recovery:	130.10%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30204834003
Duplicate Sample I.D.:	30204834003DUP
Sample Result (pCi/L, g, F):	0.752
Sample Result Counting Uncertainty (pCi/L, g, F):	0.372
Sample Duplicate Result (pCi/L, g, F):	1.526
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.436
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-2.649
Duplicate RPD:	67.95%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail**

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

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision.

*Handwritten signature: J. White*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	



**PACE ANALYTICAL SERVICES, LLC.**

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

**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AZL0316**

**December 21, 2016**

**Project: CCR Event**

**Project #: Plant Mitchell**

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

Approved:

A handwritten signature in black ink that reads "Betsy McDaniel" written over a horizontal line.

Project Manager

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All test results relate only to the samples analyzed.



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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 21, 2016

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
PZ-7D	AZL0316-01	Ground Water	12/07/16 10:30	12/08/16 10:05
Dup-01	AZL0316-02	Ground Water	12/07/16 00:00	12/08/16 10:05
PZ-14	AZL0316-03	Ground Water	12/07/16 13:15	12/08/16 10:05
PZ-23	AZL0316-04	Ground Water	12/07/16 15:45	12/08/16 10:05
PZ-32	AZL0316-05	Ground Water	12/07/16 10:45	12/08/16 10:05
PZ-6S	AZL0316-06	Ground Water	12/07/16 13:50	12/08/16 10:05



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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 21, 2016

**Report No.:** AZL0316

**Project:** CCR Event

**Client ID:** PZ-7D

**Lab Number ID:** AZL0316-01

**Date/Time Sampled:** 12/7/2016 10:30:00AM

**Date/Time Received:** 12/8/2016 10:05:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	433	25	10	mg/L	SM 2540 C		1	12/12/16 18:16	12/12/16 18:16	6120339	JPT
<b>Inorganic Anions</b>											
Chloride	7.6	0.25	0.01	mg/L	EPA 300.0		1	12/13/16 08:57	12/14/16 02:15	6120363	RLC
Fluoride	0.15	0.30	0.02	mg/L	EPA 300.0	J	1	12/13/16 08:57	12/14/16 02:15	6120363	RLC
Sulfate	57	5.0	0.26	mg/L	EPA 300.0		5	12/13/16 08:57	12/14/16 20:11	6120363	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 16:14	6120325	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 16:14	6120325	KLH
Barium	0.0133	0.0100	0.0004	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 16:14	6120325	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 16:14	6120325	KLH
Boron	0.394	0.0400	0.0064	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 16:14	6120325	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 16:14	6120325	KLH
Calcium	103	25.0	1.55	mg/L	EPA 6020B		50	12/12/16 16:35	12/17/16 04:02	6120325	CSW
Chromium	0.0030	0.0100	0.0009	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 16:14	6120325	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 16:14	6120325	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 16:14	6120325	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 16:14	6120325	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 16:14	6120325	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 16:14	6120325	KLH
Lithium	0.0023	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 16:14	6120325	KLH
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/13/16 09:50	12/13/16 15:27	6120353	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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 Atlanta GA, 30339

December 21, 2016

Attention: Mr. Joju Abraham

Report No.: AZL0316

Project: CCR Event

Client ID: Dup-01

Lab Number ID: AZL0316-02

Date/Time Sampled: 12/7/2016 12:00:00AM

Date/Time Received: 12/8/2016 10:05:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	378	25	10	mg/L	SM 2540 C		1	12/12/16 18:16	12/12/16 18:16	6120339	JPT
<b>Inorganic Anions</b>											
Chloride	7.3	0.25	0.01	mg/L	EPA 300.0		1	12/13/16 08:57	12/14/16 02:37	6120363	RLC
Fluoride	0.14	0.30	0.02	mg/L	EPA 300.0	J	1	12/13/16 08:57	12/14/16 02:37	6120363	RLC
Sulfate	58	5.0	0.26	mg/L	EPA 300.0		5	12/13/16 08:57	12/14/16 20:33	6120363	RLC
<b>Metals, Total</b>											
Antimony	0.0008	0.0030	0.0008	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:31	6120326	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:31	6120326	CSW
Barium	0.0127	0.0100	0.0004	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:31	6120326	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:31	6120326	CSW
Boron	0.436	0.0400	0.0064	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:31	6120326	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:31	6120326	CSW
Calcium	105	50.0	3.11	mg/L	EPA 6020B		100	12/14/16 15:30	12/21/16 12:37	6120326	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:31	6120326	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:31	6120326	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:31	6120326	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:31	6120326	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:31	6120326	CSW
Thallium	0.0002	0.0010	0.0002	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:31	6120326	CSW
Lithium	0.0022	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:31	6120326	CSW
Mercury	0.000064	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/13/16 09:50	12/13/16 15:30	6120353	MTC



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 Atlanta GA, 30339

December 21, 2016

Attention: Mr. Joju Abraham

Report No.: AZL0316

Project: CCR Event

Client ID: PZ-14

Lab Number ID: AZL0316-03

Date/Time Sampled: 12/7/2016 1:15:00PM

Date/Time Received: 12/8/2016 10:05:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	393	25	10	mg/L	SM 2540 C		1	12/12/16 18:16	12/12/16 18:16	6120339	JPT
<b>Inorganic Anions</b>											
Chloride	4.8	0.25	0.01	mg/L	EPA 300.0		1	12/13/16 08:57	12/14/16 02:58	6120363	RLC
Fluoride	0.07	0.30	0.02	mg/L	EPA 300.0	J	1	12/13/16 08:57	12/14/16 02:58	6120363	RLC
Sulfate	1.5	1.0	0.05	mg/L	EPA 300.0		1	12/13/16 08:57	12/14/16 02:58	6120363	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:37	6120326	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:37	6120326	CSW
Barium	0.0650	0.0100	0.0004	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:37	6120326	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:37	6120326	CSW
Boron	0.0292	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:37	6120326	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:37	6120326	CSW
Calcium	93.1	25.0	1.55	mg/L	EPA 6020B		50	12/14/16 15:30	12/21/16 12:43	6120326	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:37	6120326	CSW
Cobalt	0.0020	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:37	6120326	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:37	6120326	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:37	6120326	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:37	6120326	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:37	6120326	CSW
Lithium	0.0030	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:37	6120326	CSW
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/13/16 09:50	12/13/16 15:32	6120353	MTC



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 Atlanta GA, 30339

December 21, 2016

Attention: Mr. Joju Abraham

**Report No.: AZL0316**

**Project: CCR Event**

**Client ID: PZ-23**

**Lab Number ID: AZL0316-04**

**Date/Time Sampled: 12/7/2016 3:45:00PM**

**Date/Time Received: 12/8/2016 10:05:00AM**

**Matrix: Ground Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	406	25	10	mg/L	SM 2540 C		1	12/12/16 18:16	12/12/16 18:16	6120339	JPT
<b>Inorganic Anions</b>											
Chloride	5.2	0.25	0.01	mg/L	EPA 300.0		1	12/13/16 08:57	12/14/16 05:09	6120363	RLC
Fluoride	0.13	0.30	0.02	mg/L	EPA 300.0	J	1	12/13/16 08:57	12/14/16 05:09	6120363	RLC
Sulfate	24	1.0	0.05	mg/L	EPA 300.0		1	12/13/16 08:57	12/14/16 05:09	6120363	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:43	6120326	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:43	6120326	CSW
Barium	0.0581	0.0100	0.0004	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:43	6120326	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:43	6120326	CSW
Boron	0.182	0.0400	0.0064	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:43	6120326	CSW
Cadmium	0.0002	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:43	6120326	CSW
Calcium	125	50.0	3.11	mg/L	EPA 6020B		100	12/14/16 15:30	12/21/16 12:49	6120326	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:43	6120326	CSW
Cobalt	0.0008	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:43	6120326	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:43	6120326	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:43	6120326	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:43	6120326	CSW
Thallium	0.0002	0.0010	0.0002	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:43	6120326	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:43	6120326	CSW
Mercury	0.00009	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/13/16 09:50	12/13/16 15:35	6120353	MTC





**PACE ANALYTICAL SERVICES, LLC.**

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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 21, 2016

**Report No.: AZL0316**

**Project: CCR Event**

**Client ID: PZ-32**

**Lab Number ID: AZL0316-05**

**Date/Time Sampled: 12/7/2016 10:45:00AM**

**Date/Time Received: 12/8/2016 10:05:00AM**

**Matrix: Ground Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	214	25	10	mg/L	SM 2540 C		1	12/12/16 18:16	12/12/16 18:16	6120339	JPT
<b>Inorganic Anions</b>											
Chloride	3.2	0.25	0.01	mg/L	EPA 300.0		1	12/13/16 08:57	12/14/16 05:30	6120363	RLC
Fluoride	0.07	0.30	0.02	mg/L	EPA 300.0	J	1	12/13/16 08:57	12/14/16 05:30	6120363	RLC
Sulfate	1.9	1.0	0.05	mg/L	EPA 300.0		1	12/13/16 08:57	12/14/16 05:30	6120363	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:49	6120326	CSW
Arsenic	0.0020	0.0050	0.0016	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:49	6120326	CSW
Barium	0.0506	0.0100	0.0004	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:49	6120326	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:49	6120326	CSW
Boron	0.0157	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:49	6120326	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:49	6120326	CSW
Calcium	52.8	25.0	1.55	mg/L	EPA 6020B		50	12/14/16 15:30	12/21/16 12:54	6120326	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:49	6120326	CSW
Cobalt	0.0015	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:49	6120326	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:49	6120326	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:49	6120326	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:49	6120326	CSW
Thallium	0.0002	0.0010	0.0002	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:49	6120326	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:49	6120326	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 10:55	12/14/16 13:51	6120386	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 21, 2016

**Report No.: AZL0316**

**Project: CCR Event**

**Client ID: PZ-6S**

**Lab Number ID: AZL0316-06**

**Date/Time Sampled: 12/7/2016 1:50:00PM**

**Date/Time Received: 12/8/2016 10:05:00AM**

**Matrix: Ground Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	192	25	10	mg/L	SM 2540 C		1	12/12/16 18:16	12/12/16 18:16	6120339	JPT
<b>Inorganic Anions</b>											
Chloride	6.5	0.25	0.01	mg/L	EPA 300.0		1	12/13/16 08:57	12/14/16 05:51	6120363	RLC
Fluoride	0.08	0.30	0.02	mg/L	EPA 300.0	J	1	12/13/16 08:57	12/14/16 05:51	6120363	RLC
Sulfate	33	1.0	0.05	mg/L	EPA 300.0		1	12/13/16 08:57	12/14/16 05:51	6120363	RLC
<b>Metals, Total</b>											
Antimony	0.0029	0.0030	0.0008	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:56	6120326	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:56	6120326	CSW
Barium	0.0234	0.0100	0.0004	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:56	6120326	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:56	6120326	CSW
Boron	0.263	0.0400	0.0064	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:56	6120326	CSW
Cadmium	0.0006	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:56	6120326	CSW
Calcium	13.5	5.00	0.311	mg/L	EPA 6020B		10	12/14/16 15:30	12/21/16 13:00	6120326	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:56	6120326	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:56	6120326	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:56	6120326	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:56	6120326	CSW
Selenium	0.0017	0.0100	0.0010	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 13:56	6120326	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:56	6120326	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 13:56	6120326	CSW
Mercury	0.00018	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/14/16 10:55	12/14/16 13:53	6120386	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 21, 2016

**Report No.: AZL0316**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120339 - SM 2540 C</b>											
<b>Blank (6120339-BLK1)</b>						Prepared & Analyzed: 12/12/16					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (6120339-BS1)</b>						Prepared & Analyzed: 12/12/16					
Total Dissolved Solids	394	25	10	mg/L	400.00		98	84-108			
<b>Duplicate (6120339-DUP1)</b>						Prepared & Analyzed: 12/12/16					
						Source: AZL0313-04					
Total Dissolved Solids	1730	25	10	mg/L		1770			3	10	



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December 21, 2016

**Report No.: AZL0316**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120363 - EPA 300.0</b>											
<b>Blank (6120363-BLK1)</b>						Prepared & Analyzed: 12/13/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
<b>LCS (6120363-BS1)</b>						Prepared & Analyzed: 12/13/16					
Chloride	9.93	0.25	0.01	mg/L	10.010		99	90-110			
Fluoride	10.5	0.30	0.02	mg/L	10.020		105	90-110			
Sulfate	10.0	1.0	0.05	mg/L	10.020		100	90-110			
<b>Matrix Spike (6120363-MS1)</b>						Source: AZL0284-07 Prepared & Analyzed: 12/13/16					
Chloride	12.3	0.25	0.01	mg/L	10.010	3.13	92	90-110			
Fluoride	10.1	0.30	0.02	mg/L	10.020	0.10	100	90-110			
Sulfate	50.3	1.0	0.05	mg/L	10.020	45.5	48	90-110			QM-02
<b>Matrix Spike (6120363-MS2)</b>						Source: AZL0316-03 Prepared: 12/13/16 Analyzed: 12/14/16					
Chloride	14.2	0.25	0.01	mg/L	10.010	4.81	93	90-110			
Fluoride	10.2	0.30	0.02	mg/L	10.020	0.07	101	90-110			
Sulfate	10.6	1.0	0.05	mg/L	10.020	1.53	90	90-110			
<b>Matrix Spike Dup (6120363-MSD1)</b>						Source: AZL0284-07 Prepared & Analyzed: 12/13/16					
Chloride	13.0	0.25	0.01	mg/L	10.010	3.13	98	90-110	5	15	
Fluoride	10.8	0.30	0.02	mg/L	10.020	0.10	107	90-110	6	15	
Sulfate	50.7	1.0	0.05	mg/L	10.020	45.5	52	90-110	0.8	15	QM-02



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**Report No.: AZL0316**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6120325 - EPA 3005A**

**Blank (6120325-BLK1)**

Prepared: 12/12/16 Analyzed: 12/13/16

Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.0400	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0100	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	0.0025	0.0100	0.0021	mg/L							J
Lithium	ND	0.0500	0.0021	mg/L							

**LCS (6120325-BS1)**

Prepared: 12/12/16 Analyzed: 12/13/16

Antimony	0.105	0.0030	0.0008	mg/L	0.10000		105	80-120			
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000		102	80-120			
Barium	0.103	0.0100	0.0004	mg/L	0.10000		103	80-120			
Beryllium	0.108	0.0030	0.00008	mg/L	0.10000		108	80-120			
Boron	1.10	0.0400	0.0064	mg/L	1.0000		110	80-120			
Cadmium	0.106	0.0010	0.00007	mg/L	0.10000		106	80-120			
Calcium	1.00	0.500	0.0311	mg/L	1.0000		100	80-120			
Chromium	0.104	0.0100	0.0009	mg/L	0.10000		104	80-120			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000		102	80-120			
Copper	0.104	0.0250	0.0005	mg/L	0.10000		104	80-120			
Lead	0.102	0.0050	0.0001	mg/L	0.10000		102	80-120			
Molybdenum	0.109	0.0100	0.0017	mg/L	0.10000		109	80-120			
Nickel	0.106	0.0100	0.0006	mg/L	0.10000		106	80-120			
Selenium	0.104	0.0100	0.0010	mg/L	0.10000		104	80-120			
Silver	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Thallium	0.102	0.0010	0.0002	mg/L	0.10000		102	80-120			
Vanadium	0.106	0.0100	0.0071	mg/L	0.10000		106	80-120			
Zinc	0.105	0.0100	0.0021	mg/L	0.10000		105	80-120			
Lithium	0.106	0.0500	0.0021	mg/L	0.10000		106	80-120			



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**Report No.: AZL0316**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120325 - EPA 3005A</b>											
<b>Matrix Spike (6120325-MS1)</b>			<b>Source: AZL0282-07</b>				Prepared: 12/12/16 Analyzed: 12/13/16				
Antimony	0.108	0.0030	0.0008	mg/L	0.10000	ND	108	75-125			
Arsenic	0.106	0.0050	0.0016	mg/L	0.10000	ND	106	75-125			
Barium	0.174	0.0100	0.0004	mg/L	0.10000	0.0752	99	75-125			
Beryllium	0.113	0.0030	0.00008	mg/L	0.10000	ND	113	75-125			
Boron	2.19	0.0400	0.0064	mg/L	1.0000	1.06	114	75-125			
Cadmium	0.109	0.0010	0.00007	mg/L	0.10000	0.0002	109	75-125			
Calcium	102	25.0	1.55	mg/L	1.0000	104	NR	75-125			QM-02
Chromium	0.102	0.0100	0.0009	mg/L	0.10000	ND	102	75-125			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	0.0009	101	75-125			
Copper	0.0998	0.0250	0.0005	mg/L	0.10000	0.0006	99	75-125			
Lead	0.100	0.0050	0.0001	mg/L	0.10000	0.0001	100	75-125			
Molybdenum	0.149	0.0100	0.0017	mg/L	0.10000	0.0365	113	75-125			
Nickel	0.105	0.0100	0.0006	mg/L	0.10000	0.0053	99	75-125			
Selenium	0.107	0.0100	0.0010	mg/L	0.10000	ND	107	75-125			
Silver	0.103	0.0100	0.0005	mg/L	0.10000	ND	103	75-125			
Thallium	0.102	0.0010	0.0002	mg/L	0.10000	ND	102	75-125			
Vanadium	0.109	0.0100	0.0071	mg/L	0.10000	ND	109	75-125			
Zinc	0.105	0.0100	0.0021	mg/L	0.10000	0.0032	102	75-125			
Lithium	0.111	0.0500	0.0021	mg/L	0.10000	0.0026	108	75-125			
<b>Matrix Spike Dup (6120325-MSD1)</b>			<b>Source: AZL0282-07</b>				Prepared: 12/12/16 Analyzed: 12/13/16				
Antimony	0.109	0.0030	0.0008	mg/L	0.10000	ND	109	75-125	0.5	20	
Arsenic	0.104	0.0050	0.0016	mg/L	0.10000	ND	104	75-125	1	20	
Barium	0.177	0.0100	0.0004	mg/L	0.10000	0.0752	102	75-125	2	20	
Beryllium	0.116	0.0030	0.00008	mg/L	0.10000	ND	116	75-125	3	20	
Boron	2.24	0.0400	0.0064	mg/L	1.0000	1.06	119	75-125	2	20	
Cadmium	0.108	0.0010	0.00007	mg/L	0.10000	0.0002	108	75-125	0.8	20	
Calcium	103	25.0	1.55	mg/L	1.0000	104	NR	75-125	0.5	20	QM-02
Chromium	0.103	0.0100	0.0009	mg/L	0.10000	ND	103	75-125	0.5	20	
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000	0.0009	102	75-125	0.8	20	
Copper	0.0996	0.0250	0.0005	mg/L	0.10000	0.0006	99	75-125	0.1	20	
Lead	0.101	0.0050	0.0001	mg/L	0.10000	0.0001	101	75-125	0.8	20	
Molybdenum	0.149	0.0100	0.0017	mg/L	0.10000	0.0365	113	75-125	0.04	20	
Nickel	0.107	0.0100	0.0006	mg/L	0.10000	0.0053	102	75-125	2	20	
Selenium	0.108	0.0100	0.0010	mg/L	0.10000	ND	108	75-125	0.6	20	
Silver	0.104	0.0100	0.0005	mg/L	0.10000	ND	104	75-125	1	20	
Thallium	0.104	0.0010	0.0002	mg/L	0.10000	ND	104	75-125	1	20	
Vanadium	0.109	0.0100	0.0071	mg/L	0.10000	ND	109	75-125	0.3	20	
Zinc	0.107	0.0100	0.0021	mg/L	0.10000	0.0032	104	75-125	2	20	
Lithium	0.114	0.0500	0.0021	mg/L	0.10000	0.0026	112	75-125	3	20	



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December 21, 2016

**Report No.: AZL0316**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120325 - EPA 3005A</b>											
<b>Post Spike (6120325-PS1)</b>			<b>Source: AZL0282-07</b>			<b>Prepared: 12/12/16 Analyzed: 12/13/16</b>					
Antimony	101			ug/L	100.00	0.150	101	80-120			
Arsenic	101			ug/L	100.00	0.750	100	80-120			
Barium	170			ug/L	100.00	75.2	95	80-120			
Beryllium	110			ug/L	100.00	0.0200	110	80-120			
Boron	2140			ug/L	1000.0	1060	109	80-120			
Cadmium	104			ug/L	100.00	0.190	103	80-120			
Calcium	101000			ug/L	1000.0	104000	NR	80-120			QM-02
Chromium	97.9			ug/L	100.00	-3.87	98	80-120			
Cobalt	96.3			ug/L	100.00	0.910	95	80-120			
Copper	94.1			ug/L	100.00	0.630	93	80-120			
Lead	96.7			ug/L	100.00	0.140	97	80-120			
Molybdenum	144			ug/L	100.00	36.5	107	80-120			
Nickel	100			ug/L	100.00	5.29	95	80-120			
Selenium	102			ug/L	100.00	0.770	101	80-120			
Silver	99.8			ug/L	100.00	0.0100	100	80-120			
Thallium	99.7			ug/L	100.00	0.0400	100	80-120			
Vanadium	106			ug/L	100.00	3.17	102	80-120			
Zinc	100			ug/L	100.00	3.24	97	80-120			
Lithium	109			ug/L	100.00	2.55	107	80-120			

**Batch 6120326 - EPA 3005A**

<b>Blank (6120326-BLK1)</b>				<b>Prepared: 12/14/16 Analyzed: 12/15/16</b>							
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.0400	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0100	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							



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**Report No.: AZL0316**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120326 - EPA 3005A</b>											
<b>Blank (6120326-BLK1)</b>											
						Prepared: 12/14/16 Analyzed: 12/15/16					
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							
<b>LCS (6120326-BS1)</b>											
						Prepared: 12/14/16 Analyzed: 12/15/16					
Antimony	0.101	0.0030	0.0008	mg/L	0.10000		101	80-120			
Arsenic	0.100	0.0050	0.0016	mg/L	0.10000		100	80-120			
Barium	0.0974	0.0100	0.0004	mg/L	0.10000		97	80-120			
Beryllium	0.108	0.0030	0.00008	mg/L	0.10000		108	80-120			
Boron	1.06	0.0400	0.0064	mg/L	1.0000		106	80-120			
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000		101	80-120			
Calcium	0.972	0.500	0.0311	mg/L	1.0000		97	80-120			
Chromium	0.101	0.0100	0.0009	mg/L	0.10000		101	80-120			
Cobalt	0.0998	0.0100	0.0005	mg/L	0.10000		100	80-120			
Copper	0.100	0.0250	0.0005	mg/L	0.10000		100	80-120			
Lead	0.0990	0.0050	0.0001	mg/L	0.10000		99	80-120			
Molybdenum	0.102	0.0100	0.0017	mg/L	0.10000		102	80-120			
Nickel	0.101	0.0100	0.0006	mg/L	0.10000		101	80-120			
Selenium	0.0980	0.0100	0.0010	mg/L	0.10000		98	80-120			
Silver	0.0985	0.0100	0.0005	mg/L	0.10000		98	80-120			
Thallium	0.0982	0.0010	0.0002	mg/L	0.10000		98	80-120			
Vanadium	0.104	0.0100	0.0071	mg/L	0.10000		104	80-120			
Zinc	0.101	0.0100	0.0021	mg/L	0.10000		101	80-120			
Lithium	0.104	0.0500	0.0021	mg/L	0.10000		104	80-120			
<b>Matrix Spike (6120326-MS1)</b>											
				<b>Source: AZL0316-02</b>		Prepared: 12/14/16 Analyzed: 12/15/16					
Antimony	0.101	0.0030	0.0008	mg/L	0.10000	0.0008	100	75-125			
Arsenic	0.0976	0.0050	0.0016	mg/L	0.10000	ND	98	75-125			
Barium	0.109	0.0100	0.0004	mg/L	0.10000	0.0127	96	75-125			
Beryllium	0.105	0.0030	0.00008	mg/L	0.10000	ND	105	75-125			
Boron	1.48	0.0400	0.0064	mg/L	1.0000	0.436	105	75-125			
Cadmium	0.0992	0.0010	0.00007	mg/L	0.10000	ND	99	75-125			
Calcium	107	50.0	3.11	mg/L	1.0000	105	276	75-125			QM-02
Chromium	0.0954	0.0100	0.0009	mg/L	0.10000	ND	95	75-125			
Cobalt	0.0957	0.0100	0.0005	mg/L	0.10000	ND	96	75-125			
Copper	0.0942	0.0250	0.0005	mg/L	0.10000	ND	94	75-125			
Lead	0.0979	0.0050	0.0001	mg/L	0.10000	ND	98	75-125			
Molybdenum	0.102	0.0100	0.0017	mg/L	0.10000	ND	102	75-125			
Nickel	0.100	0.0100	0.0006	mg/L	0.10000	0.0042	96	75-125			
Selenium	0.0986	0.0100	0.0010	mg/L	0.10000	ND	99	75-125			
Silver	0.0958	0.0100	0.0005	mg/L	0.10000	ND	96	75-125			





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Attention: Mr. Joju Abraham

December 21, 2016

**Report No.: AZL0316**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120326 - EPA 3005A</b>											
<b>Matrix Spike (6120326-MS1)</b>			<b>Source: AZL0316-02</b>			<b>Prepared: 12/14/16 Analyzed: 12/15/16</b>					
Thallium	0.0983	0.0010	0.0002	mg/L	0.10000	0.0002	98	75-125			
Vanadium	0.102	0.0100	0.0071	mg/L	0.10000	ND	102	75-125			
Zinc	0.0978	0.0100	0.0021	mg/L	0.10000	ND	98	75-125			
Lithium	0.103	0.0500	0.0021	mg/L	0.10000	0.0022	101	75-125			
<b>Matrix Spike Dup (6120326-MSD1)</b>			<b>Source: AZL0316-02</b>			<b>Prepared: 12/14/16 Analyzed: 12/15/16</b>					
Antimony	0.105	0.0030	0.0008	mg/L	0.10000	0.0008	104	75-125	4	20	
Arsenic	0.100	0.0050	0.0016	mg/L	0.10000	ND	100	75-125	2	20	
Barium	0.110	0.0100	0.0004	mg/L	0.10000	0.0127	97	75-125	1	20	
Beryllium	0.109	0.0030	0.00008	mg/L	0.10000	ND	109	75-125	4	20	
Boron	1.52	0.0400	0.0064	mg/L	1.0000	0.436	108	75-125	2	20	
Cadmium	0.104	0.0010	0.00007	mg/L	0.10000	ND	104	75-125	5	20	
Calcium	108	50.0	3.11	mg/L	1.0000	105	301	75-125	0.2	20	QM-02
Chromium	0.0968	0.0100	0.0009	mg/L	0.10000	ND	97	75-125	1	20	
Cobalt	0.0993	0.0100	0.0005	mg/L	0.10000	ND	99	75-125	4	20	
Copper	0.0960	0.0250	0.0005	mg/L	0.10000	ND	96	75-125	2	20	
Lead	0.100	0.0050	0.0001	mg/L	0.10000	ND	100	75-125	2	20	
Molybdenum	0.107	0.0100	0.0017	mg/L	0.10000	ND	107	75-125	4	20	
Nickel	0.102	0.0100	0.0006	mg/L	0.10000	0.0042	98	75-125	2	20	
Selenium	0.0975	0.0100	0.0010	mg/L	0.10000	ND	98	75-125	1	20	
Silver	0.0986	0.0100	0.0005	mg/L	0.10000	ND	99	75-125	3	20	
Thallium	0.0988	0.0010	0.0002	mg/L	0.10000	0.0002	99	75-125	0.5	20	
Vanadium	0.103	0.0100	0.0071	mg/L	0.10000	ND	103	75-125	0.5	20	
Zinc	0.101	0.0100	0.0021	mg/L	0.10000	ND	101	75-125	3	20	
Lithium	0.108	0.0500	0.0021	mg/L	0.10000	0.0022	106	75-125	5	20	
<b>Post Spike (6120326-PS1)</b>			<b>Source: AZL0316-02</b>			<b>Prepared: 12/14/16 Analyzed: 12/15/16</b>					
Antimony	97.3			ug/L	100.00	0.850	96	80-120			
Arsenic	98.2			ug/L	100.00	-0.560	98	80-120			
Barium	109			ug/L	100.00	12.7	96	80-120			
Beryllium	107			ug/L	100.00	0.0200	107	80-120			
Boron	1490			ug/L	1000.0	436	105	80-120			
Cadmium	101			ug/L	100.00	0.00	101	80-120			
Calcium	103000			ug/L	1000.0	105000	NR	80-120			QM-02
Chromium	97.1			ug/L	100.00	-3.67	97	80-120			
Cobalt	97.0			ug/L	100.00	0.400	97	80-120			
Copper	95.8			ug/L	100.00	0.520	95	80-120			
Lead	96.9			ug/L	100.00	0.0200	97	80-120			
Molybdenum	102			ug/L	100.00	0.140	102	80-120			
Nickel	101			ug/L	100.00	4.18	97	80-120			



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 21, 2016

**Report No.: AZL0316**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120326 - EPA 3005A</b>											
<b>Post Spike (6120326-PS1)</b>			<b>Source: AZL0316-02</b>			Prepared: 12/14/16 Analyzed: 12/15/16					
Selenium	97.8			ug/L	100.00	-0.170	98	80-120			
Silver	96.6			ug/L	100.00	0.00	97	80-120			
Thallium	96.4			ug/L	100.00	0.220	96	80-120			
Vanadium	103			ug/L	100.00	3.25	99	80-120			
Zinc	100			ug/L	100.00	1.15	99	80-120			
Lithium	108			ug/L	100.00	2.21	105	80-120			
<b>Batch 6120353 - EPA 7470A</b>											
<b>Blank (6120353-BLK1)</b>						Prepared & Analyzed: 12/13/16					
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (6120353-BS1)</b>						Prepared & Analyzed: 12/13/16					
Mercury	0.00245	0.00050	0.000041	mg/L	2.5000E-3		98	80-120			
<b>Matrix Spike (6120353-MS1)</b>			<b>Source: AZL0284-06</b>			Prepared & Analyzed: 12/13/16					
Mercury	0.00250	0.00050	0.000041	mg/L	2.5000E-3	0.00008	97	75-125			
<b>Matrix Spike Dup (6120353-MSD1)</b>			<b>Source: AZL0284-06</b>			Prepared & Analyzed: 12/13/16					
Mercury	0.00244	0.00050	0.000041	mg/L	2.5000E-3	0.00008	94	75-125	2	20	
<b>Post Spike (6120353-PS1)</b>			<b>Source: AZL0284-06</b>			Prepared & Analyzed: 12/13/16					
Mercury	1.73			ug/L	1.6667	0.0524	101	80-120			
<b>Batch 6120386 - EPA 7470A</b>											
<b>Blank (6120386-BLK1)</b>						Prepared & Analyzed: 12/14/16					
Mercury	ND	0.00050	0.000041	mg/L							



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 21, 2016

**Report No.: AZL0316**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120386 - EPA 7470A</b>											
<b>LCS (6120386-BS1)</b>						Prepared & Analyzed: 12/14/16					
Mercury	0.00252	0.00050	0.000041	mg/L	2.5000E-3		101	80-120			
<b>Matrix Spike (6120386-MS1)</b>						Source: AZL0316-05 Prepared & Analyzed: 12/14/16					
Mercury	0.00247	0.00050	0.000041	mg/L	2.5000E-3	ND	99	75-125			
<b>Matrix Spike Dup (6120386-MSD1)</b>						Source: AZL0316-05 Prepared & Analyzed: 12/14/16					
Mercury	0.00245	0.00050	0.000041	mg/L	2.5000E-3	ND	98	75-125	0.6	20	
<b>Post Spike (6120386-PS1)</b>						Source: AZL0316-05 Prepared & Analyzed: 12/14/16					
Mercury	1.69			ug/L	1.6667	0.00473	101	80-120			



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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 21, 2016

## Legend

### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

### Definition of Qualifiers

**QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

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

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



Pace Analytical Services, Inc.  
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PAGE: 1 OF 1

**CHAIN OF CUSTODY RECORD**

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Jolu Abraham Heath McCorkle <b>CC:</b> Mania Padilla <b>PO #:</b> GPC10684198		<b>REQUESTED COMPLETION DATE:</b> Normal TAT <b>PROJECT NAME/STATE:</b> Plant Mitchell/GA		<b>PROJECT #:</b> Phase II CCR			
Collection DATE	Collection TIME	MATRIX CODE*	COMPA	GRA B	SAMPLE IDENTIFICATION	CONTAINER TYPE:	ANALYSIS REQUESTED	LAB #	REMARKS/ADDITIONAL INFORMATION
12-7-16	10:30	GW	✓		VPZ-7D	3	Metals App. III & IV EPA 6020/7470 IC (Cl, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320 2 x 1L HDPE WIDE MOUTH	LAB #	FOR LAB USE ONLY
12-7-16	-	GW	✓		VDup-ØI	3		7	
12-7-16	13:15	GW	✓		VPZ-14	3		7	
DATE/TIME: 12-7-16/10:30 RECEIVED BY: J. Abraham DATE/TIME: 12-8-16/10:05 RECEIVED BY: J. Abraham TEMPERATURE: 100 Min: 100 Max: 100 SEAL: Intact BROKEN: No COOLERS: 1005 COURIER: J. Abraham CLIENT: J. Abraham OTHER: FS DATE/TIME: 12-7-16/10:30 RELINQUISHED BY: J. Abraham DATE/TIME: 12-7-16/10:15 RELINQUISHED BY: J. Abraham									

LAB #: A Z L O 3 1 6  
 Entered into LIMS:  
 Tracking #: 8102 9472 4568



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PAGE: 1 OF 1

**CHAIN OF CUSTODY RECORD**

**CLIENT NAME:** Georgia Power  
**CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:** 241 Ralph McGill Blvd SE, Atlanta, GA 30308, 404-506-7239  
**REPORT TO:** Joju Abraham  
**CC:** Maria Padilla, Heath McConkie  
**REQUESTED COMPLETION DATE:** 12/18/16  
**PO #:** GPC10684198  
**PROJECT NAME/STATE:** Plant Mitchell / GA  
**PROJECT #:** Phase II CCR

Collection DATE	Collection TIME	MATRIX CODE*	C O M P	SAMPLE IDENTIFICATION	CONTAINER TYPE	ANALYSIS REQUESTED	LAB #	DATE/TIME
12-7-16	15:45	GW	✓	PZ-23	4	Metals App. III & IV EPA 60207/470 IC (Cl, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320 2XLL HDPE WARRANTY	45	12-7-16/15:45
12-7-16	10:45	GW	✓	PZ-32	4		45	12-7-16/15:45
12-7-16	13:50	GW	✓	PZ-6S	4		45	12-7-16/15:45

**RELINQUISHED BY:** [Signature] DATE/TIME: 12-7-16/15:45  
**RECEIVED BY:** [Signature] DATE/TIME: 12-7-16/15:45

**CONTAINER TYPE:** P - PLASTIC, A - AMBER GLASS, G - CLEAR GLASS, V - VOA VIAL, S - STERILE, O - OTHER  
**PRESERVATION:** 1 - HCl, 56°C, 2 - H2SO4, 56°C, 3 - HNO3, 4 - NaOH, 56°C, 5 - NaOH/NaAc, 56°C, 6 - Na2S2O3, 56°C, 7 - 56°C not frozen  
**\*MATRIX CODES:** DW - DRINKING WATER, WW - WASTEWATER, GW - GROUNDWATER, SW - SURFACE WATER, W - WATER, S - SOIL, SL - SLUDGE, SD - SOLID, A - AIR, L - LIQUID, P - PRODUCT  
**REMARKS/ADDITIONAL INFORMATION:**

**LAB #:** A2LO316  
**Entered into LIMS:** 8102 9472 4579  
**Tracking #:** MR

**FOR LAB USE ONLY**

**RECEIVED BY LAB:** [Signature] DATE/TIME: 12/08/16 10:05  
**TEMPERATURE:** 10 Min: 10, Max: 10  
**Ice checked:** No NA, No NA, No NA  
**Seal:** Intact, Broken, Not Present  
**USPS:** # of Coolers: 2, Courier ID: #2  
**CLIENT:** OTHER FS  
**COOLERS:** #2



**PACE ANALYTICAL SERVICES, INC.**

Environmental Monitoring & Laboratory Analysis  
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**LOG-IN CHECKLIST**

**Printed: 12/12/2016 8:48:03AM**

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 12/08/16 10:05

**Work Order:** AZL0316

**Logged In By:** Mohammad M. Rahman

**OBSERVATIONS**

**#Samples:** 6

**#Containers:** 24

**Minimum Temp(C):** 1.0

**Maximum Temp(C):** 1.0

**Custody Seal(s) Used:** Yes

**CHECKLIST ITEMS**

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

**Comments:**

January 23, 2017

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: Plant Mitchell  
Pace Project No.: 30205266

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on December 12, 2016. 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,



Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell  
Pace Project No.: 30205266

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH-0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana DHH/TNI Certification #: LA140008  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: PA00091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification  
Missouri Certification #: 235

Montana Certification #: Cert 0082  
Nebraska Certification #: NE-05-29-14  
Nevada Certification #: PA014572015-1  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188-14-8  
Utah/TNI Certification #: PA014572015-5  
USDA Soil Permit #: P330-14-00213  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 460198  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Certification  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell

Pace Project No.: 30205266

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30205266001	PZ-7D	Water	12/07/16 10:30	12/12/16 09:20
30205266002	Dup-01	Water	12/07/16 00:01	12/12/16 09:20
30205266003	PZ-14	Water	12/07/16 13:15	12/12/16 09:20
30205266004	PZ-23	Water	12/07/16 15:45	12/12/16 09:20
30205266005	PZ-32	Water	12/07/16 10:45	12/12/16 09:20
30205266006	PZ-6S	Water	12/07/16 13:50	12/12/16 09:20

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell  
Pace Project No.: 30205266

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30205266001	PZ-7D	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205266002	Dup-01	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205266003	PZ-14	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205266004	PZ-23	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205266005	PZ-32	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205266006	PZ-6S	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell  
Pace Project No.: 30205266

Sample: PZ-7D		Lab ID: 30205266001	Collected: 12/07/16 10:30	Received: 12/12/16 09:20	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>-0.00263 ± 0.180 (0.490)</b> C:87% T:NA	pCi/L	01/17/17 09:29	13982-63-3	
Radium-228	EPA 9320	<b>0.179 ± 0.380 (0.840)</b> C:66% T:90%	pCi/L	01/22/17 16:02	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.179 ± 0.560 (1.33)</b>	pCi/L	01/23/17 12:09	7440-14-4	

Sample: Dup-01		Lab ID: 30205266002	Collected: 12/07/16 00:01	Received: 12/12/16 09:20	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.199 ± 0.292 (0.642)</b> C:72% T:NA	pCi/L	01/17/17 09:30	13982-63-3	
Radium-228	EPA 9320	<b>0.926 ± 0.546 (1.02)</b> C:68% T:80%	pCi/L	01/22/17 16:02	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.13 ± 0.838 (1.66)</b>	pCi/L	01/23/17 12:09	7440-14-4	

Sample: PZ-14		Lab ID: 30205266003	Collected: 12/07/16 13:15	Received: 12/12/16 09:20	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.0896 ± 0.140 (0.302)</b> C:83% T:NA	pCi/L	01/17/17 11:19	13982-63-3	
Radium-228	EPA 9320	<b>0.582 ± 0.389 (0.746)</b> C:71% T:95%	pCi/L	01/22/17 16:02	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.672 ± 0.529 (1.05)</b>	pCi/L	01/23/17 12:09	7440-14-4	

Sample: PZ-23		Lab ID: 30205266004	Collected: 12/07/16 15:45	Received: 12/12/16 09:20	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.407 ± 0.246 (0.296)</b> C:73% T:NA	pCi/L	01/17/17 11:19	13982-63-3	
Radium-228	EPA 9320	<b>0.437 ± 0.400 (0.812)</b> C:65% T:89%	pCi/L	01/22/17 16:02	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.844 ± 0.646 (1.11)</b>	pCi/L	01/23/17 12:09	7440-14-4	

Sample: PZ-32		Lab ID: 30205266005	Collected: 12/07/16 10:45	Received: 12/12/16 09:20	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.167 ± 0.173 (0.321)</b> C:84% T:NA	pCi/L	01/17/17 11:19	13982-63-3	
Radium-228	EPA 9320	<b>0.340 ± 0.392 (0.821)</b> C:63% T:88%	pCi/L	01/22/17 16:02	15262-20-1	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell

Pace Project No.: 30205266

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	<b>0.507 ± 0.565 (1.14)</b>	pCi/L	01/23/17 12:09	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.529 ± 0.285 (0.374)</b> C:82% T:NA	pCi/L	01/17/17 11:19	13982-63-3	
Radium-228	EPA 9320	<b>1.15 ± 0.516 (0.839)</b> C:62% T:86%	pCi/L	01/22/17 16:01	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.68 ± 0.801 (1.21)</b>	pCi/L	01/23/17 12:09	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell

Pace Project No.: 30205266

QC Batch: 245742 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Associated Lab Samples: 30205266001, 30205266002, 30205266003, 30205266004, 30205266005, 30205266006

METHOD BLANK: 1208865 Matrix: Water

Associated Lab Samples: 30205266001, 30205266002, 30205266003, 30205266004, 30205266005, 30205266006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.683 ± 0.424 (0.798) C:67% T:93%	pCi/L	01/22/17 16:02	

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 Mitchell

Pace Project No.: 30205266

---

QC Batch:	245741	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	30205266001, 30205266002, 30205266003, 30205266004, 30205266005, 30205266006		

---

METHOD BLANK:	1208863	Matrix:	Water
Associated Lab Samples:	30205266001, 30205266002, 30205266003, 30205266004, 30205266005, 30205266006		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.106 ± 0.218 (0.506) C:79% T:NA	pCi/L	01/17/17 09:29	

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Plant Mitchell  
Pace Project No.: 30205266

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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WO#: 30205266



30205266

www.pacelabs.com

Chain of Custody

Workorder: AZL0316  
Report To: Betsy McDaniel  
Pace Analytical Atlanta  
110 Technology Parkway  
Peachtree Corners, GA 30092  
Phone (770)-734-4200

Workorder Name: Plant Mitchell  
Subcontract To: Pace - Pittsburgh  
1638 Roseytown Road  
Stes. 2,3,4  
Greensburg, PA 15601  
Phone (724) 850-5600

Owner Received Date:  
Results Requested By: 1/9/2017

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers			Date/Time	Received By	Date/Time	Comments	
						NO	H	N					
1	PZ-7D	G	12/7/2016 10:30	AZL0316-01	GW	2							
2	Dup-01	G	12/7/2016 0:00	AZL0316-02	GW	2							
3	PZ-14	G	12/7/2016 13:15	AZL0316-03	GW	2							
4	PZ-23	G	12/7/2016 15:45	AZL0316-04	GW	2							
5	PZ-32	G	12/7/2016 10:45	AZL0316-05	GW	2							
6	PZ-6S	G	12/7/2016 13:50	AZL0316-06	GW	2							
7													
8													
9													
10													
						Radium 226, 228, Total			X				

Transfers Released By

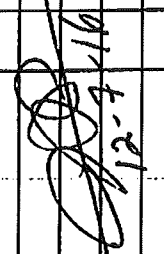
1  
2  
3

Cooler Temperature on Receipt N/A °C  
Custody Seal Y or N  
Received on Ice Y or N  
Sample Intact Y or N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC  
This chain of custody is considered complete as is since this information is available in the owner laboratory.

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

CHAIN OF CUSTODY RECORD

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Joju Abraham Health McConkle <b>CC:</b> Maria Padilla <b>PO #:</b> GPC10684198	
<b>REQUESTED COMPLETION DATE:</b> Normal TAT		<b>PROJECT NAME/STATE:</b> Plant Mitchell/GA	
<b>PROJECT #:</b> Phase II CCR			
Collection DATE	Collection TIME	MATRIX CODE*	SAMPLE IDENTIFICATION
12-7-16	10:30	GW	VPZ-7D
12-7-16	—	GW	VDup-01
12-7-16	13:15	GW	VPZ-14
 12-7-16			

CONTAINER TYPE	ANALYSIS REQUESTED	LAB #	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE: P-3 PRESERVATION: 3 of	Metals App. III & IV EPA 6020/7470 IC (Cl, F, SO4) EPA 300.0 TDS SM 2840C Radium 226 & 228 SW-846 8315/8320 W/HE METHOD OK IL HDPE	1 2 3	

<b>SAMPLED BY AND TITLE:</b> J. Abraham Mgr.	<b>DATE/TIME:</b> 12-7-16/10:30	<b>RELINQUISHED BY:</b> J. Abraham	<b>DATE/TIME:</b> 12-7-16/16:15
<b>RECEIVED BY:</b> J. Abraham	<b>DATE/TIME:</b> 12-8-16/10:05	<b>RELINQUISHED BY:</b> J. Abraham	<b>DATE/TIME:</b> 12-8-16/10:30

<b>RECEIVED BY LAB:</b> J. Abraham	<b>DATE/TIME:</b> 12-8-16/10:05	<b>SAMPLE SHIPPED VIA:</b> UPS	<b>USPS (FED-EX)</b> Broken Not Present	<b>COURIER</b> # of Coolers (Label #)	<b>CLIENT</b> Cooler ID:	<b>OTHER</b> FS
---------------------------------------	------------------------------------	-----------------------------------	--	---	-----------------------------	--------------------

<b>LAB #:</b> 7260316 <b>Entered into LIMS:</b> 810294724568 MR	<b>FOR LAB USE ONLY</b>
---	-------------------------

30205266

PAGE: 1 OF 1

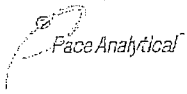
Pace Analytical Services, Inc.  
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092  
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

**CHAIN OF CUSTODY RECORD**

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Joiu Abraham <b>CC:</b> Maria Padilla Heath McCortle <b>PO #:</b> GPC10684198		<b>PROJECT NAME/STATE:</b> Plant Mitchell / GA <b>PROJECT #:</b> Phase II CCR		<b>REQUESTED COMPLETION DATE:</b> 12/16/15 <b>PROJECT NAME/STATE:</b>	
Collection DATE	Collection TIME	MATRIX CODE	GRA B	SAMPLE IDENTIFICATION	CONTAINER TYPE PRESERVATION	ANALYSIS REQUESTED	CONTAINER TYPE PRESERVATION
12-7-16	15:45	GW	✓	PZ-23	4	P 7 3 TDS GM 25400 Radium 226 & 228 GW-848 9315/9320 2XLT HDPE C/W/11/15	P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER
12-7-16	10:45	GW	✓	PZ-32	4	P 7 3 TDS GM 25400 Radium 226 & 228 GW-848 9315/9320 2XLT HDPE C/W/11/15	P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER
12-7-16	13:50	GW	✓	PZ-6S	4	P 7 3 TDS GM 25400 Radium 226 & 228 GW-848 9315/9320 2XLT HDPE C/W/11/15	P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER
<b>REMARKS/ADDITIONAL INFORMATION</b> RELINQUISHED BY: [Signature] DATE/TIME: 12-7-16/15:45 RELINQUISHED BY: [Signature] DATE/TIME: 12-7-16/16:15 SAMPLE SHIPPED VIA: UPS FED-EX CUSTOMER SEAL: Broken Not Present # of Coolers: 2 Cooler ID: 2							
<b>SAMPLED BY AND TITLE:</b> [Signature] Site Mgr.		<b>DATE/TIME:</b> 12-7-16/15:45		<b>RELINQUISHED BY:</b> [Signature]		<b>DATE/TIME:</b> 12-7-16/16:15	
<b>RECEIVED BY:</b> [Signature]		<b>DATE/TIME:</b> 12/08/16 10:05		<b>LAB #:</b> A260316		<b>FOR LAB USE ONLY</b>	
<b>PH FOLLOWED:</b> No NA		<b>TEMPERATURE:</b> 10 Min: 10 Max:		<b>ENTERED INTO LIMS:</b>		<b>TRACKING #:</b> 8102 9472 4579	

Pace COC Revised.xlsx

Sample Condition Upon Receipt Pittsburgh



Client Name: Pace Georgia Project # 30205266

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 08125101 0100

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

Thermometer Used N/A Type of Ice: Wet Blue None

Cooler Temperature Observed Temp N/A °C Correction Factor: N/A °C Final Temp: N/A °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: KHL 12-12-16

Comments:

	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
-Includes date/time/ID/Analysis Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
-Pace Containers Used:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Filtered volume received for Dissolved tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
exceptions: VOA, coliform, TOC, O&G, Phenolics	Initial when completed		Date/time of preservation	
	Lot # of added preservative			
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
Trip Blank Present:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rad Aqueous Samples Screened > 0.5 mrem/hr	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Initial when completed: _____ Date: _____

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e. out of hold, incorrect preservative, out of temp, incorrect containers)  
 \*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

# Quality Control Sample Performance Assessment



Test: Ra-228  
Analyst: JAL  
Date: 1/13/2017  
Worklist: 33373  
Matrix: DW

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

<p><b>Method Blank Assessment</b></p> <p>MB Sample ID: 1208865 MB concentration: 0.683 M/B Counting Uncertainty: 0.406 MB MDC: 0.798 MB Numerical Performance Indicator: 3.30 MB Status vs Numerical Indicator: N/A MB Status vs. MDC: Pass</p>	<p><b>Sample Matrix Spike Control Assessment</b></p> <p>Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.: MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): Spike uncertainty (calculated): Sample Result Sample Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Result Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): MS Numerical Performance Indicator: MS Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery:</p>
<p><b>Laboratory Control Sample Assessment</b></p> <p>LCSD (Y or N)? N LCS33373 Count Date: 1/22/2017 Spike I.D.: 16-027 Spike Concentration (pCi/mL): 25.495 Volume Used (mL): 0.20 Aliquot Volume (L, g, F): 0.810 Target Conc. (pCi/L, g, F): 6.292 Uncertainty (Calculated): 0.455 Result (pCi/L, g, F): 7.232 LCSD Counting Uncertainty (pCi/L, g, F): 0.801 Numerical Performance Indicator: 2.00 Percent Recovery: 114.95% Status vs Numerical Indicator: N/A Status vs Recovery: Pass</p>	<p><b>Matrix Spike/Matrix Spike Duplicate Sample Assessment</b></p> <p>Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD:</p>
<p><b>Duplicate Sample Assessment</b></p> <p>Sample I.D.: 30205268003 Duplicate Sample I.D.: 30205268003DUP Sample Result (pCi/L, g, F): 0.166 Sample Result Counting Uncertainty (pCi/L, g, F): 0.335 Sample Duplicate Result (pCi/L, g, F): 0.662 Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.361 Are sample and/or duplicate results below MDC? See Below ## Duplicate Numerical Performance Indicator: -1.972 Duplicate RPD: 119.81% Duplicate Status vs Numerical Indicator: N/A Duplicate Status vs RPD: Fail***</p>	<p><b>Duplicate Sample Assessment</b></p> <p>Enter Duplicate sample IDs if other than LCS/LCSD in the space below. 30205268003 30205268003DUP</p> <p>## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.</p> <p>Comments:</p> <p>***Batch must be re-prepped due to unacceptable precision.</p>

*Jan 13 2017*



# Quality Control Sample Performance Assessment



Analyt Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: LAL  
Date: 1/16/2017  
Worklist: 33372  
Matrix: DW

**Method Blank Assessment**

MB Sample ID: 1208863  
MB concentration: 0.106  
M/B Counting Uncertainty: 0.217  
MB MDC: 0.506  
MB Numerical Performance Indicator: 0.95  
MB Status vs Numerical Indicator: N/A  
MB Status vs. MDC: Pass

**Laboratory Control Sample Assessment**

LCS (Y or N): N  
LCS33372 LCS33372

Count Date: 1/17/2017  
Spike I.D.: 16-026  
Spike Concentration (pCi/mL): 44.671  
Volume Used (mL): 0.10  
Aliquot Volume (L, g, F): 0.510  
Target Conc. (pCi/L, g, F): 8.765  
Uncertainty (Calculated): 0.412  
Result (pCi/L, g, F): 7.466  
LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.856  
Numerical Performance Indicator: -2.68  
Percent Recovery: 85.18%  
Status vs Numerical Indicator: N/A  
Status vs Recovery: Pass

**Duplicate Sample Assessment**

Sample I.D.: 30205266001  
Duplicate Sample I.D.: 30205266001DUP  
Sample Result (pCi/L, g, F): -0.003  
Sample Result Counting Uncertainty (pCi/L, g, F): 0.180  
Sample Duplicate Result (pCi/L, g, F): -0.014  
Sample Duplicate Counting Uncertainty (pCi/L, g, F): 0.099  
Are sample and/or duplicate results below MDC? See Below #  
Duplicate Numerical Performance Indicator: 0.110  
Duplicate RPD: -137.14%  
Duplicate Status vs Numerical Indicator: N/A  
Duplicate Status vs RPD: Pass

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

Comments:

*[Handwritten signature]*

**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Spike I.D.:  
MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
Spike Volume Used in MS (mL):  
Spike Volume Used in MSD (mL):  
MS Aliquot (L, g, F):  
MS Target Conc. (pCi/L, g, F):  
MSD Aliquot (L, g, F):  
MSD Target Conc. (pCi/L, g, F):  
Spike uncertainty (calculated):  
Sample Result:  
Sample Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
MS Numerical Performance Indicator:  
MSD Numerical Performance Indicator:  
MS Percent Recovery:  
MSD Percent Recovery:  
MS Status vs Numerical Indicator:  
MSD Status vs Numerical Indicator:  
MS Status vs Recovery:  
MSD Status vs Recovery:

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
Duplicate Numerical Performance Indicator:  
MS/MSD Duplicate RPD:  
MS/MSD Duplicate Status vs Numerical Indicator:  
MS/MSD Duplicate Status vs RPD:



**PACE ANALYTICAL SERVICES, LLC.**

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

**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AZL0418**

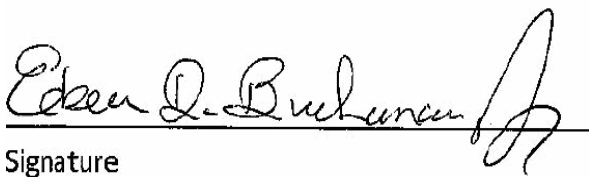
**December 28, 2016**

**Project: CCR Event**

**Project #: Plant Mitchell**

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

Approved:

  
Signature

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



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
PZ-15	AZL0418-01	Ground Water	12/07/16 13:10	12/09/16 10:40
PZ-16	AZL0418-02	Ground Water	12/07/16 17:20	12/09/16 10:40
FB-01	AZL0418-03	Water	12/07/16 17:15	12/09/16 10:40
EB-01	AZL0418-04	Water	12/08/16 07:45	12/09/16 10:40
PZ-33	AZL0418-05	Ground Water	12/08/16 11:25	12/09/16 10:40
PZ-17	AZL0418-06	Ground Water	12/08/16 10:48	12/09/16 10:40
PZ-19	AZL0418-07	Ground Water	12/08/16 11:55	12/09/16 10:40
PZ-25	AZL0418-08	Ground Water	12/08/16 14:15	12/09/16 10:40
PZ-18	AZL0418-09	Ground Water	12/08/16 14:45	12/09/16 10:40
Dup-02	AZL0418-10	Ground Water	12/08/16 00:00	12/09/16 10:40





**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

December 28, 2016

Attention: Mr. Joju Abraham

**Report No.: AZL0418**

**Project: CCR Event**

**Client ID: PZ-15**

**Lab Number ID: AZL0418-01**

**Date/Time Sampled: 12/7/2016 1:10:00PM**

**Date/Time Received: 12/9/2016 10:40:00AM**

**Matrix: Ground Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	242	25	10	mg/L	SM 2540 C		1	12/12/16 21:27	12/12/16 21:27	6120343	JPT
<b>Inorganic Anions</b>											
Chloride	7.0	0.25	0.01	mg/L	EPA 300.0		1	12/22/16 16:55	12/23/16 07:13	6120712	RNB
Fluoride	0.09	0.30	0.02	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 07:13	6120712	RNB
Sulfate	71	5.0	0.26	mg/L	EPA 300.0		5	12/22/16 16:55	12/24/16 14:01	6120712	RNB
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:09	6120445	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:09	6120445	CSW
Barium	0.0781	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:09	6120445	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:09	6120445	CSW
Boron	0.224	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:09	6120445	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:09	6120445	CSW
Calcium	74.0	25.0	1.55	mg/L	EPA 6020B		50	12/15/16 09:05	12/22/16 15:21	6120445	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:09	6120445	CSW
Cobalt	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 19:09	6120445	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:09	6120445	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:09	6120445	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:09	6120445	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:09	6120445	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:09	6120445	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 14:22	6120426	MTC



**PACE ANALYTICAL SERVICES, LLC.**

Environmental Monitoring & Laboratory Analysis  
 110 Technology Parkway, Peachtree Corners, GA 30092  
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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

December 28, 2016

Attention: Mr. Joju Abraham

Report No.: AZL0418

Project: CCR Event

Client ID: PZ-16

Lab Number ID: AZL0418-02

Date/Time Sampled: 12/7/2016 5:20:00PM

Date/Time Received: 12/9/2016 10:40:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	248	25	10	mg/L	SM 2540 C		1	12/12/16 21:27	12/12/16 21:27	6120343	JPT
<b>Inorganic Anions</b>											
Chloride	7.6	0.25	0.01	mg/L	EPA 300.0		1	12/22/16 16:55	12/23/16 08:17	6120712	RNB
Fluoride	0.09	0.30	0.02	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 08:17	6120712	RNB
Sulfate	46	1.0	0.05	mg/L	EPA 300.0		1	12/22/16 16:55	12/23/16 08:17	6120712	RNB
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:15	6120445	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:15	6120445	CSW
Barium	0.0689	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:15	6120445	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:15	6120445	CSW
Boron	0.173	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:15	6120445	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:15	6120445	CSW
Calcium	68.9	25.0	1.55	mg/L	EPA 6020B		50	12/15/16 09:05	12/22/16 15:26	6120445	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:15	6120445	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:15	6120445	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:15	6120445	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:15	6120445	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:15	6120445	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:15	6120445	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:15	6120445	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 14:24	6120426	MTC



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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

**Report No.: AZL0418**

**Project: CCR Event**

**Client ID: FB-01**

**Lab Number ID: AZL0418-03**

**Date/Time Sampled: 12/7/2016 5:15:00PM**

**Date/Time Received: 12/9/2016 10:40:00AM**

**Matrix: Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	12/12/16 21:27	12/12/16 21:27	6120343	JPT
<b>Inorganic Anions</b>											
Chloride	0.06	0.25	0.01	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 08:38	6120712	RNB
Fluoride	0.04	0.30	0.02	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 08:38	6120712	RNB
Sulfate	0.08	1.0	0.05	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 08:38	6120712	RNB
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:20	6120445	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:20	6120445	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:20	6120445	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:20	6120445	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:20	6120445	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:20	6120445	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:20	6120445	CSW
Chromium	0.0011	0.0100	0.0009	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 19:20	6120445	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:20	6120445	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:20	6120445	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:20	6120445	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:20	6120445	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:20	6120445	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:20	6120445	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 14:27	6120426	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

Report No.: AZL0418

Project: CCR Event

Client ID: EB-01

Lab Number ID: AZL0418-04

Date/Time Sampled: 12/8/2016 7:45:00AM

Date/Time Received: 12/9/2016 10:40:00AM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	12/13/16 11:20	12/13/16 11:20	6120356	JPT
<b>Inorganic Anions</b>											
Chloride	0.05	0.25	0.01	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 08:59	6120712	RNB
Fluoride	0.04	0.30	0.02	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 08:59	6120712	RNB
Sulfate	0.07	1.0	0.05	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 08:59	6120712	RNB
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:26	6120445	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:26	6120445	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:26	6120445	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:26	6120445	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:26	6120445	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:26	6120445	CSW
Calcium	0.0322	0.500	0.0311	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 19:26	6120445	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:26	6120445	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:26	6120445	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:26	6120445	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:26	6120445	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:26	6120445	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:26	6120445	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:26	6120445	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 14:29	6120426	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

**Report No.: AZL0418**

**Project: CCR Event**

**Client ID: PZ-33**

**Lab Number ID: AZL0418-05**

**Date/Time Sampled: 12/8/2016 11:25:00AM**

**Date/Time Received: 12/9/2016 10:40:00AM**

**Matrix: Ground Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	503	25	10	mg/L	SM 2540 C		1	12/13/16 11:20	12/13/16 11:20	6120356	JPT
<b>Inorganic Anions</b>											
Chloride	6.9	0.25	0.01	mg/L	EPA 300.0		1	12/22/16 16:55	12/23/16 09:21	6120712	RNB
Fluoride	0.21	0.30	0.02	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 09:21	6120712	RNB
Sulfate	100	10	0.51	mg/L	EPA 300.0		10	12/22/16 16:55	12/24/16 14:22	6120712	RNB
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:43	6120445	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:43	6120445	CSW
Barium	0.162	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:43	6120445	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:43	6120445	CSW
Boron	0.375	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:43	6120445	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:43	6120445	CSW
Calcium	117	50.0	3.11	mg/L	EPA 6020B		100	12/15/16 09:05	12/22/16 15:32	6120445	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:43	6120445	CSW
Cobalt	0.0041	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 19:43	6120445	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:43	6120445	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:43	6120445	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:43	6120445	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:43	6120445	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:43	6120445	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 14:31	6120426	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

Report No.: AZL0418

Project: CCR Event

Client ID: PZ-17

Lab Number ID: AZL0418-06

Date/Time Sampled: 12/8/2016 10:48:00AM

Date/Time Received: 12/9/2016 10:40:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	431	25	10	mg/L	SM 2540 C		1	12/13/16 11:20	12/13/16 11:20	6120356	JPT
<b>Inorganic Anions</b>											
Chloride	7.2	0.25	0.01	mg/L	EPA 300.0		1	12/22/16 16:55	12/23/16 09:42	6120712	RNB
Fluoride	0.18	0.30	0.02	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 09:42	6120712	RNB
Sulfate	94	10	0.51	mg/L	EPA 300.0		10	12/22/16 16:55	12/24/16 14:43	6120712	RNB
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:49	6120445	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:49	6120445	CSW
Barium	0.0668	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:49	6120445	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:49	6120445	CSW
Boron	0.303	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:49	6120445	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:49	6120445	CSW
Calcium	102	25.0	1.55	mg/L	EPA 6020B		50	12/15/16 09:05	12/22/16 15:38	6120445	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:49	6120445	CSW
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 19:49	6120445	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:49	6120445	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:49	6120445	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:49	6120445	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:49	6120445	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:49	6120445	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 14:34	6120426	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

**Report No.:** AZL0418

**Project:** CCR Event

**Client ID:** PZ-19

**Lab Number ID:** AZL0418-07

**Date/Time Sampled:** 12/8/2016 11:55:00AM

**Date/Time Received:** 12/9/2016 10:40:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	556	25	10	mg/L	SM 2540 C		1	12/13/16 11:20	12/13/16 11:20	6120356	JPT
<b>Inorganic Anions</b>											
Chloride	6.6	0.25	0.01	mg/L	EPA 300.0		1	12/22/16 16:55	12/23/16 10:03	6120712	RNB
Fluoride	0.12	0.30	0.02	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 10:03	6120712	RNB
Sulfate	84	5.0	0.26	mg/L	EPA 300.0		5	12/22/16 16:55	12/24/16 15:03	6120712	RNB
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:55	6120445	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:55	6120445	CSW
Barium	0.0522	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:55	6120445	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:55	6120445	CSW
Boron	0.588	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:55	6120445	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:55	6120445	CSW
Calcium	135	25.0	1.55	mg/L	EPA 6020B		50	12/15/16 09:05	12/23/16 12:08	6120445	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:55	6120445	CSW
Cobalt	0.0009	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 19:55	6120445	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:55	6120445	CSW
Molybdenum	0.0022	0.0100	0.0017	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 19:55	6120445	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 19:55	6120445	CSW
Thallium	0.0003	0.0010	0.0002	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 19:55	6120445	CSW
Lithium	0.0061	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 19:55	6120445	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 14:36	6120426	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

December 28, 2016

Attention: Mr. Joju Abraham

**Report No.: AZL0418**

**Project: CCR Event**

**Client ID: PZ-25**

**Lab Number ID: AZL0418-08**

**Date/Time Sampled: 12/8/2016 2:15:00PM**

**Date/Time Received: 12/9/2016 10:40:00AM**

**Matrix: Ground Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	309	25	10	mg/L	SM 2540 C		1	12/13/16 11:20	12/13/16 11:20	6120356	JPT
<b>Inorganic Anions</b>											
Chloride	3.6	0.25	0.01	mg/L	EPA 300.0		1	12/22/16 16:55	12/23/16 10:24	6120712	RNB
Fluoride	0.22	0.30	0.02	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 10:24	6120712	RNB
Sulfate	46	1.0	0.05	mg/L	EPA 300.0		1	12/22/16 16:55	12/23/16 10:24	6120712	RNB
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:01	6120445	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:01	6120445	CSW
Barium	0.102	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:01	6120445	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:01	6120445	CSW
Boron	0.216	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:01	6120445	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:01	6120445	CSW
Calcium	84.5	25.0	1.55	mg/L	EPA 6020B		50	12/15/16 09:05	12/22/16 15:49	6120445	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:01	6120445	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:01	6120445	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:01	6120445	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:01	6120445	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:01	6120445	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:01	6120445	CSW
Lithium	0.0038	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 20:01	6120445	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 14:38	6120426	MTC





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December 28, 2016

Attention: Mr. Joju Abraham

**Report No.: AZL0418**

**Project: CCR Event**

**Client ID: PZ-18**

**Lab Number ID: AZL0418-09**

**Date/Time Sampled: 12/8/2016 2:45:00PM**

**Date/Time Received: 12/9/2016 10:40:00AM**

**Matrix: Ground Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	441	25	10	mg/L	SM 2540 C		1	12/13/16 11:20	12/13/16 11:20	6120356	JPT
<b>Inorganic Anions</b>											
Chloride	6.8	0.25	0.01	mg/L	EPA 300.0		1	12/22/16 16:55	12/23/16 12:10	6120712	RNB
Fluoride	0.18	0.30	0.02	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 12:10	6120712	RNB
Sulfate	94	10	0.51	mg/L	EPA 300.0		10	12/22/16 16:55	12/24/16 15:24	6120712	RNB
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:06	6120445	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:06	6120445	CSW
Barium	0.0513	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:06	6120445	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:06	6120445	CSW
Boron	0.351	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:06	6120445	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:06	6120445	CSW
Calcium	113	50.0	3.11	mg/L	EPA 6020B		100	12/15/16 09:05	12/22/16 15:55	6120445	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:06	6120445	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:06	6120445	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:06	6120445	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:06	6120445	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:06	6120445	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:06	6120445	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:06	6120445	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 14:41	6120426	MTC



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Attention: Mr. Joju Abraham

December 28, 2016

**Report No.:** AZL0418

**Project:** CCR Event

**Client ID:** Dup-02

**Lab Number ID:** AZL0418-10

**Date/Time Sampled:** 12/8/2016 12:00:00AM

**Date/Time Received:** 12/9/2016 10:40:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	399	25	10	mg/L	SM 2540 C		1	12/13/16 11:20	12/13/16 11:20	6120356	JPT
<b>Inorganic Anions</b>											
Chloride	7.2	0.25	0.01	mg/L	EPA 300.0		1	12/22/16 16:55	12/23/16 12:31	6120712	RNB
Fluoride	0.18	0.30	0.02	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 12:31	6120712	RNB
Sulfate	94	10	0.51	mg/L	EPA 300.0		10	12/22/16 16:55	12/24/16 15:45	6120712	RNB
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:12	6120445	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:12	6120445	CSW
Barium	0.0667	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:12	6120445	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:12	6120445	CSW
Boron	0.293	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:12	6120445	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:12	6120445	CSW
Calcium	108	25.0	1.55	mg/L	EPA 6020B		50	12/15/16 09:05	12/22/16 17:04	6120445	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:12	6120445	CSW
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 20:12	6120445	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:12	6120445	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:12	6120445	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:12	6120445	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:12	6120445	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:12	6120445	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 14:48	6120426	MTC



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Attention: Mr. Joju Abraham

December 28, 2016

**Report No.: AZL0418**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120343 - SM 2540 C</b>											
<b>Blank (6120343-BLK1)</b>						Prepared & Analyzed: 12/12/16					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (6120343-BS1)</b>						Prepared & Analyzed: 12/12/16					
Total Dissolved Solids	364	25	10	mg/L	400.00		91	84-108			
<b>Duplicate (6120343-DUP1)</b>						Source: AZL0390-07 Prepared & Analyzed: 12/12/16					
Total Dissolved Solids	536	25	10	mg/L		561			5	10	QR-03
<b>Duplicate (6120343-DUP2)</b>						Source: AZL0418-03 Prepared & Analyzed: 12/12/16					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
<b>Batch 6120356 - SM 2540 C</b>											
<b>Blank (6120356-BLK1)</b>						Prepared & Analyzed: 12/13/16					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (6120356-BS1)</b>						Prepared & Analyzed: 12/13/16					
Total Dissolved Solids	411	25	10	mg/L	400.00		103	84-108			
<b>Duplicate (6120356-DUP1)</b>						Source: AZL0406-04 Prepared & Analyzed: 12/13/16					
Total Dissolved Solids	974	25	10	mg/L		980			0.6	10	
<b>Duplicate (6120356-DUP2)</b>						Source: AZL0435-04 Prepared & Analyzed: 12/13/16					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	



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December 28, 2016

**Report No.: AZL0418**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120712 - EPA 300.0</b>											
<b>Blank (6120712-BLK1)</b>						Prepared: 12/22/16 Analyzed: 12/23/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
<b>LCS (6120712-BS1)</b>						Prepared: 12/22/16 Analyzed: 12/23/16					
Chloride	10.2	0.25	0.01	mg/L	10.010		102	90-110			
Fluoride	10.5	0.30	0.02	mg/L	10.020		105	90-110			
Sulfate	10.2	1.0	0.05	mg/L	10.020		101	90-110			
<b>Matrix Spike (6120712-MS1)</b>						Source: AZL0418-01 Prepared: 12/22/16 Analyzed: 12/23/16					
Chloride	15.6	0.25	0.01	mg/L	10.010	6.97	87	90-110			QM-02
Fluoride	9.22	0.30	0.02	mg/L	10.020	0.09	91	90-110			
Sulfate	70.7	1.0	0.05	mg/L	10.020	68.3	24	90-110			QM-02
<b>Matrix Spike (6120712-MS2)</b>						Source: AZL0435-03 Prepared: 12/22/16 Analyzed: 12/23/16					
Chloride	182	0.25	0.01	mg/L	10.010	199	NR	90-110			QM-02
Fluoride	13.4	0.30	0.02	mg/L	10.020	0.63	127	90-110			QM-05
Sulfate	415	1.0	0.05	mg/L	10.020	440	NR	90-110			QM-02
<b>Matrix Spike Dup (6120712-MSD1)</b>						Source: AZL0418-01 Prepared: 12/22/16 Analyzed: 12/23/16					
Chloride	16.5	0.25	0.01	mg/L	10.010	6.97	95	90-110	5	15	
Fluoride	10.1	0.30	0.02	mg/L	10.020	0.09	100	90-110	9	15	
Sulfate	70.9	1.0	0.05	mg/L	10.020	68.3	25	90-110	0.2	15	QM-02



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**Report No.: AZL0418**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120426 - EPA 7470A</b>											
<b>Blank (6120426-BLK1)</b> Prepared & Analyzed: 12/15/16											
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (6120426-BS1)</b> Prepared & Analyzed: 12/15/16											
Mercury	0.00245	0.00050	0.000041	mg/L	2.5000E-3		98	80-120			
<b>Matrix Spike (6120426-MS1)</b> Source: AZL0406-04 Prepared & Analyzed: 12/15/16											
Mercury	0.00243	0.00050	0.000041	mg/L	2.5000E-3	ND	97	75-125			
<b>Matrix Spike Dup (6120426-MSD1)</b> Source: AZL0406-04 Prepared & Analyzed: 12/15/16											
Mercury	0.00242	0.00050	0.000041	mg/L	2.5000E-3	ND	97	75-125	0.3	20	
<b>Post Spike (6120426-PS1)</b> Source: AZL0406-04 Prepared & Analyzed: 12/15/16											
Mercury	1.77			ug/L	1.6667	-0.0161	106	80-120			
<b>Batch 6120445 - EPA 3005A</b>											
<b>Blank (6120445-BLK1)</b> Prepared: 12/15/16 Analyzed: 12/16/16											
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.0400	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0100	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							



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December 28, 2016

**Report No.: AZL0418**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6120445 - EPA 3005A**

**LCS (6120445-BS1)**

Prepared: 12/15/16 Analyzed: 12/16/16

Antimony	0.116	0.0030	0.0008	mg/L	0.10000		116	80-120			
Arsenic	0.105	0.0050	0.0016	mg/L	0.10000		105	80-120			
Barium	0.105	0.0100	0.0004	mg/L	0.10000		105	80-120			
Beryllium	0.111	0.0030	0.00008	mg/L	0.10000		111	80-120			
Boron	1.05	0.0400	0.0064	mg/L	1.0000		105	80-120			
Cadmium	0.104	0.0010	0.00007	mg/L	0.10000		104	80-120			
Calcium	1.07	0.500	0.0311	mg/L	1.0000		107	80-120			
Chromium	0.104	0.0100	0.0009	mg/L	0.10000		104	80-120			
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000		105	80-120			
Copper	0.103	0.0250	0.0005	mg/L	0.10000		103	80-120			
Lead	0.104	0.0050	0.0001	mg/L	0.10000		104	80-120			
Molybdenum	0.106	0.0100	0.0017	mg/L	0.10000		106	80-120			
Nickel	0.105	0.0100	0.0006	mg/L	0.10000		105	80-120			
Selenium	0.102	0.0100	0.0010	mg/L	0.10000		102	80-120			
Silver	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Thallium	0.105	0.0010	0.0002	mg/L	0.10000		105	80-120			
Vanadium	0.107	0.0100	0.0071	mg/L	0.10000		107	80-120			
Zinc	0.106	0.0100	0.0021	mg/L	0.10000		106	80-120			
Lithium	0.106	0.0500	0.0021	mg/L	0.10000		106	80-120			

**Matrix Spike (6120445-MS1)**

Source: AZL0418-01

Prepared: 12/15/16 Analyzed: 12/16/16

Antimony	0.115	0.0030	0.0008	mg/L	0.10000	ND	115	75-125			
Arsenic	0.105	0.0050	0.0016	mg/L	0.10000	ND	105	75-125			
Barium	0.174	0.0100	0.0004	mg/L	0.10000	0.0781	95	75-125			
Beryllium	0.0958	0.0030	0.00008	mg/L	0.10000	ND	96	75-125			
Boron	1.01	0.0400	0.0064	mg/L	1.0000	0.224	79	75-125			
Cadmium	0.104	0.0010	0.00007	mg/L	0.10000	ND	104	75-125			
Calcium	78.8	25.0	1.55	mg/L	1.0000	74.0	480	75-125			QM-02
Chromium	0.104	0.0100	0.0009	mg/L	0.10000	ND	104	75-125			
Cobalt	0.108	0.0100	0.0005	mg/L	0.10000	0.0005	107	75-125			
Copper	0.102	0.0250	0.0005	mg/L	0.10000	ND	102	75-125			
Lead	0.101	0.0050	0.0001	mg/L	0.10000	ND	101	75-125			
Molybdenum	0.110	0.0100	0.0017	mg/L	0.10000	ND	110	75-125			
Nickel	0.106	0.0100	0.0006	mg/L	0.10000	ND	106	75-125			
Selenium	0.102	0.0100	0.0010	mg/L	0.10000	ND	102	75-125			
Silver	0.103	0.0100	0.0005	mg/L	0.10000	ND	103	75-125			
Thallium	0.104	0.0010	0.0002	mg/L	0.10000	ND	104	75-125			
Vanadium	0.107	0.0100	0.0071	mg/L	0.10000	ND	107	75-125			
Zinc	0.111	0.0100	0.0021	mg/L	0.10000	ND	111	75-125			
Lithium	0.0967	0.0500	0.0021	mg/L	0.10000	ND	97	75-125			



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

**Report No.: AZL0418**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120445 - EPA 3005A</b>											
<b>Matrix Spike Dup (6120445-MSD1)</b>			<b>Source: AZL0418-01</b>			<b>Prepared: 12/15/16 Analyzed: 12/16/16</b>					
Antimony	0.118	0.0030	0.0008	mg/L	0.10000	ND	118	75-125	3	20	
Arsenic	0.109	0.0050	0.0016	mg/L	0.10000	ND	109	75-125	3	20	
Barium	0.176	0.0100	0.0004	mg/L	0.10000	0.0781	98	75-125	1	20	
Beryllium	0.0929	0.0030	0.00008	mg/L	0.10000	ND	93	75-125	3	20	
Boron	0.979	0.0400	0.0064	mg/L	1.0000	0.224	76	75-125	3	20	
Cadmium	0.104	0.0010	0.00007	mg/L	0.10000	ND	104	75-125	0.4	20	
Calcium	81.3	25.0	1.55	mg/L	1.0000	74.0	728	75-125	3	20	QM-02
Chromium	0.106	0.0100	0.0009	mg/L	0.10000	ND	106	75-125	2	20	
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000	0.0005	102	75-125	5	20	
Copper	0.101	0.0250	0.0005	mg/L	0.10000	ND	101	75-125	1	20	
Lead	0.101	0.0050	0.0001	mg/L	0.10000	ND	101	75-125	0.5	20	
Molybdenum	0.112	0.0100	0.0017	mg/L	0.10000	ND	112	75-125	2	20	
Nickel	0.103	0.0100	0.0006	mg/L	0.10000	ND	103	75-125	3	20	
Selenium	0.104	0.0100	0.0010	mg/L	0.10000	ND	104	75-125	2	20	
Silver	0.104	0.0100	0.0005	mg/L	0.10000	ND	104	75-125	1	20	
Thallium	0.103	0.0010	0.0002	mg/L	0.10000	ND	103	75-125	1	20	
Vanadium	0.108	0.0100	0.0071	mg/L	0.10000	ND	108	75-125	0.3	20	
Zinc	0.106	0.0100	0.0021	mg/L	0.10000	ND	106	75-125	4	20	
Lithium	0.0925	0.0500	0.0021	mg/L	0.10000	ND	92	75-125	4	20	
<b>Post Spike (6120445-PS1)</b>											
<b>Source: AZL0418-01</b>			<b>Prepared: 12/15/16 Analyzed: 12/16/16</b>								
Antimony	109			ug/L	100.00	0.375	108	80-120			
Arsenic	110			ug/L	100.00	1.00	109	80-120			
Barium	178			ug/L	100.00	78.1	100	80-120			
Beryllium	96.0			ug/L	100.00	0.0417	96	80-120			
Boron	1010			ug/L	1000.0	224	78	80-120			QM-02
Cadmium	106			ug/L	100.00	0.0408	106	80-120			
Calcium	81800			ug/L	1000.0	74000	782	80-120			QM-02
Chromium	103			ug/L	100.00	0.152	103	80-120			
Cobalt	104			ug/L	100.00	0.524	103	80-120			
Copper	101			ug/L	100.00	0.266	101	80-120			
Lead	99.8			ug/L	100.00	0.0576	100	80-120			
Molybdenum	110			ug/L	100.00	0.410	110	80-120			
Nickel	103			ug/L	100.00	0.424	103	80-120			
Selenium	105			ug/L	100.00	0.274	105	80-120			
Silver	101			ug/L	100.00	0.0079	101	80-120			
Thallium	102			ug/L	100.00	0.0281	102	80-120			
Vanadium	109			ug/L	100.00	-1.15	109	80-120			
Zinc	108			ug/L	100.00	1.45	106	80-120			
Lithium	92.8			ug/L	100.00	0.782	92	80-120			



**PACE ANALYTICAL SERVICES, LLC.**

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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

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## Legend

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### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

### Definition of Qualifiers

- QR-03** The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to suspected matrix interference and/or non-homogeneous sample matrix.
- QM-05** The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.
- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

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





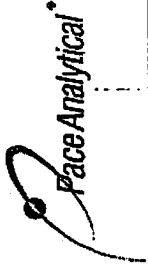
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**CHAIN OF CUSTODY RECORD**

PAGE: 1 OF 1

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Joju Abraham <b>CC:</b> Maria Padilla Heath McCorkle <b>PO #:</b> GPC10684198		<b>REQUESTED COMPLETION DATE:</b> <b>PROJECT NAME/STATE:</b> Plant Mitchell / GA <b>PROJECT #:</b> Phase II CCR			
<b>CONTAINER TYPE:</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	<b>PRESERVATION:</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - H <sub>2</sub> O <sub>2</sub> , 56°C 7 - 56°C not frozen	<b>MATRIX CODES:</b> 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	<b>ANALYSIS REQUESTED</b> P 3 P 7 P 7 P 3 TDS EPA 300.0 IC (Cl, F, SO <sub>4</sub> ) EPA 6020/7470 Metals App. III & IV SM 2540C Radium 226 & 228 SW-846 9315/9320 AXIL HADE W/HADOT	<b>CONTAINER TYPE</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	<b>PRESERVATION</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - H <sub>2</sub> O <sub>2</sub> , 56°C 7 - 56°C not frozen		
						<b>RECEIVED BY:</b> <i>Michelle mbc</i> DATE/TIME: 12-7-16/13:10 <b>RELINQUISHED BY:</b> <i>Michelle mbc</i> DATE/TIME: 12-7-16/16:15	
						<b>RECEIVED BY:</b> <i>Michelle mbc</i> DATE/TIME: 12-7-16/10:40 <b>RELINQUISHED BY:</b> <i>Michelle mbc</i> DATE/TIME: 12-7-16/16:15	
						<b>RECEIVED BY:</b> <i>Michelle mbc</i> DATE/TIME: 12-7-16/10:40 <b>RELINQUISHED BY:</b> <i>Michelle mbc</i> DATE/TIME: 12-7-16/16:15	


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PAGE: 1 OF 1

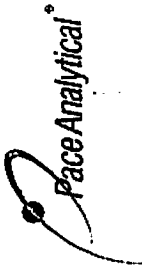
**CHAIN OF CUSTODY RECORD**

<b>CLIENT NAME:</b> Georgia Power		<b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Joju Abraham Health McCorkle		<b>CC:</b> Maria Padilla		<b>PO #:</b> GPC10684198		
<b>REQUESTED COMPLETION DATE:</b> STANDARD TAT		<b>PROJECT NAME/STATE:</b> Plant Mitchell / GA								
<b>PROJECT #:</b> Phase II CCR		<b>CONTAINERS</b> →								
Collection DATE	Collection TIME	MATRIX CODE*	GRAB	SAMPLE IDENTIFICATION	ANALYSIS REQUESTED	CONTAINER TYPE	PRESERVATION	# OF CONTAINERS	RELINQUISHED BY	RELINQUISHED DATE
12-8-16	07:45	W	✓	EB-01	Metals App. III & IV EPA 6020/7470 IC (Cl, T, SO4) EPA 300.0 TDS SM 2540C Radum 226 & 228 SW-846 9315/9320 2 x 1L PL only 2 x 1L PL only	3	7	3	James T. Abraham	12-8-16/16:30
12-8-16	11:25	GW	✓	PZ-33				6		
12-8-16	10:48	GW	✓	PZ-17				4		
 12-8-16										
<b>SAMPLED BY AND TITLE:</b> James T. Abraham, mgr.		<b>RECEIVED BY:</b>		<b>DATE/TIME:</b> 12-8-16 / 07:45		<b>DATE/TIME:</b> 12-8-16 / 16:30		<b>RELINQUISHED BY:</b> James T. Abraham <b>RELINQUISHED DATE:</b> 12-8-16/16:30		
<b>RECEIVED BY LAB:</b> M. A. Laman		<b>RECEIVED BY:</b>		<b>DATE/TIME:</b> 12/09/16 10:40		<b>DATE/TIME:</b> Temperature: 10C Min: 10C Max:		<b>USPS (EPA-ED)</b> # of Cookers: 1 <b>CLIENT OTHER FS</b> #1 <b>COOKERS #1</b>		

**LAB #:** AZL0418  
**Entered into LIMS:** mb  
**Tracking #:** 8102 9472 4970

**FOR LAB USE ONLY**





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**CHAIN OF CUSTODY RECORD**

PAGE: \_\_\_\_\_ OF \_\_\_\_\_

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239 <b>REPORT TO:</b> Joju Abraham <b>CC:</b> Maria Padilla Health McCorkle <b>REQUESTED COMPLETION DATE:</b> STANISLAW 7/17 <b>PO #:</b> GPC10684198 <b>PROJECT NAME/STATE:</b> Plant Mitchell / GA <b>PROJECT #:</b> Phase II CCR		<b>ANALYSIS REQUESTED</b> CONTAINER TYPE: P P P P P P P P PRESERVATION: 3 7 7 7 3 # of CONTAINERS → 4 4 Metals App. III & IV EPA 6020/7470 IC (Cl, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-646 8315/9320 EXIL HOPR W/ HOPR		<b>CONTAINER TYPE</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER <b>PRESERVATION</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C 7 - 56°C not frozen <b>*MATRIX CODES:</b> 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 <b>REMARKS/ADDITIONAL INFORMATION</b>	
<b>Collection DATE</b> 12-8-16 12-8-16	<b>Collection TIME</b> 14:45 —	<b>MATRIX CODE*</b> GW GW	<b>GRA B</b> ✓ ✓	<b>SAMPLE IDENTIFICATION</b> PZ-18 Dup-02	<b>L A B I D N U M B E R</b> 9 10
<b>SAMPLED BY AND TITLE:</b> Jenell [Signature] <b>RECEIVED BY:</b>		<b>DATE/TIME:</b> 12-8-16 / 14:45 <b>DATE/TIME:</b>		<b>DATE/TIME:</b> 12-8-16 / 16:30 <b>DATE/TIME:</b>	
<b>RECEIVED BY LAB:</b> J Abraham <b>Temp. checked:</b> 10°C No NA No NA Yes No NA Max: 10°C		<b>SAMPLE SHIPPED VIA:</b> UPS Custody Seal: Broken Not Present Courier: # of Coolers Client: Cooker #2		<b>LAB #:</b> AZL0418 <b>Entered into LIMS:</b> 8102 9472 4980 <b>Tracking #:</b>	

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Environmental Monitoring & Laboratory Analysis  
110 Technology Parkway, Peachtree Corners, GA 30092  
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**LOG-IN CHECKLIST**

**Printed: 12/12/2016 8:54:03AM**

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 12/09/16 10:40

**Work Order:** AZL0418

**Logged In By:** Mohammad M. Rahman

**OBSERVATIONS**

**#Samples:** 10

**#Containers:** 42

**Minimum Temp(C):** 1.0

**Maximum Temp(C):** 1.0

**Custody Seal(s) Used:** Yes

**CHECKLIST ITEMS**

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

**Comments:**

January 23, 2017

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: Plant Mitchell  
Pace Project No.: 30205160

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on December 12, 2016. 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,



Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell  
Pace Project No.: 30205160

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH-0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana DHH/TNI Certification #: LA140008  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: PA00091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification  
Missouri Certification #: 235

Montana Certification #: Cert 0082  
Nebraska Certification #: NE-05-29-14  
Nevada Certification #: PA014572015-1  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188-14-8  
Utah/TNI Certification #: PA014572015-5  
USDA Soil Permit #: P330-14-00213  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 460198  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Certification  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell

Pace Project No.: 30205160

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30205160001	PZ-15	Water	12/07/16 13:10	12/12/16 09:20
30205160002	PZ-16	Water	12/07/16 17:20	12/12/16 09:20
30205160003	FB-01	Water	12/07/16 17:15	12/12/16 09:20
30205160004	EB-01	Water	12/08/16 07:45	12/12/16 09:20
30205160005	PZ-33	Water	12/08/16 11:25	12/12/16 09:20
30205160006	PZ-17	Water	12/08/16 10:48	12/12/16 09:20
30205160007	PZ-19	Water	12/08/16 11:55	12/12/16 09:20
30205160008	PZ-25	Water	12/08/16 14:15	12/12/16 09:20
30205160009	PZ-18	Water	12/08/16 14:45	12/12/16 09:20
30205160010	Dup-02	Water	12/08/16 00:00	12/12/16 09:20

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell  
Pace Project No.: 30205160

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30205160001	PZ-15	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205160002	PZ-16	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205160003	FB-01	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205160004	EB-01	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205160005	PZ-33	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205160006	PZ-17	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205160007	PZ-19	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205160008	PZ-25	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205160009	PZ-18	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205160010	Dup-02	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell  
Pace Project No.: 30205160

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-15</b> <b>Lab ID: 30205160001</b> Collected: 12/07/16 13:10      Received: 12/12/16 09:20      Matrix: Water PWS:      Site ID:      Sample Type:							
Radium-226		EPA 9315	<b>0.408 ± 0.260 (0.418)</b> C:90% T:NA	pCi/L	01/13/17 08:20	13982-63-3	
Radium-228		EPA 9320	<b>1.47 ± 0.629 (1.02)</b> C:63% T:82%	pCi/L	01/21/17 16:44	15262-20-1	
Total Radium		Total Radium Calculation	<b>1.88 ± 0.889 (1.44)</b>	pCi/L	01/23/17 08:32	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-16</b> <b>Lab ID: 30205160002</b> Collected: 12/07/16 17:20      Received: 12/12/16 09:20      Matrix: Water PWS:      Site ID:      Sample Type:							
Radium-226		EPA 9315	<b>0.0410 ± 0.204 (0.512)</b> C:91% T:NA	pCi/L	01/13/17 08:20	13982-63-3	
Radium-228		EPA 9320	<b>1.33 ± 0.544 (0.843)</b> C:65% T:90%	pCi/L	01/21/17 16:44	15262-20-1	
Total Radium		Total Radium Calculation	<b>1.37 ± 0.748 (1.36)</b>	pCi/L	01/23/17 08:32	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: FB-01</b> <b>Lab ID: 30205160003</b> Collected: 12/07/16 17:15      Received: 12/12/16 09:20      Matrix: Water PWS:      Site ID:      Sample Type:							
Radium-226		EPA 9315	<b>0.0759 ± 0.160 (0.375)</b> C:94% T:NA	pCi/L	01/13/17 08:20	13982-63-3	
Radium-228		EPA 9320	<b>0.312 ± 0.366 (0.764)</b> C:65% T:86%	pCi/L	01/21/17 16:44	15262-20-1	
Total Radium		Total Radium Calculation	<b>0.388 ± 0.526 (1.14)</b>	pCi/L	01/23/17 08:32	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: EB-01</b> <b>Lab ID: 30205160004</b> Collected: 12/08/16 07:45      Received: 12/12/16 09:20      Matrix: Water PWS:      Site ID:      Sample Type:							
Radium-226		EPA 9315	<b>-0.0404 ± 0.113 (0.368)</b> C:90% T:NA	pCi/L	01/13/17 08:20	13982-63-3	
Radium-228		EPA 9320	<b>1.85 ± 0.645 (0.879)</b> C:70% T:77%	pCi/L	01/21/17 16:44	15262-20-1	
Total Radium		Total Radium Calculation	<b>1.85 ± 0.758 (1.25)</b>	pCi/L	01/23/17 08:32	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-33</b> <b>Lab ID: 30205160005</b> Collected: 12/08/16 11:25      Received: 12/12/16 09:20      Matrix: Water PWS:      Site ID:      Sample Type:							
Radium-226		EPA 9315	<b>0.406 ± 0.269 (0.431)</b> C:86% T:NA	pCi/L	01/13/17 08:20	13982-63-3	
Radium-228		EPA 9320	<b>0.562 ± 0.495 (1.00)</b> C:66% T:82%	pCi/L	01/21/17 16:44	15262-20-1	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell  
Pace Project No.: 30205160

<b>Sample: PZ-33</b>		<b>Lab ID: 30205160005</b>	Collected: 12/08/16 11:25	Received: 12/12/16 09:20	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	<b>0.968 ± 0.764 (1.43)</b>	pCi/L	01/23/17 08:32	7440-14-4	

<b>Sample: PZ-17</b>		<b>Lab ID: 30205160006</b>	Collected: 12/08/16 10:48	Received: 12/12/16 09:20	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.153 ± 0.189 (0.388)</b> C:83% T:NA	pCi/L	01/13/17 08:20	13982-63-3	
Radium-228	EPA 9320	<b>1.15 ± 0.509 (0.833)</b> C:69% T:88%	pCi/L	01/21/17 16:45	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.30 ± 0.698 (1.22)</b>	pCi/L	01/23/17 08:32	7440-14-4	

<b>Sample: PZ-19</b>		<b>Lab ID: 30205160007</b>	Collected: 12/08/16 11:55	Received: 12/12/16 09:20	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.211 ± 0.210 (0.414)</b> C:95% T:NA	pCi/L	01/13/17 08:20	13982-63-3	
Radium-228	EPA 9320	<b>1.48 ± 0.524 (0.727)</b> C:72% T:91%	pCi/L	01/21/17 16:45	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.69 ± 0.734 (1.14)</b>	pCi/L	01/23/17 08:32	7440-14-4	

<b>Sample: PZ-25</b>		<b>Lab ID: 30205160008</b>	Collected: 12/08/16 14:15	Received: 12/12/16 09:20	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>-0.000773 ± 0.129 (0.364)</b> C:89% T:NA	pCi/L	01/13/17 08:21	13982-63-3	
Radium-228	EPA 9320	<b>1.39 ± 0.543 (0.807)</b> C:73% T:81%	pCi/L	01/21/17 16:45	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.39 ± 0.672 (1.17)</b>	pCi/L	01/23/17 08:32	7440-14-4	

<b>Sample: PZ-18</b>		<b>Lab ID: 30205160009</b>	Collected: 12/08/16 14:45	Received: 12/12/16 09:20	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.125 ± 0.169 (0.357)</b> C:93% T:NA	pCi/L	01/13/17 08:21	13982-63-3	
Radium-228	EPA 9320	<b>1.16 ± 0.526 (0.881)</b> C:71% T:86%	pCi/L	01/21/17 16:45	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.29 ± 0.695 (1.24)</b>	pCi/L	01/23/17 08:32	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell

Pace Project No.: 30205160

**Sample: Dup-02**      **Lab ID: 30205160010**      Collected: 12/08/16 00:00      Received: 12/12/16 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.0683 ± 0.179 (0.434)</b> C:86% T:NA	pCi/L	01/13/17 08:21	13982-63-3	
Radium-228	EPA 9320	<b>0.742 ± 0.422 (0.764)</b> C:71% T:94%	pCi/L	01/21/17 16:46	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.810 ± 0.601 (1.20)</b>	pCi/L	01/23/17 08:32	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell

Pace Project No.: 30205160

QC Batch: 245735

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 30205160001, 30205160002, 30205160003, 30205160004, 30205160005, 30205160006, 30205160007, 30205160008, 30205160009, 30205160010

METHOD BLANK: 1208845

Matrix: Water

Associated Lab Samples: 30205160001, 30205160002, 30205160003, 30205160004, 30205160005, 30205160006, 30205160007, 30205160008, 30205160009, 30205160010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0640 ± 0.166 (0.402) C:91% T:NA	pCi/L	01/13/17 08:20	

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 - RADIOCHEMISTRY

Project: Plant Mitchell

Pace Project No.: 30205160

QC Batch: 245736

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30205160001, 30205160002, 30205160003, 30205160004, 30205160005, 30205160006, 30205160007, 30205160008, 30205160009, 30205160010

METHOD BLANK: 1208846

Matrix: Water

Associated Lab Samples: 30205160001, 30205160002, 30205160003, 30205160004, 30205160005, 30205160006, 30205160007, 30205160008, 30205160009, 30205160010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.286 ± 0.385 (0.821) C:68% T:88%	pCi/L	01/21/17 16:43	

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 Mitchell  
Pace Project No.: 30205160

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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30205160

Chain of Custody



Workorder: AZL0418

Workorder Name: Plant Mitchell

Owner Received Date:

Report To:

Betsy McDaniel  
Pace Analytical Atlanta  
110 Technology Parkway  
Peachtree Corners, GA 30092  
Phone (770)-734-4200

Subcontract To:  
Pace - Pittsburgh  
1638 Roseytown Road  
Stes. 2,3,4  
Greensburg, PA 15601  
Phone (724) 850-5600

Requested Analysis

WO#: 30205160



Preserved Containers

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	NO	HO	Date/Time	Received By	Date/Time	Comments	LAB USE ONLY
1	PZ-15	G	12/7/2016 13:10	AZL0418-01	GW	2						001
2	PZ-16	G	12/7/2016 17:20	AZL0418-02	GW	2						002
3	FB-01	G	12/7/2016 17:15	AZL0418-03	W	2						003
4	EB-01	G	12/8/2016 7:45	AZL0418-04	W	2						004
5	PZ-33	G	12/8/2016 11:25	AZL0418-05	GW	4						005
6	PZ-17	G	12/8/2016 10:48	AZL0418-06	GW	2						006
7	PZ-19	G	12/8/2016 11:55	AZL0418-07	GW	2						007
8	PZ-25	G	12/8/2016 14:15	AZL0418-08	GW	2						008
9	PZ-18	G	12/8/2016 14:45	AZL0418-09	GW	2						009
10	Dup-02	G	12/8/2016 0:00	AZL0418-10	GW	2						010
Transfers Released By												
1												
2												
3												

Transfers Released By	Date/Time	Received By	Date/Time	Comments
		<i>Kevin Hill</i>	12-12-16 0910	

Cooler Temperature on Receipt N/A °C Custody Seal Y or N Received on Ice Y or N Sample Intact Y or N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC  
This chain of custody is considered complete as is since this information is available in the owner laboratory.

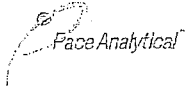
Friday, June 17, 2016 11:01:34 AM

FMT-ALL-C-002rev.00 24March2009

Page 1 of 1



Sample Condition Upon Receipt Pittsburgh



Client Name: Pace Georgia Project # 30205160

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 08125101 0100

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

Thermometer Used N/A Type of Ice: Wet Blue None

Cooler Temperature Observed Temp N/A °C Correction Factor: N/A °C Final Temp: N/A °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: KA 12-12-16

Comments:	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
-Includes date/time/ID/Analysis Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
-Pace Containers Used:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Filtered volume received for Dissolved tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13. <u>PHL2</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>AKA</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
Trip Blank Present:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rad Aqueous Samples Screened > 0.5 mrem/hr	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>AKA</u> Date: <u>12-12-16</u> <u>AKA</u>

Client Notification/ Resolution: Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: 12-13-16

Comments/ Resolution: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)  
 \*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

30205160

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

PAGE: 1 OF 1

CHAIN OF CUSTODY RECORD

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Jotiu Abraham Health McConkile <b>CC:</b> Maria Padilla <b>PO #:</b> GPC10684198		<b>REQUESTED COMPLETION DATE:</b> Nimal JAT <b>PROJECT NAME/STATE:</b> Plant Mitchell / GA		<b>PROJECT #:</b> Phase II CCR	
<b>CONTAINER TYPE</b> PRESERVATION: # of	<b>ANALYSIS REQUESTED</b> P 3 P 7 P 7 P 3 IC (Cl, T, 604) FP 300.0 TDS SM 2540C Radium 226 & 228 BW-848 9315/9320 2X1L HDPE w/HALO	<b>CONTAINER TYPE</b> PRESERVATION: # of	<b>ANALYSIS REQUESTED</b> P 3 P 7 P 7 P 3	<b>CONTAINER TYPE</b> PRESERVATION: # of	<b>ANALYSIS REQUESTED</b> P 3 P 7 P 7 P 3	<b>CONTAINER TYPE</b> PRESERVATION: # of	<b>ANALYSIS REQUESTED</b> P 3 P 7 P 7 P 3
<b>COLLECTION DATE</b> 12-7-16 12-7-16 12-7-16	<b>COLLECTION TIME</b> 13:10 17:20 17:15	<b>MATRIX CODE*</b> GW GW W	<b>GRAB</b> ✓ ✓ ✓	<b>SAMPLE IDENTIFICATION</b> PZ-15 PZ-16 FB-01	<b>DATE/TIME</b> 12-7-16/13:10 12-7-16/17:20 12-7-16/17:15	<b>DATE/TIME</b> 12-7-16/13:10 12-7-16/17:20 12-7-16/17:15	<b>DATE/TIME</b> 12-7-16/16:15 12-7-16/16:15 12-7-16/16:15
<b>RECEIVED BY:</b> RECEIVED BY AND TITLES: mbc RECEIVED BY:	<b>RECEIVED BY:</b> RECEIVED BY AND TITLES: mbc RECEIVED BY:	<b>RECEIVED BY:</b> RECEIVED BY AND TITLES: mbc RECEIVED BY:	<b>RECEIVED BY:</b> RECEIVED BY AND TITLES: mbc RECEIVED BY:	<b>RECEIVED BY:</b> RECEIVED BY AND TITLES: mbc RECEIVED BY:	<b>RECEIVED BY:</b> RECEIVED BY AND TITLES: mbc RECEIVED BY:	<b>RECEIVED BY:</b> RECEIVED BY AND TITLES: mbc RECEIVED BY:	<b>RECEIVED BY:</b> RECEIVED BY AND TITLES: mbc RECEIVED BY:

<b>CONTAINER TYPE</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	<b>PRESERVATION</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C 7 - 56°C not frozen
<b>MATRIX CODES:</b> DW - DRINKING WATER WW - WASTEWATER GW - GROUNDWATER SW - SURFACE WATER ST - STORM WATER W - WATER	<b>REMARKS/ADDITIONAL INFORMATION</b> S - SOIL SL - SLUDGE SD - SOLID A - AIR L - LIQUID P - PRODUCT

FOR LAB USE ONLY  
 LAB #: A2L0418  
 Entered into LIMS:  
 Tracking #: 8102 9472 4580

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CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239 REPORT TO: Joju Abraham Health McCortle FO #: GPC10684198 PROJECT NAME/STATE: STANFORD TAT PROJECT #: Plant Mitchell / GA Phase II CCR		ANALYSIS REQUESTED CONTAINER TYPE: P 3 PRESERVATION: 3 # of CONTAINERS: 4 Metals App. III & IV EPA 60207470 IC (Cl, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-946 9315/9320 2x 1L PL (ex) 2x 1L PL (amp)		CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER PRESERVATION 1 - HCl, 56°C 2 - H2SO4, 56°C 3 - HNO3 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na2S2O8, 56°C 7 - 56°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 2 EXTRA BOTTLES FOR RADIIUM LAB CCR									
Collection DATE	Collection TIME	MATRIX CODE	GRA B	C O M P	SAMPLE IDENTIFICATION	LAB #	DATE/TIME	RELINQUISHED BY	RELINQUISHED DATE/TIME	CLIENT	COURIER	OTHER	FS
12-8-16	07:45	W	✓		EB-01	4	12-8-16/07:45	James T. Abraham	12-8-16/16:30				
12-8-16	11:25	GW	✓		PZ-33	6	12-8-16/10:48						
12-8-16	10:48	GW	✓		PZ-17	4							
SAMPLED BY AND TITLE: J. Mitchell / Site mgr. RECEIVED BY: J. Mitchell / Site mgr. DATE/TIME: 12-8-16/07:45 RELINQUISHED BY: James T. Abraham DATE/TIME: 12-8-16/16:30 RECEIVED BY LAB: J. Abraham DATE/TIME: 12-8-16/10:40 Temperature: 10°C Min, 10°C Max Broken: No, Not Present: No, Intact: Yes SAMPLE SHIPPED VIA: UPS FEED-ED: Broken, Intact: Yes CARRIER: # of Coolers: 1 ORDER ID: CCR498 #1 TRACKING #: 8102 9472 4970 LAB #: A2L0418 Entered into LIMS: mb FOR LAB USE ONLY													

30205160

PAGE: 1 OF 1

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CHAIN OF CUSTODY RECORD

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Joju Abraham <b>CC:</b> Maria Padilla Heath McCorkle <b>PO #:</b> GPC10684198	
<b>REQUESTED COMPLETION DATE:</b> 12-8-16 <b>PROJECT NAME/STATE:</b> Plant Mitchell / GA Phase II CCR		<b>CONTAINER TYPE:</b> P <b>PRESERVATION:</b> 3	
<b>ANALYSIS REQUESTED</b>		<b>CONTAINER TYPE:</b> P <b>PRESERVATION:</b> 3	
<b>CONTAINERS</b>		<b>ANALYSIS REQUESTED</b>	
<b>Collection DATE</b> 12-8-16 11:55 12-8-16 14:15	<b>Collection TIME</b> 11:55 14:15	<b>MATRIX CODE*</b> GW GW	<b>SAMPLE IDENTIFICATION</b> PZ-19 PZ-2.5
<b>RELINQUISHED BY:</b> [Signature] DATE/TIME: 12-8-16 / 11:55		<b>RELINQUISHED BY:</b> [Signature] DATE/TIME: 12-8-16 / 11:55	
<b>RECEIVED BY LAB:</b> [Signature] DATE/TIME: 12-10-16 10:40 Temperature: 10°C		<b>RECEIVED BY:</b> [Signature] DATE/TIME: 12-8-16 / 11:55	
<b>REMARKS/ADDITIONAL INFORMATION</b>		<b>REMARKS/ADDITIONAL INFORMATION</b>	
<b>CONTAINER TYPE</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		<b>PRESERVATION</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/H <sub>2</sub> OAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub> , 56°C 7 - 56°C not frozen	
<b>MATRIX CODES:</b> 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		<b>MATRIX CODES:</b> 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	
<b>LAB #:</b> 810294724991 <b>Tracking #:</b>		<b>LAB #:</b> AZL0418 <b>Tracking #:</b>	

Pace COC Revised.xlsx

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CHAIN OF CUSTODY RECORD

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Jiju Abraham Health McCorrle <b>FO #:</b> GPC10684198	
<b>PROJECT NAME/STATE:</b> Plant Mitchell / GA Phase II CCR		<b>PROJECT #:</b> Phase II CCR	
<b>Collection DATE</b> 12-8-16 14:45 12-8-16	<b>Collection TIME</b> 14:45 —	<b>MATRIX CODE</b> GW GW	<b>SAMPLE IDENTIFICATION</b> ✓ PZ-18 ✓ Dup-02
<b>ANALYSIS REQUESTED</b> P 3 P 7 P 7 P 3 EPA 6020/7470 IC (C, T, S, Q4) EPA 300.0 TDS SM 25400 Radium 226 & 228 GW-846 9316/8320 EXISTING HODS W/ HODS			
<b>CONTAINER TYPE:</b> PRESERVATION: 3 # of CONTAINERS: 4		<b>LAB ID NUMBER</b> 9 10	
<b>CONTAINER TYPE</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		<b>PRESERVATION</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/H <sub>2</sub> SO <sub>4</sub> , 56°C 6 - H <sub>2</sub> SO <sub>4</sub> , 56°C 7 - 56°C not frozen	
<b>MATRIX CODES:</b> DW - DRINKING WATER WW - WASTEWATER GW - GROUNDWATER SW - SURFACE WATER ST - STORM WATER W - WATER		<b>REMARKS/ADDITIONAL INFORMATION</b> S - SOIL SL - SOLID SD - SOLID A - AIR L - LIQUID P - PRODUCT	
<b>SAMPLED BY AND TITLE:</b> J. Abraham, Sr.		<b>DATE/TIME:</b> 12-8-16 / 14:45	
<b>RECEIVED BY:</b> J. Abraham		<b>DATE/TIME:</b> 12-8-16 / 16:30	
<b>RECEIVED BY LAB:</b> J. Abraham		<b>DATE/TIME:</b> 12-8-16 / 10:40	
Yes No NA Yes No NA Yes No NA (Yes) (No) (NA) (Yes) (No) (NA) (Yes) (No) (NA)		SAMPLE SHIPPED VIA: UPS CUSTODY SEAL: Broken Not Present COURIER: # of Coolers CLIENT: Coolers #1 OTHER: FS	
<b>LAB #:</b> AZL0418		<b>FOR LAB USE ONLY</b> Entered into LIMS: Tracking #: 810294724980	

# Quality Control Sample Performance Assessment



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Test: Ra-226  
Analyst: LAL  
Date: 1/12/2017  
Worklist: 33366  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1208845
MB concentration:	0.084
M/B Counting Uncertainty:	0.166
MB MDC:	0.402
MB Numerical Performance Indicator:	0.76
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS (Y or N)?	N
LCS33366	LCS33366
Count Date:	1/13/2017
Spike I.D.:	16-026
Spike Concentration (pCi/mL):	44.671
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.503
Target Conc. (pCi/L, g, F):	8.875
Uncertainty (Calculated):	0.417
Result (pCi/L, g, F):	6.807
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.818
Numerical Performance Indicator:	-4.41
Percent Recovery:	76.70%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30205160001
Duplicate Sample I.D.:	30205160001DUP
Sample Result (pCi/L, g, F):	0.408
Sample Result Counting Uncertainty (pCi/L, g, F):	0.253
Sample Duplicate Result (pCi/L, g, F):	0.029
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.123
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	2.639
Duplicate RPD:	173.30%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail**

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

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision.

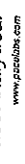
*[Handwritten signature]*  
1/12/17

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.	
Sample MS I.D.	
Sample MSD I.D.	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.	
Sample MS I.D.	
Sample MSD I.D.	
Sample Matrix Spike Result:	
Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228  
Analyst: JAL  
Date: 1/11/2017  
Worklist: 33367  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1208846
MB concentration:	0.286
M/B Counting Uncertainty:	0.381
MB MDC:	0.821
MB Numerical Performance Indicator:	1.47
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS (Y or N)?	N
LCS33367			LCS33367
Count Date:	1/21/2017		
Spike I.D.:	16-027		
Spike Concentration (pCi/mL):	25.503		
Volume Used (mL):	0.20		
Aliquot Volume (L, g, F):	0.809		
Target Conc. (pCi/L, g, F):	5.307		
Uncertainty (Calculated):	0.454		
Result (pCi/L, g, F):	6.535		
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.834		
Numerical Performance Indicator:	0.47		
Percent Recovery:	103.62%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		

Duplicate Sample Assessment	
Sample I.D.:	30205160004
Duplicate Sample I.D.:	30205160004DUP
Sample Result (pCi/L, g, F):	1.855
Sample Duplicate Result (pCi/L, g, F):	0.553
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	2.225
Are sample and/or duplicate results below MDC?	0.584
Duplicate Numerical Performance Indicator:	See Below ##
Duplicate RPD:	-0.903
Duplicate Status vs Numerical Indicator:	18.15%
Duplicate Status vs RPD:	N/A
Duplicate Status vs Recovery:	Pass

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

Comments:

*Handwritten signature: JAL 1/23/17*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	



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**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AZL0715**

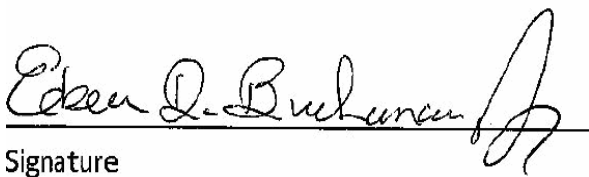
**December 28, 2016**

**Project: CCR Event**

**Project #: Plant Mitchell**

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

Approved:

  
Signature

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All test results relate only to the samples analyzed.





**PACE ANALYTICAL SERVICES, LLC.**

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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
PZ-2S	AZL0715-01	Ground Water	12/15/16 15:25	12/16/16 12:20



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

**Report No.: AZL0715**

**Project: CCR Event**

**Client ID: PZ-2S**

**Lab Number ID: AZL0715-01**

**Date/Time Sampled: 12/15/2016 3:25:00PM**

**Date/Time Received: 12/16/2016 12:20:00PM**

**Matrix: Ground Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	227	25	10	mg/L	SM 2540 C		1	12/19/16 13:00	12/19/16 13:00	6120550	JPT
<b>Inorganic Anions</b>											
Chloride	0.05	0.25	0.01	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 15:21	6120712	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	12/22/16 16:55	12/23/16 15:21	6120712	RNB
Sulfate	0.07	1.0	0.05	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 15:21	6120712	RNB
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/20/16 16:35	12/22/16 13:21	6120609	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/20/16 16:35	12/22/16 13:21	6120609	CSW
Barium	0.0131	0.0100	0.0004	mg/L	EPA 6020B		1	12/20/16 16:35	12/22/16 13:21	6120609	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/20/16 16:35	12/22/16 13:21	6120609	CSW
Boron	0.0163	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/20/16 16:35	12/22/16 13:21	6120609	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/20/16 16:35	12/22/16 13:21	6120609	CSW
Calcium	45.0	2.50	0.155	mg/L	EPA 6020B	B-01	5	12/20/16 16:35	12/23/16 15:13	6120609	CSW
Chromium	0.0024	0.0100	0.0009	mg/L	EPA 6020B	J	1	12/20/16 16:35	12/22/16 13:21	6120609	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/20/16 16:35	12/22/16 13:21	6120609	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	12/20/16 16:35	12/22/16 13:21	6120609	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/20/16 16:35	12/22/16 13:21	6120609	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/20/16 16:35	12/22/16 13:21	6120609	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/20/16 16:35	12/22/16 13:21	6120609	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/20/16 16:35	12/22/16 13:21	6120609	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/19/16 09:55	12/19/16 14:24	6120545	MTC



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**Report No.: AZL0715**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120550 - SM 2540 C</b>											
<b>Blank (6120550-BLK1)</b>						Prepared & Analyzed: 12/19/16					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (6120550-BS1)</b>						Prepared & Analyzed: 12/19/16					
Total Dissolved Solids	401	25	10	mg/L	400.00		100	84-108			
<b>Duplicate (6120550-DUP1)</b>			<b>Source: AZL0694-01</b>			Prepared & Analyzed: 12/19/16					
Total Dissolved Solids	196	25	10	mg/L		191			3	10	



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**Report No.: AZL0715**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120712 - EPA 300.0</b>											
<b>Blank (6120712-BLK1)</b>						Prepared: 12/22/16 Analyzed: 12/23/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
<b>LCS (6120712-BS1)</b>						Prepared: 12/22/16 Analyzed: 12/23/16					
Chloride	10.2	0.25	0.01	mg/L	10.010		102	90-110			
Fluoride	10.5	0.30	0.02	mg/L	10.020		105	90-110			
Sulfate	10.2	1.0	0.05	mg/L	10.020		101	90-110			
<b>Matrix Spike (6120712-MS1)</b>						<b>Source: AZL0418-01</b> Prepared: 12/22/16 Analyzed: 12/23/16					
Chloride	15.6	0.25	0.01	mg/L	10.010	6.97	87	90-110			QM-02
Fluoride	9.22	0.30	0.02	mg/L	10.020	0.09	91	90-110			
Sulfate	70.7	1.0	0.05	mg/L	10.020	68.3	24	90-110			QM-02
<b>Matrix Spike (6120712-MS2)</b>						<b>Source: AZL0435-03</b> Prepared: 12/22/16 Analyzed: 12/23/16					
Chloride	182	0.25	0.01	mg/L	10.010	199	NR	90-110			QM-02
Fluoride	13.4	0.30	0.02	mg/L	10.020	0.63	127	90-110			QM-05
Sulfate	415	1.0	0.05	mg/L	10.020	440	NR	90-110			QM-02
<b>Matrix Spike Dup (6120712-MSD1)</b>						<b>Source: AZL0418-01</b> Prepared: 12/22/16 Analyzed: 12/23/16					
Chloride	16.5	0.25	0.01	mg/L	10.010	6.97	95	90-110	5	15	
Fluoride	10.1	0.30	0.02	mg/L	10.020	0.09	100	90-110	9	15	
Sulfate	70.9	1.0	0.05	mg/L	10.020	68.3	25	90-110	0.2	15	QM-02



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**Report No.: AZL0715**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120545 - EPA 7470A</b>											
<b>Blank (6120545-BLK1)</b> Prepared & Analyzed: 12/19/16											
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (6120545-BS1)</b> Prepared & Analyzed: 12/19/16											
Mercury	0.00253	0.00050	0.000041	mg/L	2.5000E-3		101	80-120			
<b>Matrix Spike (6120545-MS1)</b> Source: AZL0715-01 Prepared & Analyzed: 12/19/16											
Mercury	0.00253	0.00050	0.000041	mg/L	2.5000E-3	ND	101	75-125			
<b>Matrix Spike Dup (6120545-MSD1)</b> Source: AZL0715-01 Prepared & Analyzed: 12/19/16											
Mercury	0.00254	0.00050	0.000041	mg/L	2.5000E-3	ND	102	75-125	0.6	20	
<b>Post Spike (6120545-PS1)</b> Source: AZL0715-01 Prepared & Analyzed: 12/19/16											
Mercury	1.71			ug/L	1.6667	0.0125	102	80-120			
<b>Batch 6120609 - EPA 3005A</b>											
<b>Blank (6120609-BLK1)</b> Prepared: 12/20/16 Analyzed: 12/22/16											
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.0400	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	0.0407	0.500	0.0311	mg/L							J
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0100	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							



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Attention: Mr. Joju Abraham

December 28, 2016

**Report No.: AZL0715**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6120609 - EPA 3005A**

**LCS (6120609-BS1)**

Prepared: 12/20/16 Analyzed: 12/22/16

Antimony	0.104	0.0030	0.0008	mg/L	0.10000		104	80-120			
Arsenic	0.0988	0.0050	0.0016	mg/L	0.10000		99	80-120			
Barium	0.103	0.0100	0.0004	mg/L	0.10000		103	80-120			
Beryllium	0.0972	0.0030	0.00008	mg/L	0.10000		97	80-120			
Boron	0.930	0.0400	0.0064	mg/L	1.0000		93	80-120			
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000		101	80-120			
Calcium	0.966	0.500	0.0311	mg/L	1.0000		97	80-120			
Chromium	0.102	0.0100	0.0009	mg/L	0.10000		102	80-120			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000		102	80-120			
Copper	0.0992	0.0250	0.0005	mg/L	0.10000		99	80-120			
Lead	0.0992	0.0050	0.0001	mg/L	0.10000		99	80-120			
Molybdenum	0.104	0.0100	0.0017	mg/L	0.10000		104	80-120			
Nickel	0.104	0.0100	0.0006	mg/L	0.10000		104	80-120			
Selenium	0.101	0.0100	0.0010	mg/L	0.10000		101	80-120			
Silver	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Thallium	0.101	0.0010	0.0002	mg/L	0.10000		101	80-120			
Vanadium	0.0997	0.0100	0.0071	mg/L	0.10000		100	80-120			
Zinc	0.0960	0.0100	0.0021	mg/L	0.10000		96	80-120			
Lithium	0.0996	0.0500	0.0021	mg/L	0.10000		100	80-120			

**Matrix Spike (6120609-MS1)**

Source: AZL0694-01

Prepared: 12/20/16 Analyzed: 12/22/16

Antimony	0.104	0.0030	0.0008	mg/L	0.10000	0.0012	103	75-125			
Arsenic	0.105	0.0050	0.0016	mg/L	0.10000	0.0023	103	75-125			
Barium	0.109	0.0100	0.0004	mg/L	0.10000	0.0056	104	75-125			
Beryllium	0.111	0.0030	0.00008	mg/L	0.10000	ND	111	75-125			
Boron	0.916	0.200	0.0321	mg/L	1.0000	ND	92	75-125			
Cadmium	0.102	0.0010	0.00007	mg/L	0.10000	ND	102	75-125			
Calcium	23.1	2.50	0.155	mg/L	1.0000	23.1	7	75-125			QM-02
Chromium	0.104	0.0100	0.0009	mg/L	0.10000	ND	104	75-125			
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000	ND	105	75-125			
Copper	0.104	0.0250	0.0005	mg/L	0.10000	0.0019	102	75-125			
Lead	0.104	0.0050	0.0001	mg/L	0.10000	ND	104	75-125			
Molybdenum	0.111	0.0100	0.0017	mg/L	0.10000	0.0066	105	75-125			
Nickel	0.108	0.0100	0.0006	mg/L	0.10000	ND	108	75-125			
Selenium	0.106	0.0100	0.0010	mg/L	0.10000	ND	106	75-125			
Silver	0.102	0.0100	0.0005	mg/L	0.10000	ND	102	75-125			
Thallium	0.106	0.0010	0.0002	mg/L	0.10000	ND	106	75-125			
Vanadium	0.108	0.0100	0.0071	mg/L	0.10000	ND	108	75-125			
Zinc	0.100	0.0100	0.0021	mg/L	0.10000	0.0026	98	75-125			
Lithium	0.110	0.0500	0.0021	mg/L	0.10000	0.0026	107	75-125			



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

**Report No.: AZL0715**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6120609 - EPA 3005A</b>											
<b>Matrix Spike Dup (6120609-MSD1)</b>			<b>Source: AZL0694-01</b>			<b>Prepared: 12/20/16 Analyzed: 12/22/16</b>					
Antimony	0.103	0.0030	0.0008	mg/L	0.10000	0.0012	102	75-125	1	20	
Arsenic	0.106	0.0050	0.0016	mg/L	0.10000	0.0023	104	75-125	1	20	
Barium	0.107	0.0100	0.0004	mg/L	0.10000	0.0056	101	75-125	2	20	
Beryllium	0.104	0.0030	0.00008	mg/L	0.10000	ND	104	75-125	7	20	
Boron	0.971	0.200	0.0321	mg/L	1.0000	ND	97	75-125	6	20	
Cadmium	0.104	0.0010	0.00007	mg/L	0.10000	ND	104	75-125	2	20	
Calcium	23.8	2.50	0.155	mg/L	1.0000	23.1	75	75-125	3	20	
Chromium	0.105	0.0100	0.0009	mg/L	0.10000	ND	105	75-125	1	20	
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000	ND	105	75-125	0.2	20	
Copper	0.105	0.0250	0.0005	mg/L	0.10000	0.0019	103	75-125	0.6	20	
Lead	0.105	0.0050	0.0001	mg/L	0.10000	ND	105	75-125	0.8	20	
Molybdenum	0.109	0.0100	0.0017	mg/L	0.10000	0.0066	102	75-125	2	20	
Nickel	0.104	0.0100	0.0006	mg/L	0.10000	ND	104	75-125	3	20	
Selenium	0.106	0.0100	0.0010	mg/L	0.10000	ND	106	75-125	0.1	20	
Silver	0.0998	0.0100	0.0005	mg/L	0.10000	ND	100	75-125	2	20	
Thallium	0.105	0.0010	0.0002	mg/L	0.10000	ND	105	75-125	0.3	20	
Vanadium	0.111	0.0100	0.0071	mg/L	0.10000	ND	111	75-125	3	20	
Zinc	0.107	0.0100	0.0021	mg/L	0.10000	0.0026	104	75-125	6	20	
Lithium	0.106	0.0500	0.0021	mg/L	0.10000	0.0026	103	75-125	4	20	
<b>Post Spike (6120609-PS1)</b>											
			<b>Source: AZL0694-01</b>			<b>Prepared: 12/20/16 Analyzed: 12/22/16</b>					
Antimony	99.0			ug/L	100.00	1.22	98	80-120			
Arsenic	104			ug/L	100.00	2.28	102	80-120			
Barium	111			ug/L	100.00	5.61	106	80-120			
Beryllium	104			ug/L	100.00	0.0085	104	80-120			
Boron	946			ug/L	1000.0	10.7	93	80-120			
Cadmium	101			ug/L	100.00	0.0138	101	80-120			
Calcium	23800			ug/L	1000.0	23100	73	80-120			QM-02
Chromium	107			ug/L	100.00	0.854	107	80-120			
Cobalt	106			ug/L	100.00	0.256	105	80-120			
Copper	106			ug/L	100.00	1.92	104	80-120			
Lead	105			ug/L	100.00	0.0681	105	80-120			
Molybdenum	110			ug/L	100.00	6.64	103	80-120			
Nickel	106			ug/L	100.00	0.422	105	80-120			
Selenium	105			ug/L	100.00	0.120	105	80-120			
Silver	100			ug/L	100.00	0.0111	100	80-120			
Thallium	107			ug/L	100.00	0.0905	107	80-120			
Vanadium	113			ug/L	100.00	2.91	110	80-120			
Zinc	104			ug/L	100.00	2.56	101	80-120			
Lithium	105			ug/L	100.00	2.65	102	80-120			



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

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## Legend

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### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

### Definition of Qualifiers

- QM-05** The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.
- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).
- B-01** Analyte was detected in the associated method blank at an estimated level equal to or greater than the MDL. Sample values reported as greater than the MDL and less than 10x the method blank value are reported as estimated values.

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







**PACE ANALYTICAL SERVICES, LLC.**

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

**LOG-IN CHECKLIST**

**Printed: 12/19/2016 10:11:28AM**

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 12/16/16 12:20

**Work Order:** AZL0715

**Logged In By:** Charles Hawks

**OBSERVATIONS**

**#Samples:** 1

**#Containers:** 4

**Minimum Temp(C):** 1.0

**Maximum Temp(C):** 1.0

**Custody Seal(s) Used:** Yes

**CHECKLIST ITEMS**

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

**Comments:**

January 23, 2017

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: Plant Mitchell  
Pace Project No.: 30206176

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on December 20, 2016. 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,



Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## CERTIFICATIONS

Project: Plant Mitchell  
Pace Project No.: 30206176

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH-0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana DHH/TNI Certification #: LA140008  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: PA00091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification  
Missouri Certification #: 235

Montana Certification #: Cert 0082  
Nebraska Certification #: NE-05-29-14  
Nevada Certification #: PA014572015-1  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188-14-8  
Utah/TNI Certification #: PA014572015-5  
USDA Soil Permit #: P330-14-00213  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 460198  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Certification  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: Plant Mitchell

Pace Project No.: 30206176

<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
30206176001	PZ-2S	Water	12/15/16 15:25	12/20/16 12:20

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell

Pace Project No.: 30206176

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30206176001	PZ-2S	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell  
Pace Project No.: 30206176

**Sample: PZ-2S**      **Lab ID: 30206176001**      Collected: 12/15/16 15:25      Received: 12/20/16 12:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.364 ± 0.241 (0.349)</b> <b>C:81% T:NA</b>	pCi/L	01/17/17 09:42	13982-63-3	
Radium-228	EPA 9320	<b>0.506 ± 0.713 (1.53)</b> <b>C:66% T:42%</b>	pCi/L	01/22/17 16:00	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.870 ± 0.954 (1.88)</b>	pCi/L	01/23/17 12:09	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell

Pace Project No.: 30206176

QC Batch: 245742

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30206176001

METHOD BLANK: 1208865

Matrix: Water

Associated Lab Samples: 30206176001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.683 ± 0.424 (0.798) C:67% T:93%	pCi/L	01/22/17 16:02	

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 Mitchell

Pace Project No.: 30206176

QC Batch: 245741

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 30206176001

METHOD BLANK: 1208863

Matrix: Water

Associated Lab Samples: 30206176001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.106 ± 0.218 (0.506) C:79% T:NA	pCi/L	01/17/17 09:29	

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Plant Mitchell  
Pace Project No.: 30206176

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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Chain of Custody

Results Requested By: 1/11/2017

Owner Received Date:

Workorder Name: Plant Mitchell

Workorder: AZL0715

Requested Analysis

WO#: 30206176

30206176

Report To: Betsy McDaniel  
 Pace Analytical Atlanta  
 110 Technology Parkway  
 Peachtree Corners, GA 30092  
 Phone (770)-734-4200

Subcontract To: Pace - Pittsburgh  
 1638 Roseytown Road  
 Stes. 2,3,4  
 Greensburg, PA 15601  
 Phone (724) 850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		LAB USE ONLY
						CON	ONE	
1	PZ-2S	G	12/15/2016 15:25	AZL0715-01	GW	AR		
2						BMP		
3						12/17/2016		
4								
5								
6								
7								
8								
9								
10								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			John, hole Pace	12-20-16	1720
2					
3					

Cooler Temperature on Receipt NA °C Custody Seal Y or N Y Received on Ice Y or N N Sample Intact Y or N Y

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC  
 This chain of custody is considered complete as is since this information is available in the owner laboratory.

30206176

PAGE: 1 OF 1

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

**CHAIN OF CUSTODY RECORD**

<b>CLIENT NAME:</b> Georgia Power		<b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Jolu Abraham Heath McCorkle		<b>CC:</b> Maria Padilla Heath McCorkle		<b>PO #:</b> GPC10684198		<b>REQUESTED COMPLETION DATE:</b>		<b>PROJECT NAME/STATE:</b> PLANT MITCHELL / GA	
<b>CONTAINER TYPE:</b> # of		<b>ANALYSIS REQUESTED</b>		<b>CONTAINER TYPE:</b> # of		<b>CONTAINERS</b>		<b>DATE/TIME</b>		<b>DATE/TIME</b>		<b>DATE/TIME</b>	
P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		P 3 P 7 P 7 P 3		P 3 P 7 P 7 P 3		Metals App. III & IV EPA 6020/7470 IC (Cl, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SM 469 93 15/9320		4 1 1 2		12-15-16 / 15:25 GW PE-2S		12-15-16 / 15:25 GW PE-2S	
<b>PRESERVATION:</b> 1 - HCl, ≤6°C 2 - H <sub>2</sub> SO <sub>4</sub> , ≤6°C 3 - HNO <sub>3</sub> 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , ≤6°C 7 - ≤6°C not frozen		<b>MATRIX CODES:</b> DW - DRINKING WATER WM - WASTEWATER GW - GROUNDWATER SW - SURFACE WATER ST - STORM WATER W - WATER S - SOIL SL - SLUDGE SD - SOLID A - AIR L - LIQUID P - PRODUCT		<b>REMARKS/ADDITIONAL INFORMATION</b>		<b>RECEIVED BY AND TITLE:</b> Heath McCorkle / SGT		<b>RECEIVED BY:</b>		<b>DATE/TIME:</b> 12-15-16 / 15:25		<b>DATE/TIME:</b> 12-15-16 / 15:25	
<b>LAB #:</b> A21-0715		<b>FOR LAB USE ONLY</b>		<b>RELINQUISHED BY:</b> James Mitchell		<b>DATE/TIME:</b> 12-16-16 / 12:20		<b>RELINQUISHED BY:</b>		<b>DATE/TIME:</b>		<b>ENTERED INTO LIMS:</b> CM	
<b>TRACKING #:</b> None, Drapped off at LAB		<b>SAMPLE SHIPPED VIA:</b> UPS		<b>COURIER:</b>		<b>CLIENT:</b>		<b>OTHER:</b> FS		<b>COOLER ID:</b>		<b>COOLER #:</b>	
<b>TEMPERATURE:</b>		<b>TEMPERATURE:</b>		<b>TEMPERATURE:</b>		<b>TEMPERATURE:</b>		<b>TEMPERATURE:</b>		<b>TEMPERATURE:</b>		<b>TEMPERATURE:</b>	

Pace COC Revised.xlsx

Sample Condition Upon Receipt Pittsburgh



Client Name: Pace Atlanta

30206176

Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 6812 5101 2147

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

Thermometer Used NA Type of Ice: Wet Blue None

Cooler Temperature Observed Temp NA °C Correction Factor: NA °C Final Temp: NA °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: PC 12-20-16

Comments:

	Yes	No	N/A	
Chain of Custody Present:	/			1.
Chain of Custody Filled Out:	/			2.
Chain of Custody Relinquished:	/	/		3. <u>See 12/21/16</u>
Sampler Name & Signature on COC:	/			4.
Sample Labels match COC:	/			5.
-Includes date/time/ID/Analysis Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	/			6.
Short Hold Time Analysis (<72hr remaining):	/	/		7.
Rush Turn Around Time Requested:	/	/		8.
Sufficient Volume:	/			9.
Correct Containers Used:	/			10.
-Pace Containers Used:	/			
Containers Intact:	/			11.
Filtered volume received for Dissolved tests			/	12.
All containers needing preservation have been checked.	/			13.
All containers needing preservation are found to be in compliance with EPA recommendation.	/			<u>ph &lt; 2</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed <u>PC</u> Date/time of preservation <u>12-20-16</u>
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			/	14.
Trip Blank Present:			/	15.
Trip Blank Custody Seals Present			/	
Rad Aqueous Samples Screened > 0.5 mrem/hr		/		Initial when completed: <u>PC</u> Date: <u>12-20-16</u>

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

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

\*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: JAL  
Date: 1/13/2017  
Worklist: 33373  
Matrix: DW

<b>Method Blank Assessment</b>	
MB Sample ID	1208865
MB Concentration:	0.683
M/B Counting Uncertainty:	0.406
MB MDC:	0.798
MB Numerical Performance Indicator:	3.30
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

<b>Laboratory Control Sample Assessment</b>	
LCSID (Y or N)?	N
LCS33373	LCS33373
Count Date:	1/22/2017
Spike I.D.:	16-027
Spike Concentration (pCi/mL):	25.495
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.810
Target Conc. (pCi/L, g, F):	6.292
Uncertainty (Calculated):	0.453
Result (pCi/L, g, F):	7.232
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.801
Numerical Performance Indicator:	2.00
Percent Recovery:	114.95%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

<b>Duplicate Sample Assessment</b>	
Sample I.D.:	30205268003
Duplicate Sample I.D.:	30205268003DUP
Sample Result Counting Uncertainty (pCi/L, g, F):	0.166
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.335
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.662
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-1.972
Duplicate RPD:	119.81%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.  
30205268003  
30205268003DUP  
MK

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision.

*One 1/23/17*

<b>Sample Matrix Spike Control Assessment</b>	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

<b>Matrix Spike/Matrix Spike Duplicate Sample Assessment</b>	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs Recovery:	

# Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: LAL  
Date: 1/16/2017  
Worklist: 33372  
Matrix: DW



**Method Blank Assessment**

MB Sample ID: 1208863  
MB concentration: 0.106  
M/B Counting Uncertainty: 0.217  
MB MDC: 0.506  
MB Numerical Performance Indicator: 0.95  
MB Status vs Numerical Indicator: N/A  
MB Status vs. MDC: Pass

**Laboratory Control Sample Assessment**

LCSID (Y or N)? N  
LCSID: LCS33372

Count Date: 1/17/2017  
Spike I.D.: 16-026  
Spike Concentration (pCi/mL): 44.871  
Volume Used (mL): 0.10  
Aliquot Volume (L, g, F): 0.510  
Target Conc. (pCi/L, g, F): 8.765  
Uncertainty (Calculated): 0.412  
Result (pCi/L, g, F): 7.466  
LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.856  
Numerical Performance Indicator: -2.68  
Percent Recovery: 85.18%  
Status vs Numerical Indicator: N/A  
Status vs Recovery: Pass

**Duplicate Sample Assessment**

Sample I.D.: 30205266001  
Duplicate Sample I.D.: 30205266001DUP  
Sample Result (pCi/L, g, F): -0.003  
Sample Duplicate Result (pCi/L, g, F): 0.180  
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): -0.014  
Are sample and/or duplicate results below MDC? 0.099  
Duplicate Numerical Performance Indicator: See Below #  
Duplicate RPD: 0.110  
Duplicate Status vs Numerical Indicator: -137.14%  
Duplicate Status vs RPD: N/A  
Duplicate Status vs Recovery: Pass

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.  
30205266001  
30205266001DUP

**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Spike I.D.:  
MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
Spike Volume Used in MS (mL):  
Spike Volume Used in MSD (mL):  
MS Aliquot (L, g, F):  
MS Target Conc. (pCi/L, g, F):  
MSD Aliquot (L, g, F):  
MSD Target Conc. (pCi/L, g, F):  
Spike uncertainty (calculated):  
Sample Result:  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
MS Numerical Performance Indicator:  
MSD Numerical Performance Indicator:  
MS Percent Recovery:  
MSD Percent Recovery:  
MS Status vs Numerical Indicator:  
MSD Status vs Numerical Indicator:  
MS Status vs Recovery:  
MSD Status vs Recovery:

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Spike I.D.:  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
Duplicate Numerical Performance Indicator:  
MS/MSD Duplicate RPD:  
MS/MSD Duplicate Status vs Numerical Indicator:  
MS/MSD Duplicate Status vs RPD:

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

Comments:



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Environmental Monitoring & Laboratory Analysis  
110 Technology Parkway, Peachtree Corners, GA 30092  
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**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AAC0770**

**March 28, 2017**

**Project: CCR Event**

**Project #: Plant Mitchell**

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

Approved:

A handwritten signature in black ink that reads "Betsy McDaniel" written over a horizontal line.

Project Manager

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All test results relate only to the samples analyzed.





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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 28, 2017

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
PZ-14	AAC0770-01	Ground Water	03/21/17 12:45	03/22/17 09:20
PZ-2S	AAC0770-02	Ground Water	03/21/17 13:07	03/22/17 09:20
PZ-23	AAC0770-03	Ground Water	03/21/17 16:30	03/22/17 09:20



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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 28, 2017

**Report No.: AAC0770**

**Project: CCR Event**

**Client ID: PZ-14**

**Lab Number ID: AAC0770-01**

**Date/Time Sampled: 3/21/2017 12:45:00PM**

**Date/Time Received: 3/22/2017 9:20:00AM**

**Matrix: Ground Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	276	25	10	mg/L	SM 2540 C		1	03/24/17 15:50	03/24/17 15:50	7030771	JPT
<b>Inorganic Anions</b>											
Chloride	4.9	0.25	0.01	mg/L	EPA 300.0		1	03/24/17 13:19	03/25/17 03:13	7030781	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	03/24/17 13:19	03/25/17 03:13	7030781	RLC
Sulfate	2.0	1.0	0.09	mg/L	EPA 300.0		1	03/24/17 13:19	03/25/17 03:13	7030781	RLC
<b>Metals, Total</b>											
Antimony	0.0004	0.0030	0.0003	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/24/17 23:40	7030669	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/23/17 08:20	03/24/17 23:40	7030669	CSW
Barium	0.0379	0.0100	0.0003	mg/L	EPA 6020B		1	03/23/17 08:20	03/24/17 23:40	7030669	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/23/17 08:20	03/24/17 23:40	7030669	CSW
Boron	0.0198	0.0400	0.0060	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/24/17 23:40	7030669	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/23/17 08:20	03/24/17 23:40	7030669	CSW
Calcium	95.0	25.0	0.522	mg/L	EPA 6020B		50	03/23/17 08:20	03/24/17 23:46	7030669	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/23/17 08:20	03/24/17 23:40	7030669	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/23/17 08:20	03/24/17 23:40	7030669	CSW
Lead	ND	0.0050	0.00005	mg/L	EPA 6020B		1	03/23/17 08:20	03/24/17 23:40	7030669	CSW
Molybdenum	0.0005	0.0100	0.0002	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/24/17 23:40	7030669	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/23/17 08:20	03/24/17 23:40	7030669	CSW
Thallium	0.00006	0.0010	0.00003	mg/L	EPA 6020B	B-01, J	1	03/23/17 08:20	03/24/17 23:40	7030669	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/23/17 08:20	03/24/17 23:40	7030669	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 13:41	7030754	MTC



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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 28, 2017

**Report No.: AAC0770**

**Project: CCR Event**

**Client ID: PZ-2S**

**Lab Number ID: AAC0770-02**

**Date/Time Sampled: 3/21/2017 1:07:00PM**

**Date/Time Received: 3/22/2017 9:20:00AM**

**Matrix: Ground Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	131	25	10	mg/L	SM 2540 C		1	03/24/17 15:50	03/24/17 15:50	7030771	JPT
<b>Inorganic Anions</b>											
Chloride	2.8	0.25	0.01	mg/L	EPA 300.0		1	03/24/17 13:19	03/25/17 03:33	7030781	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	03/24/17 13:19	03/25/17 03:33	7030781	RLC
Sulfate	1.2	1.0	0.09	mg/L	EPA 300.0		1	03/24/17 13:19	03/25/17 03:33	7030781	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:03	7030669	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:03	7030669	CSW
Barium	0.0085	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/25/17 00:03	7030669	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:03	7030669	CSW
Boron	0.0126	0.0400	0.0060	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/25/17 00:03	7030669	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:03	7030669	CSW
Calcium	45.9	25.0	0.522	mg/L	EPA 6020B		50	03/23/17 08:20	03/25/17 00:09	7030669	CSW
Chromium	0.0029	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/25/17 00:03	7030669	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:03	7030669	CSW
Lead	ND	0.0050	0.00005	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:03	7030669	CSW
Molybdenum	0.0003	0.0100	0.0002	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/25/17 00:03	7030669	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:03	7030669	CSW
Thallium	ND	0.0010	0.00003	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:03	7030669	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:03	7030669	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 13:43	7030754	MTC



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Attention: Mr. Joju Abraham

March 28, 2017

Report No.: AAC0770

Project: CCR Event

Client ID: PZ-23

Lab Number ID: AAC0770-03

Date/Time Sampled: 3/21/2017 4:30:00PM

Date/Time Received: 3/22/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	409	25	10	mg/L	SM 2540 C		1	03/24/17 15:50	03/24/17 15:50	7030771	JPT
<b>Inorganic Anions</b>											
Chloride	5.5	0.25	0.01	mg/L	EPA 300.0		1	03/24/17 13:19	03/25/17 03:54	7030781	RLC
Fluoride	0.05	0.30	0.004	mg/L	EPA 300.0	J	1	03/24/17 13:19	03/25/17 03:54	7030781	RLC
Sulfate	31	1.0	0.09	mg/L	EPA 300.0		1	03/24/17 13:19	03/25/17 03:54	7030781	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:14	7030669	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:14	7030669	CSW
Barium	0.0678	0.0100	0.0003	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:14	7030669	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:14	7030669	CSW
Boron	0.172	0.0400	0.0060	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:14	7030669	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:14	7030669	CSW
Calcium	138	25.0	0.522	mg/L	EPA 6020B		50	03/23/17 08:20	03/25/17 00:20	7030669	CSW
Chromium	0.0009	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/25/17 00:14	7030669	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:14	7030669	CSW
Lead	ND	0.0050	0.00005	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:14	7030669	CSW
Molybdenum	0.0006	0.0100	0.0002	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/25/17 00:14	7030669	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:14	7030669	CSW
Thallium	0.0003	0.0010	0.00003	mg/L	EPA 6020B	B-01, J	1	03/23/17 08:20	03/25/17 00:14	7030669	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:14	7030669	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 13:45	7030754	MTC



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March 28, 2017

**Report No.: AAC0770**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030771 - SM 2540 C</b>											
<b>Blank (7030771-BLK1)</b>						Prepared & Analyzed: 03/24/17					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (7030771-BS1)</b>						Prepared & Analyzed: 03/24/17					
Total Dissolved Solids	399	25	10	mg/L	400.00		100	84-108			
<b>Duplicate (7030771-DUP1)</b>						Source: AAC0780-02 Prepared & Analyzed: 03/24/17					
Total Dissolved Solids	254	25	10	mg/L		260			2	10	
<b>Duplicate (7030771-DUP2)</b>						Source: AAC0796-03 Prepared & Analyzed: 03/24/17					
Total Dissolved Solids	260	25	10	mg/L		288			10	10	



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March 28, 2017

**Report No.: AAC0770**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030781 - EPA 300.0</b>											
<b>Blank (7030781-BLK1)</b>						Prepared & Analyzed: 03/24/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
<b>LCS (7030781-BS1)</b>						Prepared & Analyzed: 03/24/17					
Chloride	9.87	0.25	0.01	mg/L	10.010		99	90-110			
Fluoride	10.3	0.30	0.004	mg/L	10.020		103	90-110			
Sulfate	10.0	1.0	0.09	mg/L	10.020		100	90-110			
<b>Matrix Spike (7030781-MS1)</b>						Source: AAC0741-01 Prepared & Analyzed: 03/24/17					
Chloride	12.1	0.25	0.01	mg/L	10.010	2.63	95	90-110			
Fluoride	10.3	0.30	0.004	mg/L	10.020	ND	102	90-110			
Sulfate	11.9	1.0	0.09	mg/L	10.020	2.31	95	90-110			
<b>Matrix Spike (7030781-MS2)</b>						Source: AAC0780-02 Prepared: 03/24/17 Analyzed: 03/25/17					
Chloride	14.4	0.25	0.01	mg/L	10.010	4.33	101	90-110			
Fluoride	10.7	0.30	0.004	mg/L	10.020	0.02	107	90-110			
Sulfate	15.4	1.0	0.09	mg/L	10.020	5.69	97	90-110			
<b>Matrix Spike Dup (7030781-MSD1)</b>						Source: AAC0741-01 Prepared & Analyzed: 03/24/17					
Chloride	12.1	0.25	0.01	mg/L	10.010	2.63	95	90-110	0.02	15	
Fluoride	10.3	0.30	0.004	mg/L	10.020	ND	103	90-110	0.3	15	
Sulfate	11.9	1.0	0.09	mg/L	10.020	2.31	96	90-110	0.2	15	



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March 28, 2017

**Report No.: AAC0770**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030669 - EPA 3005A</b>											
<b>Blank (7030669-BLK1)</b>						Prepared & Analyzed: 03/23/17					
Antimony	ND	0.0030	0.0003	mg/L							
Arsenic	ND	0.0050	0.0004	mg/L							
Barium	ND	0.0100	0.0003	mg/L							
Beryllium	ND	0.0030	0.00007	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.000060	mg/L							
Calcium	ND	0.500	0.0104	mg/L							
Chromium	ND	0.0100	0.0003	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0002	mg/L							
Lead	ND	0.0050	0.00005	mg/L							
Molybdenum	ND	0.0100	0.0002	mg/L							
Nickel	ND	0.0100	0.0003	mg/L							
Selenium	ND	0.0100	0.0014	mg/L							
Silver	ND	0.0100	0.0003	mg/L							
Thallium	0.00004	0.0010	0.00003	mg/L							J
Vanadium	ND	0.0100	0.0014	mg/L							
Zinc	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0011	mg/L							
<b>LCS (7030669-BS1)</b>						Prepared & Analyzed: 03/23/17					
Antimony	0.114	0.0030	0.0003	mg/L	0.10000		114	80-120			
Arsenic	0.104	0.0050	0.0004	mg/L	0.10000		104	80-120			
Barium	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Beryllium	0.107	0.0030	0.00007	mg/L	0.10000		107	80-120			
Boron	1.15	0.0400	0.0060	mg/L	1.0000		115	80-120			
Cadmium	0.0998	0.0010	0.000060	mg/L	0.10000		100	80-120			
Calcium	1.03	0.500	0.0104	mg/L	1.0000		103	80-120			
Chromium	0.110	0.0100	0.0003	mg/L	0.10000		110	80-120			
Cobalt	0.106	0.0100	0.0005	mg/L	0.10000		106	80-120			
Copper	0.110	0.0250	0.0002	mg/L	0.10000		110	80-120			
Lead	0.102	0.0050	0.00005	mg/L	0.10000		102	80-120			
Molybdenum	0.106	0.0100	0.0002	mg/L	0.10000		106	80-120			
Nickel	0.112	0.0100	0.0003	mg/L	0.10000		112	80-120			
Selenium	0.111	0.0100	0.0014	mg/L	0.10000		111	80-120			
Silver	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Thallium	0.104	0.0010	0.00003	mg/L	0.10000		104	80-120			
Vanadium	0.113	0.0100	0.0014	mg/L	0.10000		113	80-120			
Zinc	0.108	0.0100	0.0013	mg/L	0.10000		108	80-120			
Lithium	0.112	0.0500	0.0011	mg/L	0.10000		112	80-120			



**PACE ANALYTICAL SERVICES, LLC.**

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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 28, 2017

**Report No.: AAC0770**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030669 - EPA 3005A</b>											
<b>Matrix Spike (7030669-MS1)</b>			<b>Source: AAC0741-02</b>			<b>Prepared: 03/23/17 Analyzed: 03/24/17</b>					
Antimony	0.108	0.0030	0.0003	mg/L	0.10000	ND	108	75-125			
Arsenic	0.109	0.0050	0.0004	mg/L	0.10000	0.0012	108	75-125			
Barium	0.131	0.0100	0.0003	mg/L	0.10000	0.0330	98	75-125			
Beryllium	0.104	0.0030	0.00007	mg/L	0.10000	ND	104	75-125			
Boron	1.02	0.0400	0.0060	mg/L	1.0000	ND	102	75-125			
Cadmium	0.103	0.0010	0.000060	mg/L	0.10000	ND	103	75-125			
Calcium	32.8	25.0	0.522	mg/L	1.0000	32.0	77	75-125			
Chromium	0.115	0.0100	0.0003	mg/L	0.10000	0.0004	114	75-125			
Cobalt	0.111	0.0100	0.0005	mg/L	0.10000	ND	111	75-125			
Copper	0.109	0.0250	0.0002	mg/L	0.10000	0.0012	108	75-125			
Lead	0.0989	0.0050	0.00005	mg/L	0.10000	0.00007	99	75-125			
Molybdenum	0.104	0.0100	0.0002	mg/L	0.10000	0.0019	102	75-125			
Nickel	0.111	0.0100	0.0003	mg/L	0.10000	ND	111	75-125			
Selenium	0.111	0.0100	0.0014	mg/L	0.10000	ND	111	75-125			
Silver	0.102	0.0100	0.0003	mg/L	0.10000	ND	102	75-125			
Thallium	0.102	0.0010	0.00003	mg/L	0.10000	0.0001	101	75-125			
Vanadium	0.115	0.0100	0.0014	mg/L	0.10000	ND	115	75-125			
Zinc	0.116	0.0100	0.0013	mg/L	0.10000	0.0075	108	75-125			
Lithium	0.108	0.0500	0.0011	mg/L	0.10000	ND	108	75-125			
<b>Matrix Spike Dup (7030669-MSD1)</b>			<b>Source: AAC0741-02</b>			<b>Prepared: 03/23/17 Analyzed: 03/24/17</b>					
Antimony	0.111	0.0030	0.0003	mg/L	0.10000	ND	111	75-125	2	20	
Arsenic	0.115	0.0050	0.0004	mg/L	0.10000	0.0012	114	75-125	5	20	
Barium	0.134	0.0100	0.0003	mg/L	0.10000	0.0330	101	75-125	2	20	
Beryllium	0.104	0.0030	0.00007	mg/L	0.10000	ND	104	75-125	0.7	20	
Boron	1.07	0.0400	0.0060	mg/L	1.0000	ND	107	75-125	5	20	
Cadmium	0.109	0.0010	0.000060	mg/L	0.10000	ND	109	75-125	5	20	
Calcium	32.9	25.0	0.522	mg/L	1.0000	32.0	83	75-125	0.2	20	
Chromium	0.117	0.0100	0.0003	mg/L	0.10000	0.0004	116	75-125	2	20	
Cobalt	0.117	0.0100	0.0005	mg/L	0.10000	ND	117	75-125	5	20	
Copper	0.112	0.0250	0.0002	mg/L	0.10000	0.0012	111	75-125	3	20	
Lead	0.0999	0.0050	0.00005	mg/L	0.10000	0.00007	100	75-125	1	20	
Molybdenum	0.108	0.0100	0.0002	mg/L	0.10000	0.0019	106	75-125	4	20	
Nickel	0.116	0.0100	0.0003	mg/L	0.10000	ND	116	75-125	5	20	
Selenium	0.117	0.0100	0.0014	mg/L	0.10000	ND	117	75-125	5	20	
Silver	0.108	0.0100	0.0003	mg/L	0.10000	ND	108	75-125	6	20	
Thallium	0.104	0.0010	0.00003	mg/L	0.10000	0.0001	103	75-125	2	20	
Vanadium	0.115	0.0100	0.0014	mg/L	0.10000	ND	115	75-125	0.3	20	
Zinc	0.115	0.0100	0.0013	mg/L	0.10000	0.0075	108	75-125	0.3	20	
Lithium	0.106	0.0500	0.0011	mg/L	0.10000	ND	106	75-125	2	20	





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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 28, 2017

**Report No.: AAC0770**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030669 - EPA 3005A</b>											
<b>Post Spike (7030669-PS1)</b>			<b>Source: AAC0741-02</b>			Prepared: 03/23/17 Analyzed: 03/24/17					
Antimony	104			ug/L	100.00	0.151	104	80-120			
Arsenic	110			ug/L	100.00	1.18	109	80-120			
Barium	133			ug/L	100.00	33.0	100	80-120			
Beryllium	106			ug/L	100.00	0.0034	106	80-120			
Boron	1080			ug/L	1000.0	5.52	108	80-120			
Cadmium	104			ug/L	100.00	0.0167	104	80-120			
Calcium	32900			ug/L	1000.0	32000	84	80-120			
Chromium	113			ug/L	100.00	0.445	113	80-120			
Cobalt	111			ug/L	100.00	0.175	111	80-120			
Copper	110			ug/L	100.00	1.23	109	80-120			
Lead	97.7			ug/L	100.00	0.0685	98	80-120			
Molybdenum	105			ug/L	100.00	1.90	103	80-120			
Nickel	112			ug/L	100.00	0.246	112	80-120			
Selenium	116			ug/L	100.00	0.0886	115	80-120			
Silver	105			ug/L	100.00	0.0117	105	80-120			
Thallium	99.5			ug/L	100.00	0.129	99	80-120			
Vanadium	116			ug/L	100.00	0.724	115	80-120			
Zinc	116			ug/L	100.00	7.48	108	80-120			
Lithium	109			ug/L	100.00	0.514	109	80-120			

**Batch 7030754 - EPA 7470A**

<b>Blank (7030754-BLK1)</b>					Prepared & Analyzed: 03/24/17						
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (7030754-BS1)</b>					Prepared & Analyzed: 03/24/17						
Mercury	0.00238	0.00050	0.000041	mg/L	2.5000E-3	95	80-120				



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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 28, 2017

**Report No.: AAC0770**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030754 - EPA 7470A</b>											
<b>Matrix Spike (7030754-MS1)</b>			<b>Source: AAC0770-01</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	0.00232	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125			
<b>Matrix Spike Dup (7030754-MSD1)</b>			<b>Source: AAC0770-01</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125	3	20	
<b>Post Spike (7030754-PS1)</b>			<b>Source: AAC0770-01</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	1.64			ug/L	1.6667	0.00818	98	80-120			



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2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 28, 2017

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## Legend

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### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

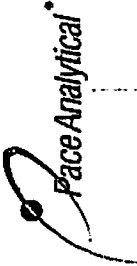
Maleic acid and maleic anhydride are reported as dimethyl malate

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

### Definition of Qualifiers

- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).
- B-01** Analyte was detected in the associated method blank at an estimated level equal to or greater than the MDL. Sample values reported as greater than the MDL and less than 10x the method blank value are reported as estimated values.

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



Pace Analytical Services, Inc.  
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092  
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PAGE: 1 OF 1

**CHAIN OF CUSTODY RECORD**

CLIENT NAME:		ANALYSIS REQUESTED		CONTAINER TYPE		PRESERVATION							
Georgia Power		P P P P P P P P P P		P - PLASTIC		1 - HCl, 56°C							
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:		P P P P P P P P P P		A - AMBER GLASS		2 - H <sub>2</sub> SO <sub>4</sub> , 56°C							
241 Ralph McGill Blvd SE		P P P P P P P P P P		G - CLEAR GLASS		3 - HNO <sub>3</sub>							
Atlanta, GA 30308		P P P P P P P P P P		V - VOA VIAL		4 - NaOH, 56°C							
404-506-7239		P P P P P P P P P P		S - STERILE		5 - NaOH/ZnAc, 56°C							
REPORT TO: Joju Abraham		P P P P P P P P P P		O - OTHER		6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C							
CC: Maria Padilla		P P P P P P P P P P				7 - 56°C not frozen							
HEALTH McCorkle		P P P P P P P P P P											
REQUESTED COMPLETION DATE: 3/21/17		P P P P P P P P P P											
STANDARD TAT		P P P P P P P P P P											
PO #: GPC10684198		P P P P P P P P P P											
PROJECT NAME/STATE: PLANT MITCHELL / GA		P P P P P P P P P P											
PROJECT #: Phase II CR		P P P P P P P P P P											
Collection DATE	Collection TIME	MATRIX CODE*	C O M P	G R A B	SAMPLE IDENTIFICATION	CONTAINER TYPE PRESERVATION	# of CONTAINERS	EPA 6020/7470 Metals App. III & IV	IC (Cl, F, SO <sub>4</sub> ) EPA 300.0	TDS SM 2540C	Radium 226 & 228 SW-846 8315/9320	DATE/TIME	DATE/TIME
3-21-17	12:45	GW	✓		PZ-14	P	4	1	1	1	2	3/21/17	12:59
3-21-17	13:07	GW	✓		PZ-23	P	4	1	1	1	2	3/21/17	13:59
3-21-17	16:30	GW	✓		PZ-23	P	4	1	1	1	2	3/21/17	17:59
<p>RELINQUISHED BY: James T. Parker / 3/21/17</p> <p>RELINQUISHED BY: [Signature]</p> <p>RELINQUISHED BY: [Signature]</p> <p>RELINQUISHED BY: [Signature]</p>													
SAMPLED BY AND TITLE: James T. Parker / Mgr.		DATE/TIME: 3-21-17 / 12:45		DATE/TIME: 3-21-17 / 17:59		LAB #:		AAC 0770		FOR LAB USE ONLY		Tracking #: 8102 9472 5027	
RECEIVED BY: [Signature]		DATE/TIME: 03/22/17 09:20		DATE/TIME: 03/22/17 09:20		RECEIVED BY LAB: [Signature]		USPS		COURIER		FS	
Checked: [Signature]		Temp: 12 Min: 12		Temp: 12 Min: 12		Custody Seal: [Signature]		Broken		# of Coolers		Cooler ID:	



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**LOG-IN CHECKLIST**

**Printed: 3/23/2017 8:31:44AM**

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 03/22/17 09:20

**Work Order:** AAC0770

**Logged In By:** Mohammad M. Rahman

**OBSERVATIONS**

**#Samples:** 3

**#Containers:** 12

**Minimum Temp(C):** 1.0

**Maximum Temp(C):** 1.0

**Custody Seal(s) Used:** Yes

**CHECKLIST ITEMS**

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

**Comments:**

April 11, 2017

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: AAC0770 Plant Mitchell  
Pace Project No.: 30213980

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on March 23, 2017. 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,



Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
(724)850-5612  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: AAC0770 Plant Mitchell  
Pace Project No.: 30213980

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH-0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana DHH/TNI Certification #: LA140008  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: PA00091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification  
Missouri Certification #: 235

Montana Certification #: Cert 0082  
Nebraska Certification #: NE-05-29-14  
Nevada Certification #: PA014572015-1  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188-14-8  
Utah/TNI Certification #: PA014572015-5  
USDA Soil Permit #: P330-14-00213  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 460198  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Certification  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: AAC0770 Plant Mitchell

Pace Project No.: 30213980

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30213980001	PZ-14	Water	03/21/17 12:45	03/23/17 09:40
30213980002	PZ-2S	Water	03/21/17 13:07	03/23/17 09:40
30213980003	PZ-23	Water	03/21/17 16:30	03/23/17 09:40

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**SAMPLE ANALYTE COUNT**

Project: AAC0770 Plant Mitchell  
Pace Project No.: 30213980

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30213980001	PZ-14	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30213980002	PZ-2S	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30213980003	PZ-23	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1

**REPORT OF LABORATORY ANALYSIS**

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC0770 Plant Mitchell

Pace Project No.: 30213980

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	<b>0.195 ± 0.142 (0.216)</b> C:76% T:NA	pCi/L	04/03/17 21:59	13982-63-3	
Radium-228		EPA 9320	<b>0.135 ± 0.315 (0.702)</b> C:74% T:94%	pCi/L	04/06/17 12:43	15262-20-1	
Total Radium		Total Radium Calculation	<b>0.330 ± 0.457 (0.918)</b>	pCi/L	04/11/17 10:22	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	<b>0.188 ± 0.148 (0.248)</b> C:72% T:NA	pCi/L	04/03/17 21:59	13982-63-3	
Radium-228		EPA 9320	<b>0.234 ± 0.378 (0.821)</b> C:79% T:88%	pCi/L	04/06/17 12:30	15262-20-1	
Total Radium		Total Radium Calculation	<b>0.422 ± 0.526 (1.07)</b>	pCi/L	04/11/17 10:22	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	<b>0.380 ± 0.204 (0.301)</b> C:77% T:NA	pCi/L	04/03/17 21:59	13982-63-3	
Radium-228		EPA 9320	<b>0.452 ± 0.332 (0.652)</b> C:78% T:99%	pCi/L	04/06/17 12:26	15262-20-1	
Total Radium		Total Radium Calculation	<b>0.832 ± 0.536 (0.953)</b>	pCi/L	04/11/17 10:22	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC0770 Plant Mitchell

Pace Project No.: 30213980

QC Batch: 253453 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Associated Lab Samples: 30213980001, 30213980002, 30213980003

METHOD BLANK: 1247540 Matrix: Water

Associated Lab Samples: 30213980001, 30213980002, 30213980003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0167 ± 0.0727 (0.192) C:92% T:NA	pCi/L	04/03/17 21:59	

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: AAC0770 Plant Mitchell

Pace Project No.: 30213980

QC Batch: 253473

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30213980001, 30213980002, 30213980003

METHOD BLANK: 1247572

Matrix: Water

Associated Lab Samples: 30213980001, 30213980002, 30213980003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0392 ± 0.312 (0.719) C:77% T:82%	pCi/L	04/06/17 12:28	

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: AAC0770 Plant Mitchell

Pace Project No.: 30213980

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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WO#: 30213980



Chain of Custody



Workorder: AAC0770

Workorder Name: Plant Mitchell

Owner Received Date:

Results Requested By: 4/14/2017

Report To:  
Betsy McDaniel  
Pace Analytical Atlanta  
110 Technology Parkway  
Peachtree Corners, GA 30092  
Phone (770)-734-4200

Subcontract To:  
Pace - Pittsburgh  
1638 Roseytown Road  
Stes. 2,3,4  
Greensburg, PA 15601  
Phone (724) 850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers			Date/Time	Comments
						BO	NH	3		
1	PZ-14	G	3/21/2017 12:45	AAC0767-01	GW	2				
2	PZ-25	G	3/21/2017 13:07	AAC0767-02	GW	2				
3	PZ-23	G	3/21/2017 16:30	AAC0767-03	GW	2				
4				AAC0770						
5				BRD						
6				3/21/2017						
7										
8										
9										
10										
Transfers Released By										
1										
2										
3										

Radium 226, 228, Total

LAB USE ONLY

001  
002  
003

3-23-17 0940

Received By: *Betsy McDaniel*

Cooler Temperature on Receipt N/A °C Custody Seal Y or N N Received on Ice Y or N N Sample Intact Y or N N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC  
This chain of custody is considered complete as is since this information is available in the owner laboratory.

30213980

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

Pace Analytical  
CHAIN OF CUSTODY RECORD

PAGE: 1 OF 1

CONTAINER TYPE	ANALYSIS REQUESTED	CONTAINER TYPE	PRESCRIPTION	PRESCRIPTION
# of	P	P	P	P
CONTAINERS	3	7	7	3
CLINT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239	CC: Maria Padilla Heath McCorkle PO #: GPC10684198	CONTAINER TYPE: PRESERVATION:	1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub> , 56°C 7 - 56°C not frozen	1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub> , 56°C 7 - 56°C not frozen
REPORT TO: Jotji Abraham	PROJECT #: Phase II COR	CONTAINER TYPE: PRESERVATION:	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	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
REQUESTED COMPLETION DATE: STANDARD TAT	PROJECT NAME/STATE: PLANT MICHELL / GA	CONTAINER TYPE: PRESERVATION:	REMARKS/ADDITIONAL INFORMATION	REMARKS/ADDITIONAL INFORMATION
Collection DATE	Collection TIME	MATRIX CODE*	GRA B	DATE/TIME
3-21-17	12:45	GW	✓	12:45
3-21-17	13:07	GW	✓	13:07
3-21-17	16:30	GW	✓	16:30
<i>[Signature]</i> 3-21-17				
SAMPLED BY AND TITLE: RECEIVED BY:	DATE/TIME: DATE/TIME:	RELINQUISHED BY: RELINQUISHED BY:	DATE/TIME: DATE/TIME:	DATE/TIME: DATE/TIME:
James J. Parker / JPR	3-21-17 / 12:45	James J. Parker / JPR	3-21-17 / 17:59	3-21-17 / 17:59
RECEIVED BY LAB: pH checked:	DATE/TIME: Temperature:	SAMPLE SHIPPED VIA: Custody Seal:	COURIER # of Cookery	CLIENT Cooler ID:
NA (Yes) NA (No)	10:10 12:12	UPS #123	USPS # of Cookery	OTHER Cooler ID:
LAB #: Entered into LIMS: Tracking #:	FOR LAB USE ONLY AAC 0770 8102 9472 5027			

Pace COC Revised.xlsx

Sample Condition Upon Receipt Pittsburgh

ANL



Client Name: Pace, GA

Project # 30213980

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 6812 5103 1874

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

Thermometer Used: N/A Type of Ice: Wet Blue  None

Cooler Temperature Observed Temp \_\_\_\_\_ °C Correction Factor: \_\_\_\_\_ °C Final Temp: \_\_\_\_\_ °C  
Temp should be above freezing to 6°C

Date and Initials of person examining contents: 097R 3-23-17

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC:	X			5.
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used:	X			
Containers Intact:	X			11.
Orthophosphate field filtered			X	12.
Organic Samples checked for dechlorination:			X	13.
Filtered volume received for Dissolved tests			X	14.
All containers have been checked for preservation.	X			15.
All containers needing preservation are found to be in compliance with EPA recommendation.	X			
exceptions: VOA, coliform, TOC, O&G, Phenolics				
				Initial when completed: <u>097R</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			X	16.
Trip Blank Present:		X		17.
Trip Blank Custody Seals Present		X		
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: <u>097R</u> Date: <u>3-23-17</u>

PH12

Client Notification/ Resolution:  
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

A check in this box indicates that additional information has been stored in ereports.

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)  
 \*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.



# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228  
Analyst: JLW  
Date: 4/4/2017  
Worklist: 34835  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1247572
MB Concentration:	0.039
M/B Counting Uncertainty:	0.312
MB MDC:	0.719
MB Numerical Performance Indicator:	0.25
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	4/6/2017
Spike I.D.:	17-005
Spike Concentration (pCi/mL):	24.852
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.800
Target Conc. (pCi/L, g, F):	6.211
Uncertainty (Calculated):	0.447
Result (pCi/L, g, F):	6.553
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.838
Numerical Performance Indicator:	0.71
Percent Recovery:	105.52%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30213981001
Duplicate Sample I.D.:	30213981001DUP
Sample Result (pCi/L, g, F):	0.483
Sample Duplicate Result (pCi/L, g, F):	0.346
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.187
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.277
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	1.308
Duplicate RPD:	88.28%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail**

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

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision. *Muller*

*Results = 5x MDC numerical indicator < 2 acceptable for all matrices*

*Muller*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: LAL  
Date: 3/31/2017  
Worklist: 34821  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1247540
MB Concentration:	0.017
MB Counting Uncertainty:	0.073
MB MDC:	0.192
MB Numerical Performance Indicator:	0.45
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	4/3/2017
Spike I.D.:	17-003
Spike Concentration (pCi/mL):	38.230
Volume Used (mL):	0.25
Aliquot Volume (L, g, F):	0.501
Target Conc. (pCi/L, g, F):	19.060
Uncertainty (Calculated):	0.897
Result (pCi/L, g, F):	14.690
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.075
Numerical Performance Indicator:	-6.12
Percent Recovery:	77.07%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30213978004
Duplicate Sample I.D.:	30213978004DUP
Sample Result Counting Uncertainty (pCi/L, g, F):	0.032
Sample Duplicate Result (pCi/L, g, F):	0.082
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.106
Are sample and/or duplicate results below MDC?	0.108
Duplicate Numerical Performance Indicator:	See Below ##
Duplicate RPD:	-1.064
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail

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

Comments:

results < 5x MDC numerical indicators < 2 acceptable for all matrices

\*\*\*Batch must be re-prepped due to unacceptable precision. On 4/11/17

*Analyst*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	



**PACE ANALYTICAL SERVICES, LLC.**

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

**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AAC0780**

**March 29, 2017**

**Project: CCR Event**

**Project #: Plant Mitchell**

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

Approved:

A handwritten signature in black ink that reads "Betsy McDaniel" written over a horizontal line.

Project Manager

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All test results relate only to the samples analyzed.



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 29, 2017

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
PZ-1D	AAC0780-01	Ground Water	03/21/17 12:42	03/22/17 09:20
PZ-31	AAC0780-02	Ground Water	03/21/17 15:34	03/22/17 09:20



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 29, 2017

**Report No.:** AAC0780

**Project:** CCR Event

**Client ID:** PZ-1D

**Lab Number ID:** AAC0780-01

**Date/Time Sampled:** 3/21/2017 12:42:00PM

**Date/Time Received:** 3/22/2017 9:20:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	128	25	10	mg/L	SM 2540 C		1	03/24/17 15:50	03/24/17 15:50	7030771	JPT
<b>Inorganic Anions</b>											
Chloride	2.9	0.25	0.01	mg/L	EPA 300.0		1	03/24/17 13:19	03/25/17 04:15	7030781	RLC
Fluoride	0.004	0.30	0.004	mg/L	EPA 300.0	J	1	03/24/17 13:19	03/25/17 04:15	7030781	RLC
Sulfate	2.5	1.0	0.09	mg/L	EPA 300.0		1	03/24/17 13:19	03/25/17 04:15	7030781	RLC
<b>Metals, Total</b>											
Antimony	0.0028	0.0030	0.0003	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/25/17 00:26	7030669	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:26	7030669	CSW
Barium	0.0305	0.0100	0.0003	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:26	7030669	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/23/17 08:20	03/28/17 14:32	7030669	CSW
Boron	0.0082	0.0400	0.0060	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/28/17 14:32	7030669	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:26	7030669	CSW
Calcium	44.1	25.0	0.522	mg/L	EPA 6020B		50	03/23/17 08:20	03/25/17 00:32	7030669	CSW
Chromium	0.0047	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/25/17 00:26	7030669	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:26	7030669	CSW
Lead	ND	0.0050	0.00005	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:26	7030669	CSW
Molybdenum	0.0018	0.0100	0.0002	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/25/17 00:26	7030669	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:26	7030669	CSW
Thallium	ND	0.0010	0.00003	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:26	7030669	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/23/17 08:20	03/28/17 14:32	7030669	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 13:48	7030754	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 29, 2017

**Report No.: AAC0780**

**Project: CCR Event**

**Client ID: PZ-31**

**Lab Number ID: AAC0780-02**

**Date/Time Sampled: 3/21/2017 3:34:00PM**

**Date/Time Received: 3/22/2017 9:20:00AM**

**Matrix: Ground Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	260	25	10	mg/L	SM 2540 C		1	03/24/17 15:50	03/24/17 15:50	7030771	JPT
<b>Inorganic Anions</b>											
Chloride	4.3	0.25	0.01	mg/L	EPA 300.0		1	03/24/17 13:19	03/25/17 04:35	7030781	RLC
Fluoride	0.02	0.30	0.004	mg/L	EPA 300.0	J	1	03/24/17 13:19	03/25/17 04:35	7030781	RLC
Sulfate	5.7	1.0	0.09	mg/L	EPA 300.0		1	03/24/17 13:19	03/25/17 04:35	7030781	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:37	7030669	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:37	7030669	CSW
Barium	0.0226	0.0100	0.0003	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:37	7030669	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:37	7030669	CSW
Boron	0.0103	0.0400	0.0060	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/25/17 00:37	7030669	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:37	7030669	CSW
Calcium	94.0	25.0	0.522	mg/L	EPA 6020B		50	03/23/17 08:20	03/25/17 00:43	7030669	CSW
Chromium	0.0006	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/25/17 00:37	7030669	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:37	7030669	CSW
Lead	ND	0.0050	0.00005	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:37	7030669	CSW
Molybdenum	0.0005	0.0100	0.0002	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/25/17 00:37	7030669	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:37	7030669	CSW
Thallium	0.00006	0.0010	0.00003	mg/L	EPA 6020B	B-01, J	1	03/23/17 08:20	03/25/17 00:37	7030669	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:37	7030669	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 13:55	7030754	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 29, 2017

**Report No.: AAC0780**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030771 - SM 2540 C</b>											
<b>Blank (7030771-BLK1)</b>						Prepared & Analyzed: 03/24/17					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (7030771-BS1)</b>						Prepared & Analyzed: 03/24/17					
Total Dissolved Solids	399	25	10	mg/L	400.00		100	84-108			
<b>Duplicate (7030771-DUP1)</b>						Source: AAC0780-02 Prepared & Analyzed: 03/24/17					
Total Dissolved Solids	254	25	10	mg/L		260			2	10	
<b>Duplicate (7030771-DUP2)</b>						Source: AAC0796-03 Prepared & Analyzed: 03/24/17					
Total Dissolved Solids	260	25	10	mg/L		288			10	10	



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Attention: Mr. Joju Abraham

March 29, 2017

**Report No.: AAC0780**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030781 - EPA 300.0</b>											
<b>Blank (7030781-BLK1)</b>						Prepared & Analyzed: 03/24/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
<b>LCS (7030781-BS1)</b>						Prepared & Analyzed: 03/24/17					
Chloride	9.87	0.25	0.01	mg/L	10.010		99	90-110			
Fluoride	10.3	0.30	0.004	mg/L	10.020		103	90-110			
Sulfate	10.0	1.0	0.09	mg/L	10.020		100	90-110			
<b>Matrix Spike (7030781-MS1)</b>						Source: AAC0741-01 Prepared & Analyzed: 03/24/17					
Chloride	12.1	0.25	0.01	mg/L	10.010	2.63	95	90-110			
Fluoride	10.3	0.30	0.004	mg/L	10.020	ND	102	90-110			
Sulfate	11.9	1.0	0.09	mg/L	10.020	2.31	95	90-110			
<b>Matrix Spike (7030781-MS2)</b>						Source: AAC0780-02 Prepared: 03/24/17 Analyzed: 03/25/17					
Chloride	14.4	0.25	0.01	mg/L	10.010	4.33	101	90-110			
Fluoride	10.7	0.30	0.004	mg/L	10.020	0.02	107	90-110			
Sulfate	15.4	1.0	0.09	mg/L	10.020	5.69	97	90-110			
<b>Matrix Spike Dup (7030781-MSD1)</b>						Source: AAC0741-01 Prepared & Analyzed: 03/24/17					
Chloride	12.1	0.25	0.01	mg/L	10.010	2.63	95	90-110	0.02	15	
Fluoride	10.3	0.30	0.004	mg/L	10.020	ND	103	90-110	0.3	15	
Sulfate	11.9	1.0	0.09	mg/L	10.020	2.31	96	90-110	0.2	15	





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Attention: Mr. Joju Abraham

March 29, 2017

**Report No.: AAC0780**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030669 - EPA 3005A</b>											
<b>Blank (7030669-BLK1)</b>						Prepared & Analyzed: 03/23/17					
Antimony	ND	0.0030	0.0003	mg/L							
Arsenic	ND	0.0050	0.0004	mg/L							
Barium	ND	0.0100	0.0003	mg/L							
Beryllium	ND	0.0030	0.00007	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.000060	mg/L							
Calcium	ND	0.500	0.0104	mg/L							
Chromium	ND	0.0100	0.0003	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0002	mg/L							
Lead	ND	0.0050	0.00005	mg/L							
Molybdenum	ND	0.0100	0.0002	mg/L							
Nickel	ND	0.0100	0.0003	mg/L							
Selenium	ND	0.0100	0.0014	mg/L							
Silver	ND	0.0100	0.0003	mg/L							
Thallium	0.00004	0.0010	0.00003	mg/L							J
Vanadium	ND	0.0100	0.0014	mg/L							
Zinc	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0011	mg/L							

<b>LCS (7030669-BS1)</b>						Prepared & Analyzed: 03/23/17					
Antimony	0.114	0.0030	0.0003	mg/L	0.10000		114	80-120			
Arsenic	0.104	0.0050	0.0004	mg/L	0.10000		104	80-120			
Barium	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Beryllium	0.107	0.0030	0.00007	mg/L	0.10000		107	80-120			
Boron	1.15	0.0400	0.0060	mg/L	1.0000		115	80-120			
Cadmium	0.0998	0.0010	0.000060	mg/L	0.10000		100	80-120			
Calcium	1.03	0.500	0.0104	mg/L	1.0000		103	80-120			
Chromium	0.110	0.0100	0.0003	mg/L	0.10000		110	80-120			
Cobalt	0.106	0.0100	0.0005	mg/L	0.10000		106	80-120			
Copper	0.110	0.0250	0.0002	mg/L	0.10000		110	80-120			
Lead	0.102	0.0050	0.00005	mg/L	0.10000		102	80-120			
Molybdenum	0.106	0.0100	0.0002	mg/L	0.10000		106	80-120			
Nickel	0.112	0.0100	0.0003	mg/L	0.10000		112	80-120			
Selenium	0.111	0.0100	0.0014	mg/L	0.10000		111	80-120			
Silver	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Thallium	0.104	0.0010	0.00003	mg/L	0.10000		104	80-120			
Vanadium	0.113	0.0100	0.0014	mg/L	0.10000		113	80-120			
Zinc	0.108	0.0100	0.0013	mg/L	0.10000		108	80-120			
Lithium	0.112	0.0500	0.0011	mg/L	0.10000		112	80-120			



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 2480 Maner Road  
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Attention: Mr. Joju Abraham

March 29, 2017

**Report No.: AAC0780**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030669 - EPA 3005A</b>											
<b>Matrix Spike (7030669-MS1)</b>			<b>Source: AAC0741-02</b>			<b>Prepared: 03/23/17 Analyzed: 03/24/17</b>					
Antimony	0.108	0.0030	0.0003	mg/L	0.10000	ND	108	75-125			
Arsenic	0.109	0.0050	0.0004	mg/L	0.10000	0.0012	108	75-125			
Barium	0.131	0.0100	0.0003	mg/L	0.10000	0.0330	98	75-125			
Beryllium	0.104	0.0030	0.00007	mg/L	0.10000	ND	104	75-125			
Boron	1.02	0.0400	0.0060	mg/L	1.0000	ND	102	75-125			
Cadmium	0.103	0.0010	0.000060	mg/L	0.10000	ND	103	75-125			
Calcium	32.8	25.0	0.522	mg/L	1.0000	32.0	77	75-125			
Chromium	0.115	0.0100	0.0003	mg/L	0.10000	0.0004	114	75-125			
Cobalt	0.111	0.0100	0.0005	mg/L	0.10000	ND	111	75-125			
Copper	0.109	0.0250	0.0002	mg/L	0.10000	0.0012	108	75-125			
Lead	0.0989	0.0050	0.00005	mg/L	0.10000	0.00007	99	75-125			
Molybdenum	0.104	0.0100	0.0002	mg/L	0.10000	0.0019	102	75-125			
Nickel	0.111	0.0100	0.0003	mg/L	0.10000	ND	111	75-125			
Selenium	0.111	0.0100	0.0014	mg/L	0.10000	ND	111	75-125			
Silver	0.102	0.0100	0.0003	mg/L	0.10000	ND	102	75-125			
Thallium	0.102	0.0010	0.00003	mg/L	0.10000	0.0001	101	75-125			
Vanadium	0.115	0.0100	0.0014	mg/L	0.10000	ND	115	75-125			
Zinc	0.116	0.0100	0.0013	mg/L	0.10000	0.0075	108	75-125			
Lithium	0.108	0.0500	0.0011	mg/L	0.10000	ND	108	75-125			
<b>Matrix Spike Dup (7030669-MSD1)</b>			<b>Source: AAC0741-02</b>			<b>Prepared: 03/23/17 Analyzed: 03/24/17</b>					
Antimony	0.111	0.0030	0.0003	mg/L	0.10000	ND	111	75-125	2	20	
Arsenic	0.115	0.0050	0.0004	mg/L	0.10000	0.0012	114	75-125	5	20	
Barium	0.134	0.0100	0.0003	mg/L	0.10000	0.0330	101	75-125	2	20	
Beryllium	0.104	0.0030	0.00007	mg/L	0.10000	ND	104	75-125	0.7	20	
Boron	1.07	0.0400	0.0060	mg/L	1.0000	ND	107	75-125	5	20	
Cadmium	0.109	0.0010	0.000060	mg/L	0.10000	ND	109	75-125	5	20	
Calcium	32.9	25.0	0.522	mg/L	1.0000	32.0	83	75-125	0.2	20	
Chromium	0.117	0.0100	0.0003	mg/L	0.10000	0.0004	116	75-125	2	20	
Cobalt	0.117	0.0100	0.0005	mg/L	0.10000	ND	117	75-125	5	20	
Copper	0.112	0.0250	0.0002	mg/L	0.10000	0.0012	111	75-125	3	20	
Lead	0.0999	0.0050	0.00005	mg/L	0.10000	0.00007	100	75-125	1	20	
Molybdenum	0.108	0.0100	0.0002	mg/L	0.10000	0.0019	106	75-125	4	20	
Nickel	0.116	0.0100	0.0003	mg/L	0.10000	ND	116	75-125	5	20	
Selenium	0.117	0.0100	0.0014	mg/L	0.10000	ND	117	75-125	5	20	
Silver	0.108	0.0100	0.0003	mg/L	0.10000	ND	108	75-125	6	20	
Thallium	0.104	0.0010	0.00003	mg/L	0.10000	0.0001	103	75-125	2	20	
Vanadium	0.115	0.0100	0.0014	mg/L	0.10000	ND	115	75-125	0.3	20	
Zinc	0.115	0.0100	0.0013	mg/L	0.10000	0.0075	108	75-125	0.3	20	
Lithium	0.106	0.0500	0.0011	mg/L	0.10000	ND	106	75-125	2	20	



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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 29, 2017

**Report No.: AAC0780**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030669 - EPA 3005A</b>											
<b>Post Spike (7030669-PS1)</b>			<b>Source: AAC0741-02</b>			Prepared: 03/23/17 Analyzed: 03/24/17					
Antimony	104			ug/L	100.00	0.151	104	80-120			
Arsenic	110			ug/L	100.00	1.18	109	80-120			
Barium	133			ug/L	100.00	33.0	100	80-120			
Beryllium	106			ug/L	100.00	0.0034	106	80-120			
Boron	1080			ug/L	1000.0	5.52	108	80-120			
Cadmium	104			ug/L	100.00	0.0167	104	80-120			
Calcium	32900			ug/L	1000.0	32000	84	80-120			
Chromium	113			ug/L	100.00	0.445	113	80-120			
Cobalt	111			ug/L	100.00	0.175	111	80-120			
Copper	110			ug/L	100.00	1.23	109	80-120			
Lead	97.7			ug/L	100.00	0.0685	98	80-120			
Molybdenum	105			ug/L	100.00	1.90	103	80-120			
Nickel	112			ug/L	100.00	0.246	112	80-120			
Selenium	116			ug/L	100.00	0.0886	115	80-120			
Silver	105			ug/L	100.00	0.0117	105	80-120			
Thallium	99.5			ug/L	100.00	0.129	99	80-120			
Vanadium	116			ug/L	100.00	0.724	115	80-120			
Zinc	116			ug/L	100.00	7.48	108	80-120			
Lithium	109			ug/L	100.00	0.514	109	80-120			

**Batch 7030754 - EPA 7470A**

<b>Blank (7030754-BLK1)</b>					Prepared & Analyzed: 03/24/17						
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (7030754-BS1)</b>					Prepared & Analyzed: 03/24/17						
Mercury	0.00238	0.00050	0.000041	mg/L	2.5000E-3		95	80-120			



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March 29, 2017

**Report No.: AAC0780**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030754 - EPA 7470A</b>											
<b>Matrix Spike (7030754-MS1)</b>			<b>Source: AAC0770-01</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	0.00232	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125			
<b>Matrix Spike Dup (7030754-MSD1)</b>			<b>Source: AAC0770-01</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125	3	20	
<b>Post Spike (7030754-PS1)</b>			<b>Source: AAC0770-01</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	1.64			ug/L	1.6667	0.00818	98	80-120			



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2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 29, 2017

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## Legend

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### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

### Definition of Qualifiers

- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).
- B-01** Analyte was detected in the associated method blank at an estimated level equal to or greater than the MDL. Sample values reported as greater than the MDL and less than 10x the method blank value are reported as estimated values.

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



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

PAGE: 1 OF 1

CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power		CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		REPORT TO: Joju Abraham Heath McCorkle	CC: Maria Padilla	PO #: GPC10684198	PROJECT NAME/STATE: PLANT MITCHELL/GA	PROJECT #: PHASE II COR	Collection DATE	Collection TIME	MATRIX CODE*	COMPOUND	SAMPLE IDENTIFICATION	CONTAINER TYPE	PRESEVATION	# of CONTAINERS	ANALYSIS REQUESTED	LAB #:	TRACKING #:
3-21-17	12:42	GW	✓	PZ-1D	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3-21-17	15:34	GW	✓	PZ-31	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1
<p>RECEIVED BY LAB: <i>James I. Park</i> DATE/TIME: 3-21-17 12:42</p> <p>RECEIVED BY: <i>James I. Park</i> DATE/TIME: 3-21-17 12:42</p> <p>RELINQUISHED BY: <i>James I. Park</i> DATE/TIME: 3-21-17 17:40</p> <p>RELINQUISHED BY: <i>James I. Park</i> DATE/TIME: 3-21-17 17:40</p> <p>REMARKS/ADDITIONAL INFORMATION: <i>1211 W/HNO3 for Lab RAD GC</i> <i>1211 W/HNO3 for 2nd set Lab RAD GC</i></p>																			
<p>FOR LAB USE ONLY</p> <p>LAB #: <i>AAC0780</i></p> <p>Entered into LIMS: <i>1/2</i></p> <p>Tracking #: <i>810294725016</i></p>																			



**PACE ANALYTICAL SERVICES, LLC.**

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**LOG-IN CHECKLIST**

**Printed: 3/23/2017 8:48:37AM**

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 03/22/17 09:20

**Work Order:** AAC0780

**Logged In By:** Mohammad M. Rahman

**OBSERVATIONS**

**#Samples:** 2

**#Containers:** 12

**Minimum Temp(C):** 1.0

**Maximum Temp(C):** 1.0

**Custody Seal(s) Used:** Yes

**CHECKLIST ITEMS**

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

**Comments:**

April 11, 2017

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: AAC0780 Plant Mitchell  
Pace Project No.: 30213981

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on March 23, 2017. 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,



Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
(724)850-5612  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## CERTIFICATIONS

Project: AAC0780 Plant Mitchell  
Pace Project No.: 30213981

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH-0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana DHH/TNI Certification #: LA140008  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: PA00091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification  
Missouri Certification #: 235

Montana Certification #: Cert 0082  
Nebraska Certification #: NE-05-29-14  
Nevada Certification #: PA014572015-1  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188-14-8  
Utah/TNI Certification #: PA014572015-5  
USDA Soil Permit #: P330-14-00213  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 460198  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Certification  
Wyoming Certification #: 8TMS-L

---

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: AAC0780 Plant Mitchell

Pace Project No.: 30213981

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30213981001	PZ-1D	Water	03/21/17 12:42	03/23/17 09:40
30213981002	PZ-31	Water	03/21/17 15:34	03/23/17 09:40

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: AAC0780 Plant Mitchell

Pace Project No.: 30213981

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30213981001	PZ-1D	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30213981002	PZ-31	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC0780 Plant Mitchell

Pace Project No.: 30213981

**Sample: PZ-1D**      **Lab ID: 30213981001**      Collected: 03/21/17 12:42      Received: 03/23/17 09:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.0432 ± 0.0890 (0.208)</b> C:87% T:NA	pCi/L	04/03/17 21:59	13982-63-3	
Radium-228	EPA 9320	<b>0.483 ± 0.357 (0.695)</b> C:74% T:88%	pCi/L	04/06/17 12:27	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.526 ± 0.446 (0.903)</b>	pCi/L	04/11/17 10:22	7440-14-4	

**Sample: PZ-31**      **Lab ID: 30213981002**      Collected: 03/21/17 15:34      Received: 03/23/17 09:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.202 ± 0.136 (0.201)</b> C:86% T:NA	pCi/L	04/03/17 21:59	13982-63-3	
Radium-228	EPA 9320	<b>0.304 ± 0.377 (0.800)</b> C:74% T:87%	pCi/L	04/06/17 12:26	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.506 ± 0.513 (1.00)</b>	pCi/L	04/11/17 10:22	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC0780 Plant Mitchell

Pace Project No.: 30213981

QC Batch: 253453

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 30213981001, 30213981002

METHOD BLANK: 1247540

Matrix: Water

Associated Lab Samples: 30213981001, 30213981002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0167 ± 0.0727 (0.192) C:92% T:NA	pCi/L	04/03/17 21:59	

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: AAC0780 Plant Mitchell

Pace Project No.: 30213981

QC Batch: 253473

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30213981001, 30213981002

METHOD BLANK: 1247572

Matrix: Water

Associated Lab Samples: 30213981001, 30213981002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0392 ± 0.312 (0.719) C:77% T:82%	pCi/L	04/06/17 12:28	

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: AAC0780 Plant Mitchell

Pace Project No.: 30213981

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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WO#: 30213981



30213981

Chain of Custody



Workorder: AAC0780

Workorder Name: Plant Mitchell

Owner Received Date:

Results Requested By: 4/14/2017

Report To:

Betsy McDaniel  
Pace Analytical Atlanta  
110 Technology Parkway  
Peachtree Corners, GA 30092  
Phone (770)-734-4200

Subcontract To:

Pace - Pittsburgh  
1638 Roseytown Road  
Stes. 2,3,4  
Greensburg, PA 15601  
Phone (724) 850-5600

Requested Analysis

Radium 226, 228, Total

Preserved Containers  
30NH

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Received By	Date/Time	Comments
1	PZ-1D	G	3/21/2017 12:42	AAC0780-01	GW	<i>Whaley Per A Pace</i>	3-23-17/0940	
2	PZ-31	G	3/21/2017 15:34	AAC0780-02	GW			
3								
4								
5								
6								
7								
8								
9								
10								

LAB USE ONLY

001  
002

Cooler Temperature on Receipt N/A °C

Custody Seal Y or N

Received on Ice Y or N

Sample Intact Y or N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC  
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Friday, June 17, 2016 11:01:34 AM

FMT-ALL-C-002rev.00 24March2009

Page 1 of 1



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

CHAIN OF CUSTODY RECORD

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239 <b>REPORT TO:</b> Joju Abraham CC: Maria Padilla Heath McCordle <b>REQUESTED COMPLETION DATE:</b> STANDAR TAT PO #: GPC10684198 <b>PROJECT NAME/STATE:</b> PLANT MITCHELL/GA PROJECT #: PHASE II COR		<b>CONTAINER TYPE:</b> PRESERVATION: # of CONTAINERS →		<b>ANALYSIS REQUESTED</b> P 3 P 7 P 3 TDS SM 25400 IC (G, F, SO4) EPA 300.0 Metals App. III & IV EPA 6020/7470 Radium 226 & 228 SW-846 9316/9320		<b>CONTAINER TYPE</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		<b>PRESERVATION</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C 7 - 56°C not frozen	
<b>LAB NUMBER</b> 14 25		<b>MATRIX CODES:</b> 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		<b>REMARKS/ADDITIONAL INFORMATION</b> 14 121L w/HNO3 for Lab RAD QC 25 121L w/HNO3 for 2nd set Lab RAD QC		<b>LAB #:</b> AACO780 Entered into LIMS: <i>ML</i> Tracking #: 8102 9472 5016		<b>FOR LAB USE ONLY</b>	
<b>RELINQUISHED BY:</b> James J. P... DATE/TIME: 3-21-17/17:40		<b>RELINQUISHED BY:</b> James J. P... DATE/TIME: 3-21-17/17:40		<b>CLIENT</b> OTHER FS Courier ID:		<b>COURIER</b> USPS if of Coolers		<b>OTHER</b> FS	
<b>SAMPLE SHIPPED VIA:</b> UPS (Fed-Ex) Custody Seal: Intact		<b>DATE/TIME:</b> 3-21-17/12:42		<b>DATE/TIME:</b> 3-21-17/12:42		<b>DATE/TIME:</b> 3-21-17/12:42		<b>DATE/TIME:</b> 3-21-17/12:42	
<b>RECEIVED BY LAB:</b> ML... Yes No NA		<b>RECEIVED BY:</b> James J. P... Yes No NA		<b>DATE/TIME:</b> 3-21-17/12:42		<b>DATE/TIME:</b> 3-21-17/12:42		<b>DATE/TIME:</b> 3-21-17/12:42	

Pace COC Revised.xlsx

Sample Condition Upon Receipt Pittsburgh

ANL



Client Name: Pace, GA

Project # 30213981

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 6812 5103 1874

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

Thermometer Used N/A Type of Ice: Wet Blue None

Cooler Temperature Observed Temp \_\_\_\_\_ °C Correction Factor: \_\_\_\_\_ °C Final Temp: \_\_\_\_\_ °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 097R 3-23-17

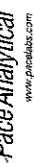
Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC:	X			5.
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used:	X			
Containers Intact:	X			11.
Orthophosphate field filtered			X	12.
Organic Samples checked for dechlorination:			X	13.
Filtered volume received for Dissolved tests			X	14.
All containers have been checked for preservation.	X			15.
All containers needing preservation are found to be in compliance with EPA recommendation.	X			<u>PH12</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>097R</u> Date/time of preservation: _____
				Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):			X	16.
Trip Blank Present:		X		17.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: <u>097R</u> Date: <u>3-23-17</u>

Client Notification/ Resolution:  
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

A check in this box indicates that additional information has been stored in ereports.

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)  
 \*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

# Quality Control Sample Performance Assessment



www.paceanalytical.com

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

Test: Ra-228  
Analyst: JLW  
Date: 4/4/2017  
Worklist: 34835  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1247572
MB Concentration:	0.039
M/B Counting Uncertainty:	0.312
MB MDC:	0.719
MB Numerical Performance Indicator:	0.25
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment	
LCS (Y or N)?	N
LCS#	LCS34835
Count Date:	4/6/2017
Spike I.D.:	17-005
Spike Concentration (pCi/mL):	24.852
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.800
Target Conc. (pCi/L, g, F):	6.211
Uncertainty (Calculated):	0.447
Result (pCi/L, g, F):	6.563
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.838
Numerical Performance Indicator:	0.71
Percent Recovery:	105.52%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30213981001
Duplicate Sample I.D.:	30213981001DUP
Sample Result (pCi/L, g, F):	0.483
Sample Duplicate Result (pCi/L, g, F):	0.346
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.187
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.277
Are sample and/or duplicate results below MDC?	See Below:##
Duplicate Numerical Performance Indicator:	1.308
Duplicate RPD:	28.28%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

*results = 5x MDC numerical indicators < 2 acceptable for all matrices*

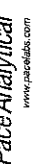
*Multiple*

\*\*\*Batch must be re-prepped due to unacceptable precision.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: LAL  
Date: 3/31/2017  
Worklist: 34821  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1247540
MB concentration:	0.017
MB Counting Uncertainty:	0.073
MB MDC:	0.192
MB Numerical Performance Indicator:	0.45
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS (Y or N)?	N
		LCS34821	LCS034821
Count Date:	4/3/2017		
Spike I.D.:	17-003		
Spike Concentration (pCi/mL):	38.230		
Volume Used (mL):	0.25		
Aliquot Volume (L, g, F):	0.501		
Target Conc. (pCi/L, g, F):	19.060		
Result (pCi/L, g, F):	0.897		
Uncertainty (Calculated):	14.690		
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.075		
Numerical Performance Indicator:	-6.12		
Percent Recovery:	77.07%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		

Duplicate Sample Assessment	
Sample I.D.:	30213978004
Duplicate Sample I.D.:	30213978004DUP
Sample Result (pCi/L, g, F):	0.032
Duplicate Result (pCi/L, g, F):	0.082
Sample Result Counting Uncertainty (pCi/L, g, F):	0.106
Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.108
Sample Duplicate Result (pCi/L, g, F):	0.108
Duplicate Duplicate Result (pCi/L, g, F):	0.108
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	-1.064
Duplicate RPD:	106.39%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail**

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

Comments:

Results < 5x MDC numerical indicator < 2 acceptable for all matrices

\*\*\*Batch must be re-prepared due to unacceptable precision. On 4/1/17

Analyst

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	



**PACE ANALYTICAL SERVICES, LLC.**

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

**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AAC0830**

**April 03, 2017**

**Project: CCR Event**

**Project #: Plant Mitchell**

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

Approved:

A handwritten signature in black ink that reads "Betsy McDaniel" written over a horizontal line.

Project Manager

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All test results relate only to the samples analyzed.



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
PZ-6S	AAC0830-01	Ground Water	03/22/17 10:56	03/23/17 09:20
PZ-15	AAC0830-02	Ground Water	03/22/17 14:06	03/23/17 09:20
Dup-01	AAC0830-03	Ground Water	03/22/17 00:00	03/23/17 09:20



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

**Report No.: AAC0830**

**Project: CCR Event**

**Client ID: PZ-6S**

**Lab Number ID: AAC0830-01**

**Date/Time Sampled: 3/22/2017 10:56:00AM**

**Date/Time Received: 3/23/2017 9:20:00AM**

**Matrix: Ground Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	76	25	10	mg/L	SM 2540 C		1	03/27/17 15:10	03/27/17 15:10	7030811	JPT
<b>Inorganic Anions</b>											
Chloride	5.7	0.25	0.01	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 22:31	7030810	RLC
Fluoride	0.03	0.30	0.004	mg/L	EPA 300.0	J	1	03/27/17 10:16	03/27/17 22:31	7030810	RLC
Sulfate	35	1.0	0.09	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 22:31	7030810	RLC
<b>Metals, Total</b>											
Antimony	0.0448	0.0030	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:09	7030738	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:09	7030738	CSW
Barium	0.0224	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:09	7030738	CSW
Beryllium	0.0001	0.0030	0.00007	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:09	7030738	CSW
Boron	0.294	0.0400	0.0060	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:09	7030738	CSW
Cadmium	0.0006	0.0010	0.000060	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:09	7030738	CSW
Calcium	13.0	5.00	0.522	mg/L	EPA 6020B		50	03/24/17 06:30	03/28/17 00:15	7030738	CSW
Chromium	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:09	7030738	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:09	7030738	CSW
Lead	0.0002	0.0050	0.00005	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:09	7030738	CSW
Molybdenum	ND	0.0100	0.0002	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:09	7030738	CSW
Selenium	0.0017	0.0100	0.0014	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:09	7030738	CSW
Thallium	0.00005	0.0010	0.00003	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:09	7030738	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:09	7030738	CSW
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	J	1	03/24/17 09:00	03/24/17 14:26	7030754	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

**Report No.: AAC0830**

**Project: CCR Event**

**Client ID: PZ-15**

**Lab Number ID: AAC0830-02**

**Date/Time Sampled: 3/22/2017 2:06:00PM**

**Date/Time Received: 3/23/2017 9:20:00AM**

**Matrix: Ground Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	332	25	10	mg/L	SM 2540 C		1	03/27/17 15:10	03/27/17 15:10	7030811	JPT
<b>Inorganic Anions</b>											
Chloride	7.4	0.25	0.01	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 22:51	7030810	RLC
Fluoride	0.11	0.30	0.004	mg/L	EPA 300.0	J	1	03/27/17 10:16	03/27/17 22:51	7030810	RLC
Sulfate	80	5.0	0.46	mg/L	EPA 300.0		5	03/27/17 10:16	03/28/17 14:23	7030810	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:20	7030738	CSW
Arsenic	0.0011	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:20	7030738	CSW
Barium	0.0589	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:20	7030738	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:20	7030738	CSW
Boron	0.205	0.0400	0.0060	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:20	7030738	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:20	7030738	CSW
Calcium	99.3	25.0	0.522	mg/L	EPA 6020B		50	03/24/17 06:30	03/28/17 00:26	7030738	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:20	7030738	CSW
Cobalt	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:20	7030738	CSW
Lead	0.00005	0.0050	0.00005	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:20	7030738	CSW
Molybdenum	0.0004	0.0100	0.0002	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:20	7030738	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:20	7030738	CSW
Thallium	ND	0.0010	0.00003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:20	7030738	CSW
Lithium	0.0011	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:20	7030738	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 14:28	7030754	MTC





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Attention: Mr. Joju Abraham

April 03, 2017

**Report No.:** AAC0830

**Project:** CCR Event

**Client ID:** Dup-01

**Lab Number ID:** AAC0830-03

**Date/Time Sampled:** 3/22/2017 12:00:00AM

**Date/Time Received:** 3/23/2017 9:20:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	368	25	10	mg/L	SM 2540 C		1	03/27/17 15:10	03/27/17 15:10	7030811	JPT
<b>Inorganic Anions</b>											
Chloride	7.4	0.25	0.01	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 23:12	7030810	RLC
Fluoride	0.41	0.30	0.004	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 23:12	7030810	RLC
Sulfate	81	5.0	0.46	mg/L	EPA 300.0		5	03/27/17 10:16	03/28/17 17:49	7030810	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:43	7030738	CSW
Arsenic	0.0011	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:43	7030738	CSW
Barium	0.0607	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/31/17 13:58	7030738	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:43	7030738	CSW
Boron	0.205	0.0400	0.0060	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:43	7030738	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:43	7030738	CSW
Calcium	93.3	25.0	0.522	mg/L	EPA 6020B		50	03/24/17 06:30	03/28/17 00:49	7030738	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:43	7030738	CSW
Cobalt	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:43	7030738	CSW
Lead	0.00005	0.0050	0.00005	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:43	7030738	CSW
Molybdenum	0.0004	0.0100	0.0002	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:43	7030738	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:43	7030738	CSW
Thallium	ND	0.0010	0.00003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:43	7030738	CSW
Lithium	0.0011	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:43	7030738	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 14:30	7030754	MTC



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April 03, 2017

**Report No.: AAC0830**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030811 - SM 2540 C</b>											
<b>Blank (7030811-BLK1)</b>						Prepared & Analyzed: 03/27/17					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (7030811-BS1)</b>						Prepared & Analyzed: 03/27/17					
Total Dissolved Solids	399	25	10	mg/L	400.00		100	84-108			
<b>Duplicate (7030811-DUP1)</b>						Source: AAC0828-01 Prepared & Analyzed: 03/27/17					
Total Dissolved Solids	150	25	10	mg/L		137			9	10	
<b>Duplicate (7030811-DUP2)</b>						Source: AAC0858-06 Prepared & Analyzed: 03/27/17					
Total Dissolved Solids	621	25	10	mg/L		599			4	10	



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**Report No.: AAC0830**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030810 - EPA 300.0</b>											
<b>Blank (7030810-BLK1)</b>						Prepared & Analyzed: 03/27/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
<b>LCS (7030810-BS1)</b>						Prepared & Analyzed: 03/27/17					
Chloride	9.29	0.25	0.01	mg/L	10.010		93	90-110			
Fluoride	9.77	0.30	0.004	mg/L	10.020		98	90-110			
Sulfate	9.50	1.0	0.09	mg/L	10.020		95	90-110			
<b>Matrix Spike (7030810-MS1)</b>						Source: AAC0796-08 Prepared & Analyzed: 03/27/17					
Chloride	99.2	0.25	0.01	mg/L	10.010	99.7	NR	90-110			QM-02
Fluoride	11.0	0.30	0.004	mg/L	10.020	0.46	105	90-110			
Sulfate	186	1.0	0.09	mg/L	10.020	192	NR	90-110			QM-02
<b>Matrix Spike (7030810-MS2)</b>						Source: AAC0832-03 Prepared: 03/27/17 Analyzed: 03/28/17					
Chloride	17.2	0.25	0.01	mg/L	10.010	7.20	100	90-110			
Fluoride	10.7	0.30	0.004	mg/L	10.020	0.09	106	90-110			
Sulfate	66.7	1.0	0.09	mg/L	10.020	63.1	36	90-110			QM-02
<b>Matrix Spike Dup (7030810-MSD1)</b>						Source: AAC0796-08 Prepared & Analyzed: 03/27/17					
Chloride	99.4	0.25	0.01	mg/L	10.010	99.7	NR	90-110	0.2	15	QM-02
Fluoride	11.0	0.30	0.004	mg/L	10.020	0.46	105	90-110	0.4	15	
Sulfate	186	1.0	0.09	mg/L	10.020	192	NR	90-110	0.2	15	QM-02



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**Report No.: AAC0830**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 7030738 - EPA 3005A**

**Blank (7030738-BLK1)**

Prepared: 03/24/17 Analyzed: 03/27/17

Antimony	ND	0.0030	0.0003	mg/L							
Arsenic	ND	0.0050	0.0004	mg/L							
Barium	ND	0.0100	0.0003	mg/L							
Beryllium	ND	0.0030	0.00007	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.000060	mg/L							
Calcium	ND	0.500	0.0104	mg/L							
Chromium	ND	0.0100	0.0003	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0002	mg/L							
Lead	ND	0.0050	0.00005	mg/L							
Molybdenum	ND	0.0100	0.0002	mg/L							
Nickel	ND	0.0100	0.0003	mg/L							
Selenium	ND	0.0100	0.0014	mg/L							
Silver	ND	0.0100	0.0003	mg/L							
Thallium	ND	0.0010	0.00003	mg/L							
Vanadium	ND	0.0100	0.0014	mg/L							
Zinc	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0011	mg/L							

**LCS (7030738-BS1)**

Prepared: 03/24/17 Analyzed: 03/27/17

Antimony	0.104	0.0030	0.0003	mg/L	0.10000		104	80-120			
Arsenic	0.0980	0.0050	0.0004	mg/L	0.10000		98	80-120			
Barium	0.0966	0.0100	0.0003	mg/L	0.10000		97	80-120			
Beryllium	0.101	0.0030	0.00007	mg/L	0.10000		101	80-120			
Boron	0.985	0.0400	0.0060	mg/L	1.0000		98	80-120			
Cadmium	0.102	0.0010	0.000060	mg/L	0.10000		102	80-120			
Calcium	0.996	0.500	0.0104	mg/L	1.0000		100	80-120			
Chromium	0.107	0.0100	0.0003	mg/L	0.10000		107	80-120			
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Copper	0.105	0.0250	0.0002	mg/L	0.10000		105	80-120			
Lead	0.0974	0.0050	0.00005	mg/L	0.10000		97	80-120			
Molybdenum	0.107	0.0100	0.0002	mg/L	0.10000		107	80-120			
Nickel	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Selenium	0.104	0.0100	0.0014	mg/L	0.10000		104	80-120			
Silver	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Thallium	0.0985	0.0010	0.00003	mg/L	0.10000		98	80-120			
Vanadium	0.108	0.0100	0.0014	mg/L	0.10000		108	80-120			
Zinc	0.101	0.0100	0.0013	mg/L	0.10000		101	80-120			
Lithium	0.110	0.0500	0.0011	mg/L	0.10000		110	80-120			



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April 03, 2017

**Report No.: AAC0830**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030738 - EPA 3005A</b>											
<b>Matrix Spike (7030738-MS1)</b>			<b>Source: AAC0796-02</b>			Prepared: 03/24/17 Analyzed: 03/27/17					
Antimony	0.103	0.0030	0.0003	mg/L	0.10000	ND	103	75-125			
Arsenic	0.101	0.0050	0.0004	mg/L	0.10000	ND	101	75-125			
Barium	0.243	0.0100	0.0003	mg/L	0.10000	0.0950	148	75-125			QM-02
Beryllium	0.101	0.0030	0.00007	mg/L	0.10000	0.0001	101	75-125			
Boron	1.00	0.0400	0.0060	mg/L	1.0000	0.0349	97	75-125			
Cadmium	0.104	0.0010	0.000060	mg/L	0.10000	0.00007	104	75-125			
Calcium	20.1	25.0	0.522	mg/L	1.0000	18.6	157	75-125			QM-02, J
Chromium	0.104	0.0100	0.0003	mg/L	0.10000	ND	104	75-125			
Cobalt	0.127	0.0100	0.0005	mg/L	0.10000	0.0251	102	75-125			
Copper	0.0995	0.0250	0.0002	mg/L	0.10000	0.0004	99	75-125			
Lead	0.0937	0.0050	0.00005	mg/L	0.10000	0.00006	94	75-125			
Molybdenum	0.108	0.0100	0.0002	mg/L	0.10000	ND	108	75-125			
Nickel	0.104	0.0100	0.0003	mg/L	0.10000	0.0035	100	75-125			
Selenium	0.102	0.0100	0.0014	mg/L	0.10000	ND	102	75-125			
Silver	0.106	0.0100	0.0003	mg/L	0.10000	ND	106	75-125			
Thallium	0.0969	0.0010	0.00003	mg/L	0.10000	0.00003	97	75-125			
Vanadium	0.108	0.0100	0.0014	mg/L	0.10000	ND	108	75-125			
Zinc	0.103	0.0100	0.0013	mg/L	0.10000	0.0067	96	75-125			
Lithium	0.109	0.0500	0.0011	mg/L	0.10000	0.0012	108	75-125			
<b>Matrix Spike Dup (7030738-MSD1)</b>			<b>Source: AAC0796-02</b>			Prepared: 03/24/17 Analyzed: 03/27/17					
Antimony	0.103	0.0030	0.0003	mg/L	0.10000	ND	103	75-125	0.6	20	
Arsenic	0.101	0.0050	0.0004	mg/L	0.10000	ND	101	75-125	0.1	20	
Barium	0.238	0.0100	0.0003	mg/L	0.10000	0.0950	143	75-125	2	20	QM-02
Beryllium	0.104	0.0030	0.00007	mg/L	0.10000	0.0001	104	75-125	3	20	
Boron	0.991	0.0400	0.0060	mg/L	1.0000	0.0349	96	75-125	1	20	
Cadmium	0.104	0.0010	0.000060	mg/L	0.10000	0.00007	104	75-125	0.4	20	
Calcium	19.5	25.0	0.522	mg/L	1.0000	18.6	93	75-125	3	20	J
Chromium	0.105	0.0100	0.0003	mg/L	0.10000	ND	105	75-125	1	20	
Cobalt	0.128	0.0100	0.0005	mg/L	0.10000	0.0251	103	75-125	1	20	
Copper	0.103	0.0250	0.0002	mg/L	0.10000	0.0004	102	75-125	3	20	
Lead	0.0967	0.0050	0.00005	mg/L	0.10000	0.00006	97	75-125	3	20	
Molybdenum	0.110	0.0100	0.0002	mg/L	0.10000	ND	110	75-125	2	20	
Nickel	0.107	0.0100	0.0003	mg/L	0.10000	0.0035	104	75-125	4	20	
Selenium	0.104	0.0100	0.0014	mg/L	0.10000	ND	104	75-125	1	20	
Silver	0.102	0.0100	0.0003	mg/L	0.10000	ND	102	75-125	3	20	
Thallium	0.100	0.0010	0.00003	mg/L	0.10000	0.00003	100	75-125	3	20	
Vanadium	0.110	0.0100	0.0014	mg/L	0.10000	ND	110	75-125	2	20	
Zinc	0.106	0.0100	0.0013	mg/L	0.10000	0.0067	99	75-125	3	20	
Lithium	0.112	0.0500	0.0011	mg/L	0.10000	0.0012	111	75-125	3	20	



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April 03, 2017

**Report No.: AAC0830**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030738 - EPA 3005A</b>											
<b>Post Spike (7030738-PS1)</b>			<b>Source: AAC0796-02</b>			<b>Prepared: 03/24/17 Analyzed: 03/27/17</b>					
Antimony	105			ug/L	100.00	0.0435	105	80-120			
Arsenic	102			ug/L	100.00	0.288	102	80-120			
Barium	244			ug/L	100.00	95.0	149	80-120			QM-02
Beryllium	98.9			ug/L	100.00	0.102	99	80-120			
Boron	973			ug/L	1000.0	34.9	94	80-120			
Cadmium	109			ug/L	100.00	0.0678	109	80-120			
Calcium	19300			ug/L	1000.0	18600	75	80-120			QM-02
Chromium	110			ug/L	100.00	0.166	109	80-120			
Cobalt	133			ug/L	100.00	25.1	108	80-120			
Copper	103			ug/L	100.00	0.372	103	80-120			
Lead	95.8			ug/L	100.00	0.0583	96	80-120			
Molybdenum	110			ug/L	100.00	0.0712	110	80-120			
Nickel	110			ug/L	100.00	3.52	107	80-120			
Selenium	101			ug/L	100.00	-0.0331	101	80-120			
Silver	103			ug/L	100.00	0.0046	103	80-120			
Thallium	97.8			ug/L	100.00	0.0328	98	80-120			
Vanadium	111			ug/L	100.00	-0.185	111	80-120			
Zinc	107			ug/L	100.00	6.73	100	80-120			
Lithium	108			ug/L	100.00	1.18	107	80-120			

**Batch 7030754 - EPA 7470A**

<b>Blank (7030754-BLK1)</b>					<b>Prepared &amp; Analyzed: 03/24/17</b>						
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (7030754-BS1)</b>					<b>Prepared &amp; Analyzed: 03/24/17</b>						
Mercury	0.00238	0.00050	0.000041	mg/L	2.5000E-3	95	80-120				



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

**Report No.: AAC0830**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030754 - EPA 7470A</b>											
<b>Matrix Spike (7030754-MS1)</b>			<b>Source: AAC0770-01</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	0.00232	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125			
<b>Matrix Spike Dup (7030754-MSD1)</b>			<b>Source: AAC0770-01</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125	3	20	
<b>Post Spike (7030754-PS1)</b>			<b>Source: AAC0770-01</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	1.64			ug/L	1.6667	0.00818	98	80-120			



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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

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## Legend

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### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

### Definition of Qualifiers

**QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

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

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



Daniels



CHAIN OF CUSTODY RECORD

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

PAGE: 1 OF 1

Form containing client information, project details (PLANT MITCHELL / GA), analysis requested (Metals, TDS, etc.), and a table of containers with collection dates and times.

FOR LAB USE ONLY
LAB #: A ACO 830
Entered into LIMS:
Tracking #: 8102 9472 5049



**PACE ANALYTICAL SERVICES, LLC.**

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

**LOG-IN CHECKLIST**

**Printed: 3/23/2017 11:40:14AM**

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 03/23/17 09:20

**Work Order:** AAC0830

**Logged In By:** Mohammad M. Rahman

**OBSERVATIONS**

**#Samples:** 3

**#Containers:** 12

**Minimum Temp(C):** 1.0

**Maximum Temp(C):** 1.0

**Custody Seal(s) Used:** Yes

**CHECKLIST ITEMS**

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

**Comments:**

April 17, 2017

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: AAC0830 Plant Mitchell  
Pace Project No.: 30214103

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on March 24, 2017. 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,



Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
(724)850-5612  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
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## CERTIFICATIONS

Project: AAC0830 Plant Mitchell

Pace Project No.: 30214103

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: AAC0830 Plant Mitchell

Pace Project No.: 30214103

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30214103001	PZ-6S	Water	03/22/17 10:25	03/24/17 09:50
30214103002	PZ-15	Water	03/22/17 14:06	03/24/17 09:50
30214103003	Dup-01	Water	03/22/17 00:00	03/24/17 09:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: AAC0830 Plant Mitchell

Pace Project No.: 30214103

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30214103001	PZ-6S	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214103002	PZ-15	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214103003	Dup-01	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC0830 Plant Mitchell

Pace Project No.: 30214103

**Sample: PZ-6S**      **Lab ID: 30214103001**      Collected: 03/22/17 10:25      Received: 03/24/17 09:50      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.540 ± 0.202 (0.177)</b> C:90% T:NA	pCi/L	04/04/17 08:55	13982-63-3	
Radium-228	EPA 9320	<b>0.789 ± 0.540 (1.03)</b> C:76% T:83%	pCi/L	04/11/17 20:29	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.33 ± 0.742 (1.21)</b>	pCi/L	04/17/17 10:51	7440-14-4	

**Sample: PZ-15**      **Lab ID: 30214103002**      Collected: 03/22/17 14:06      Received: 03/24/17 09:50      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.310 ± 0.154 (0.175)</b> C:90% T:NA	pCi/L	04/04/17 08:55	13982-63-3	
Radium-228	EPA 9320	<b>0.307 ± 0.470 (1.02)</b> C:72% T:83%	pCi/L	04/11/17 20:30	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.617 ± 0.624 (1.20)</b>	pCi/L	04/17/17 10:51	7440-14-4	

**Sample: Dup-01**      **Lab ID: 30214103003**      Collected: 03/22/17 00:00      Received: 03/24/17 09:50      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.130 ± 0.119 (0.215)</b> C:80% T:NA	pCi/L	04/04/17 08:55	13982-63-3	
Radium-228	EPA 9320	<b>0.309 ± 0.481 (1.04)</b> C:79% T:81%	pCi/L	04/11/17 20:30	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.439 ± 0.600 (1.26)</b>	pCi/L	04/17/17 10:51	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC0830 Plant Mitchell

Pace Project No.: 30214103

QC Batch: 254541 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Associated Lab Samples: 30214103001, 30214103002, 30214103003

METHOD BLANK: 1253314 Matrix: Water

Associated Lab Samples: 30214103001, 30214103002, 30214103003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.455 ± 0.376 (0.747) C:80% T:76%	pCi/L	04/11/17 17:17	

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: AAC0830 Plant Mitchell

Pace Project No.: 30214103

QC Batch: 253625 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Associated Lab Samples: 30214103001, 30214103002, 30214103003

METHOD BLANK: 1248390 Matrix: Water

Associated Lab Samples: 30214103001, 30214103002, 30214103003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00202 ± 0.0654 (0.190) C:94% T:NA	pCi/L	04/03/17 14:41	

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: AAC0830 Plant Mitchell

Pace Project No.: 30214103

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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30214103

PAGE: 1 OF 1

CHAIN OF CUSTODY RECORD

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

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-508-7239		<b>REPORT TO:</b> Jotu Abraham Heath McCorkle <b>CC:</b> Maria Padilla <b>PO #:</b> GPC10684198	
<b>REQUESTED COMPLETION DATE:</b> STANDARD TAT		<b>PROJECT NAME/STATE:</b> PLANT MITCHELL / GA	
<b>PROJECT #:</b> Phase II CCR			
Collection DATE	Collection TIME	MATRIX CODE	SAMPLE IDENTIFICATION
3-22-17	10:56	GW	✓ PZ-6S
3-22-17	14:06	GW	✓ PZ-15
3-22-17	—	GW	✓ DUP-01

CONTAINER TYPE	ANALYSIS REQUESTED	CONTAINER TYPE	ANALYSIS REQUESTED
3	P 7 7 3	3	P 7 7 3
EPA 6020/7470 Metals App. III & IV	1	EPA 300.0 IC (17, 504)	1
TDS SM 2540C	1	SW-846 9315/9320	2
	1		2
	1		2

LAB ID NUMBER	CONTAINER TYPE	PRESERVATION	REMARKS/ADDITIONAL INFORMATION
1	P - PLASTIC	1 - HCl, 56°C	
2	A - AMBER GLASS	2 - H <sub>2</sub> SO <sub>4</sub> , 56°C	
3	G - CLEAR GLASS	3 - HNO <sub>3</sub>	
	V - VOA VIAL	4 - NaOH, 56°C	
	S - STERILE	5 - NaOH/ZnAc, 56°C	
	O - OTHER	6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C	
		7 - 56°C not frozen	

<b>SAMPLED BY AND DATE:</b> L. J. ... 3-22-17 <b>RECEIVED BY:</b> ... 3-22-17	<b>DATE/TIME:</b> 3-22-17 / 10:56 <b>DATE/TIME:</b> 3-22-17 / 10:56	<b>RETRIEVED BY:</b> ... <b>RELEASING BY:</b> ...	<b>DATE/TIME:</b> 3-22-17 / 17:10 <b>DATE/TIME:</b> 3-22-17 / 17:10
--	--	--	--

<b>RECEIVED BY LAB:</b> ... <b>DATE/TIME:</b> 3/23/17 09:20 <b>Temp:</b> 10°C <b>Min:</b> 10°C <b>Max:</b> 10°C	<b>SAMPLE SHIPPED VIA:</b> UPS <b>USPS FED-EX</b> <b>Carrier Seal:</b> Broken Not Present	<b>COURIER</b> # of Containers: 1	<b>CLIENT</b> OTHER FS
---	--	--------------------------------------	---------------------------

<b>LAB #:</b> AACO 830 <b>Entered into LIMS:</b> 8102 9472 5049 <b>Tracking #:</b> MR
---

Sample Condition Upon Receipt Pittsburgh



Client Name: Pace, GA

Project # 30214103

ANL

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 6812 5103 2208

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

Thermometer Used N/A Type of Ice: Wet Blue None

Cooler Temperature Observed Temp \_\_\_\_\_ °C Correction Factor: \_\_\_\_\_ °C Final Temp: \_\_\_\_\_ °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: ANL 3-24-17

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC:	X			5.
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used:		X		
Containers Intact:	X			11.
Orthophosphate field filtered			X	12.
Organic Samples checked for dechlorination:			X	13.
Filtered volume received for Dissolved tests			X	14.
All containers have been checked for preservation.	X			15.
All containers needing preservation are found to be in compliance with EPA recommendation.	X			<u>PHL2</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				initial when completed: <u>ANL</u> Date/time of preservation: _____
				Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):			X	16.
Trip Blank Present:		X		17.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		initial when completed: <u>ANL</u> Date: <u>3-24-17</u>

Client Notification/ Resolution:  
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

A check in this box indicates that additional information has been stored in ereports.

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)  
 \*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: JLW  
Date: 4/8/2017  
Worklist: 34997  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1253314
MB concentration:	0.455
MB Counting Uncertainty:	0.368
MB MDC:	0.747
MB Numerical Performance Indicator:	2.42
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	4/11/2017
Spike I.D.:	17-005
Spike Concentration (pCi/mL):	24.810
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.802
Target Conc. (pCi/L, g, F):	6.188
Uncertainty (Calculated):	0.446
Result (pCi/L, g, F):	6.656
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.812
Numerical Performance Indicator:	0.99
Percent Recovery:	107.55%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30214099004
Duplicate Sample I.D.:	30214099004DUP
Sample Result (pCi/L, g, F):	0.236
Sample Result Counting Uncertainty (pCi/L, g, F):	0.307
Sample Duplicate Result (pCi/L, g, F):	0.434
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.294
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	-0.912
Duplicate RPD:	59.04%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision.

*Handwritten signature: J. L. W.*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	Sample I.D.:
Sample MS I.D.:	Sample MS I.D.:
Sample MSD I.D.:	Sample MSD I.D.:
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike I.D.:
Spike Volume Used in MS (mL):	Sample Matrix Spike Result:
Spike Volume Used in MSD (mL):	Sample Matrix Spike Duplicate Result:
MS Aliquot (L, g, F):	MS Numerical Performance Indicator:
MSD Target Conc. (pCi/L, g, F):	MS Percent Recovery:
MSD Aliquot (L, g, F):	MSD Status vs Numerical Indicator:
MSD Target Conc. (pCi/L, g, F):	MS Status vs Recovery:
Spike uncertainty (calculated):	MSD Status vs RPD:
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs RPD:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample I.D.:
Sample MS I.D.:	Sample MS I.D.:
Sample MSD I.D.:	Sample MSD I.D.:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Result:
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:
Duplicate Numerical Performance Indicator:	Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs RPD:

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JC2  
Date: 3/31/2017  
Worklist: 34857  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1248390
MB concentration:	0.002
M/B Counting Uncertainty:	0.065
MB MDC:	0.190
MB Numerical Performance Indicator:	0.06
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS#	34857
N	LCS#34857
Count Date:	4/4/2017
Spike I.D.:	17-003
Spike Concentration (pCi/mL):	38.230
Volume Used (mL):	0.25
Aliquot Volume (L, g, F):	0.504
Target Conc. (pCi/L, g, F):	18.949
Uncertainty (Calculated):	0.891
Result (pCi/L, g, F):	15.378
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.910
Numerical Performance Indicator:	-5.49
Percent Recovery:	81.16%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30214099001
Duplicate Sample I.D.:	30214099001DUP
Sample Result (pCi/L, g, F):	0.087
Sample Result Counting Uncertainty (pCi/L, g, F):	0.097
Sample Duplicate Result (pCi/L, g, F):	0.074
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.086
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	0.207
Duplicate RPD:	16.96%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

*Handwritten signature*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc.(pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	



**PACE ANALYTICAL SERVICES, LLC.**

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

**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AAC0831**

**April 03, 2017**

**Project: CCR Event**

**Project #:Plant Mitchell**

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

Approved:

A handwritten signature in black ink, appearing to read "Betty McDaniel", written over a horizontal line.

Project Manager

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All test results relate only to the samples analyzed.





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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
PZ-16	AAC0831-01	Ground Water	03/22/17 11:15	03/23/17 09:20
PZ-25	AAC0831-02	Ground Water	03/22/17 14:35	03/23/17 09:20
Dup-02	AAC0831-03	Ground Water	03/22/17 00:00	03/23/17 09:20



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 Atlanta GA, 30339

April 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAC0831

Project: CCR Event

Client ID: PZ-16

Lab Number ID: AAC0831-01

Date/Time Sampled: 3/22/2017 11:15:00AM

Date/Time Received: 3/23/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	304	25	10	mg/L	SM 2540 C		1	03/27/17 15:10	03/27/17 15:10	7030811	JPT
<b>Inorganic Anions</b>											
Chloride	7.7	0.25	0.01	mg/L	EPA 300.0		1	03/27/17 10:16	03/28/17 00:55	7030810	RLC
Fluoride	0.04	0.30	0.004	mg/L	EPA 300.0	J	1	03/27/17 10:16	03/28/17 00:55	7030810	RLC
Sulfate	53	2.0	0.18	mg/L	EPA 300.0		2	03/27/17 10:16	03/28/17 17:29	7030810	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:55	7030738	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:55	7030738	CSW
Barium	0.0423	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/31/17 14:04	7030738	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:55	7030738	CSW
Boron	0.218	0.0400	0.0060	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:55	7030738	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:55	7030738	CSW
Calcium	77.8	25.0	0.522	mg/L	EPA 6020B		50	03/24/17 06:30	03/28/17 01:01	7030738	CSW
Chromium	0.0008	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:55	7030738	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:55	7030738	CSW
Lead	ND	0.0050	0.00005	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:55	7030738	CSW
Molybdenum	0.0004	0.0100	0.0002	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:55	7030738	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:55	7030738	CSW
Thallium	0.0002	0.0010	0.00003	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 00:55	7030738	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 00:55	7030738	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 14:33	7030754	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

**Report No.:** AAC0831

**Project:** CCR Event

**Client ID:** PZ-25

**Lab Number ID:** AAC0831-02

**Date/Time Sampled:** 3/22/2017 2:35:00PM

**Date/Time Received:** 3/23/2017 9:20:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	299	25	10	mg/L	SM 2540 C		1	03/27/17 15:10	03/27/17 15:10	7030811	JPT
<b>Inorganic Anions</b>											
Chloride	3.3	0.25	0.01	mg/L	EPA 300.0		1	03/27/17 10:16	03/28/17 01:16	7030810	RLC
Fluoride	0.16	0.30	0.004	mg/L	EPA 300.0	J	1	03/27/17 10:16	03/28/17 01:16	7030810	RLC
Sulfate	53	2.0	0.18	mg/L	EPA 300.0		2	03/27/17 10:16	03/28/17 15:45	7030810	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:06	7030738	CSW
Arsenic	0.0010	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 01:06	7030738	CSW
Barium	0.0951	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/31/17 14:10	7030738	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:06	7030738	CSW
Boron	0.247	0.0400	0.0060	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:06	7030738	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:06	7030738	CSW
Calcium	85.3	25.0	0.522	mg/L	EPA 6020B		50	03/24/17 06:30	03/28/17 01:12	7030738	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:06	7030738	CSW
Cobalt	0.0010	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 01:06	7030738	CSW
Lead	ND	0.0050	0.00005	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:06	7030738	CSW
Molybdenum	0.0010	0.0100	0.0002	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 01:06	7030738	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:06	7030738	CSW
Thallium	ND	0.0010	0.00003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:06	7030738	CSW
Lithium	0.0068	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 01:06	7030738	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 14:35	7030754	MTC



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April 03, 2017

Attention: Mr. Joju Abraham

**Report No.:** AAC0831

**Project:** CCR Event

**Client ID:** Dup-02

**Lab Number ID:** AAC0831-03

**Date/Time Sampled:** 3/22/2017 12:00:00AM

**Date/Time Received:** 3/23/2017 9:20:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	371	25	10	mg/L	SM 2540 C		1	03/27/17 15:10	03/27/17 15:10	7030811	JPT
<b>Inorganic Anions</b>											
Chloride	7.2	0.25	0.01	mg/L	EPA 300.0		1	03/27/17 10:16	03/28/17 01:37	7030810	RLC
Fluoride	0.10	0.30	0.004	mg/L	EPA 300.0	J	1	03/27/17 10:16	03/28/17 01:37	7030810	RLC
Sulfate	62	5.0	0.46	mg/L	EPA 300.0		5	03/27/17 10:16	03/28/17 15:25	7030810	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:18	7030738	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:18	7030738	CSW
Barium	0.0111	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/31/17 14:16	7030738	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:18	7030738	CSW
Boron	0.389	0.0400	0.0060	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:18	7030738	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:18	7030738	CSW
Calcium	109	25.0	0.522	mg/L	EPA 6020B		50	03/24/17 06:30	03/28/17 01:23	7030738	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:18	7030738	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:18	7030738	CSW
Lead	ND	0.0050	0.00005	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:18	7030738	CSW
Molybdenum	ND	0.0100	0.0002	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:18	7030738	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:18	7030738	CSW
Thallium	0.0001	0.0010	0.00003	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 01:18	7030738	CSW
Lithium	0.0024	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 01:18	7030738	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 15:59	7030756	MTC



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Attention: Mr. Joju Abraham

April 03, 2017

**Report No.: AAC0831**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030811 - SM 2540 C</b>											
<b>Blank (7030811-BLK1)</b>						Prepared & Analyzed: 03/27/17					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (7030811-BS1)</b>						Prepared & Analyzed: 03/27/17					
Total Dissolved Solids	399	25	10	mg/L	400.00		100	84-108			
<b>Duplicate (7030811-DUP1)</b>						Source: AAC0828-01 Prepared & Analyzed: 03/27/17					
Total Dissolved Solids	150	25	10	mg/L		137			9	10	
<b>Duplicate (7030811-DUP2)</b>						Source: AAC0858-06 Prepared & Analyzed: 03/27/17					
Total Dissolved Solids	621	25	10	mg/L		599			4	10	



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**Report No.: AAC0831**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030810 - EPA 300.0</b>											
<b>Blank (7030810-BLK1)</b>						Prepared & Analyzed: 03/27/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
<b>LCS (7030810-BS1)</b>						Prepared & Analyzed: 03/27/17					
Chloride	9.29	0.25	0.01	mg/L	10.010		93	90-110			
Fluoride	9.77	0.30	0.004	mg/L	10.020		98	90-110			
Sulfate	9.50	1.0	0.09	mg/L	10.020		95	90-110			
<b>Matrix Spike (7030810-MS1)</b>						Source: AAC0796-08 Prepared & Analyzed: 03/27/17					
Chloride	99.2	0.25	0.01	mg/L	10.010	99.7	NR	90-110			QM-02
Fluoride	11.0	0.30	0.004	mg/L	10.020	0.46	105	90-110			
Sulfate	186	1.0	0.09	mg/L	10.020	192	NR	90-110			QM-02
<b>Matrix Spike (7030810-MS2)</b>						Source: AAC0832-03 Prepared: 03/27/17 Analyzed: 03/28/17					
Chloride	17.2	0.25	0.01	mg/L	10.010	7.20	100	90-110			
Fluoride	10.7	0.30	0.004	mg/L	10.020	0.09	106	90-110			
Sulfate	66.7	1.0	0.09	mg/L	10.020	63.1	36	90-110			QM-02
<b>Matrix Spike Dup (7030810-MSD1)</b>						Source: AAC0796-08 Prepared & Analyzed: 03/27/17					
Chloride	99.4	0.25	0.01	mg/L	10.010	99.7	NR	90-110	0.2	15	QM-02
Fluoride	11.0	0.30	0.004	mg/L	10.020	0.46	105	90-110	0.4	15	
Sulfate	186	1.0	0.09	mg/L	10.020	192	NR	90-110	0.2	15	QM-02



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April 03, 2017

**Report No.: AAC0831**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 7030738 - EPA 3005A**

**Blank (7030738-BLK1)**

Prepared: 03/24/17 Analyzed: 03/27/17

Antimony	ND	0.0030	0.0003	mg/L							
Arsenic	ND	0.0050	0.0004	mg/L							
Barium	ND	0.0100	0.0003	mg/L							
Beryllium	ND	0.0030	0.00007	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.000060	mg/L							
Calcium	ND	0.500	0.0104	mg/L							
Chromium	ND	0.0100	0.0003	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0002	mg/L							
Lead	ND	0.0050	0.00005	mg/L							
Molybdenum	ND	0.0100	0.0002	mg/L							
Nickel	ND	0.0100	0.0003	mg/L							
Selenium	ND	0.0100	0.0014	mg/L							
Silver	ND	0.0100	0.0003	mg/L							
Thallium	ND	0.0010	0.00003	mg/L							
Vanadium	ND	0.0100	0.0014	mg/L							
Zinc	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0011	mg/L							

**LCS (7030738-BS1)**

Prepared: 03/24/17 Analyzed: 03/27/17

Antimony	0.104	0.0030	0.0003	mg/L	0.10000		104	80-120			
Arsenic	0.0980	0.0050	0.0004	mg/L	0.10000		98	80-120			
Barium	0.0966	0.0100	0.0003	mg/L	0.10000		97	80-120			
Beryllium	0.101	0.0030	0.00007	mg/L	0.10000		101	80-120			
Boron	0.985	0.0400	0.0060	mg/L	1.0000		98	80-120			
Cadmium	0.102	0.0010	0.000060	mg/L	0.10000		102	80-120			
Calcium	0.996	0.500	0.0104	mg/L	1.0000		100	80-120			
Chromium	0.107	0.0100	0.0003	mg/L	0.10000		107	80-120			
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Copper	0.105	0.0250	0.0002	mg/L	0.10000		105	80-120			
Lead	0.0974	0.0050	0.00005	mg/L	0.10000		97	80-120			
Molybdenum	0.107	0.0100	0.0002	mg/L	0.10000		107	80-120			
Nickel	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Selenium	0.104	0.0100	0.0014	mg/L	0.10000		104	80-120			
Silver	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Thallium	0.0985	0.0010	0.00003	mg/L	0.10000		98	80-120			
Vanadium	0.108	0.0100	0.0014	mg/L	0.10000		108	80-120			
Zinc	0.101	0.0100	0.0013	mg/L	0.10000		101	80-120			
Lithium	0.110	0.0500	0.0011	mg/L	0.10000		110	80-120			



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**Report No.: AAC0831**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030738 - EPA 3005A</b>											
<b>Matrix Spike (7030738-MS1)</b>			<b>Source: AAC0796-02</b>			Prepared: 03/24/17 Analyzed: 03/27/17					
Antimony	0.103	0.0030	0.0003	mg/L	0.10000	ND	103	75-125			
Arsenic	0.101	0.0050	0.0004	mg/L	0.10000	ND	101	75-125			
Barium	0.243	0.0100	0.0003	mg/L	0.10000	0.0950	148	75-125			QM-02
Beryllium	0.101	0.0030	0.00007	mg/L	0.10000	0.0001	101	75-125			
Boron	1.00	0.0400	0.0060	mg/L	1.0000	0.0349	97	75-125			
Cadmium	0.104	0.0010	0.000060	mg/L	0.10000	0.00007	104	75-125			
Calcium	20.1	25.0	0.522	mg/L	1.0000	18.6	157	75-125			QM-02, J
Chromium	0.104	0.0100	0.0003	mg/L	0.10000	ND	104	75-125			
Cobalt	0.127	0.0100	0.0005	mg/L	0.10000	0.0251	102	75-125			
Copper	0.0995	0.0250	0.0002	mg/L	0.10000	0.0004	99	75-125			
Lead	0.0937	0.0050	0.00005	mg/L	0.10000	0.00006	94	75-125			
Molybdenum	0.108	0.0100	0.0002	mg/L	0.10000	ND	108	75-125			
Nickel	0.104	0.0100	0.0003	mg/L	0.10000	0.0035	100	75-125			
Selenium	0.102	0.0100	0.0014	mg/L	0.10000	ND	102	75-125			
Silver	0.106	0.0100	0.0003	mg/L	0.10000	ND	106	75-125			
Thallium	0.0969	0.0010	0.00003	mg/L	0.10000	0.00003	97	75-125			
Vanadium	0.108	0.0100	0.0014	mg/L	0.10000	ND	108	75-125			
Zinc	0.103	0.0100	0.0013	mg/L	0.10000	0.0067	96	75-125			
Lithium	0.109	0.0500	0.0011	mg/L	0.10000	0.0012	108	75-125			
<b>Matrix Spike Dup (7030738-MSD1)</b>			<b>Source: AAC0796-02</b>			Prepared: 03/24/17 Analyzed: 03/27/17					
Antimony	0.103	0.0030	0.0003	mg/L	0.10000	ND	103	75-125	0.6	20	
Arsenic	0.101	0.0050	0.0004	mg/L	0.10000	ND	101	75-125	0.1	20	
Barium	0.238	0.0100	0.0003	mg/L	0.10000	0.0950	143	75-125	2	20	QM-02
Beryllium	0.104	0.0030	0.00007	mg/L	0.10000	0.0001	104	75-125	3	20	
Boron	0.991	0.0400	0.0060	mg/L	1.0000	0.0349	96	75-125	1	20	
Cadmium	0.104	0.0010	0.000060	mg/L	0.10000	0.00007	104	75-125	0.4	20	
Calcium	19.5	25.0	0.522	mg/L	1.0000	18.6	93	75-125	3	20	J
Chromium	0.105	0.0100	0.0003	mg/L	0.10000	ND	105	75-125	1	20	
Cobalt	0.128	0.0100	0.0005	mg/L	0.10000	0.0251	103	75-125	1	20	
Copper	0.103	0.0250	0.0002	mg/L	0.10000	0.0004	102	75-125	3	20	
Lead	0.0967	0.0050	0.00005	mg/L	0.10000	0.00006	97	75-125	3	20	
Molybdenum	0.110	0.0100	0.0002	mg/L	0.10000	ND	110	75-125	2	20	
Nickel	0.107	0.0100	0.0003	mg/L	0.10000	0.0035	104	75-125	4	20	
Selenium	0.104	0.0100	0.0014	mg/L	0.10000	ND	104	75-125	1	20	
Silver	0.102	0.0100	0.0003	mg/L	0.10000	ND	102	75-125	3	20	
Thallium	0.100	0.0010	0.00003	mg/L	0.10000	0.00003	100	75-125	3	20	
Vanadium	0.110	0.0100	0.0014	mg/L	0.10000	ND	110	75-125	2	20	
Zinc	0.106	0.0100	0.0013	mg/L	0.10000	0.0067	99	75-125	3	20	
Lithium	0.112	0.0500	0.0011	mg/L	0.10000	0.0012	111	75-125	3	20	





**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

**Report No.: AAC0831**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030738 - EPA 3005A</b>											
<b>Post Spike (7030738-PS1)</b>			<b>Source: AAC0796-02</b>			<b>Prepared: 03/24/17 Analyzed: 03/27/17</b>					
Antimony	105			ug/L	100.00	0.0435	105	80-120			
Arsenic	102			ug/L	100.00	0.288	102	80-120			
Barium	244			ug/L	100.00	95.0	149	80-120			QM-02
Beryllium	98.9			ug/L	100.00	0.102	99	80-120			
Boron	973			ug/L	1000.0	34.9	94	80-120			
Cadmium	109			ug/L	100.00	0.0678	109	80-120			
Calcium	19300			ug/L	1000.0	18600	75	80-120			QM-02
Chromium	110			ug/L	100.00	0.166	109	80-120			
Cobalt	133			ug/L	100.00	25.1	108	80-120			
Copper	103			ug/L	100.00	0.372	103	80-120			
Lead	95.8			ug/L	100.00	0.0583	96	80-120			
Molybdenum	110			ug/L	100.00	0.0712	110	80-120			
Nickel	110			ug/L	100.00	3.52	107	80-120			
Selenium	101			ug/L	100.00	-0.0331	101	80-120			
Silver	103			ug/L	100.00	0.0046	103	80-120			
Thallium	97.8			ug/L	100.00	0.0328	98	80-120			
Vanadium	111			ug/L	100.00	-0.185	111	80-120			
Zinc	107			ug/L	100.00	6.73	100	80-120			
Lithium	108			ug/L	100.00	1.18	107	80-120			

**Batch 7030754 - EPA 7470A**

<b>Blank (7030754-BLK1)</b>				<b>Prepared &amp; Analyzed: 03/24/17</b>							
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (7030754-BS1)</b>				<b>Prepared &amp; Analyzed: 03/24/17</b>							
Mercury	0.00238	0.00050	0.000041	mg/L	2.5000E-3		95	80-120			



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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

**Report No.: AAC0831**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030754 - EPA 7470A</b>											
<b>Matrix Spike (7030754-MS1)</b>			<b>Source: AAC0770-01</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	0.00232	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125			
<b>Matrix Spike Dup (7030754-MSD1)</b>			<b>Source: AAC0770-01</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125	3	20	
<b>Post Spike (7030754-PS1)</b>			<b>Source: AAC0770-01</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	1.64			ug/L	1.6667	0.00818	98	80-120			
<b>Batch 7030756 - EPA 7470A</b>											
<b>Blank (7030756-BLK1)</b>						<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (7030756-BS1)</b>						<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	0.00242	0.00050	0.000041	mg/L	2.5000E-3		97	80-120			
<b>Matrix Spike (7030756-MS1)</b>			<b>Source: AAC0831-03</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	0.00222	0.00050	0.000041	mg/L	2.5000E-3	ND	89	75-125			
<b>Matrix Spike Dup (7030756-MSD1)</b>			<b>Source: AAC0831-03</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	0.00233	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125	5	20	
<b>Post Spike (7030756-PS1)</b>			<b>Source: AAC0831-03</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	1.68			ug/L	1.6667	0.0112	100	80-120			



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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

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## Legend

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### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

### Definition of Qualifiers

**QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

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

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



EVER'S  
Pace Analytical Services, Inc.  
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092  
(770) 734-4200 : FAX (770) 734-4201 : www.ash-lab.com

# CHAIN OF CUSTODY RECORD

PAGE: 1 OF 1

CLIENT NAME: Georgia Power		CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		REPORT TO: Joiu Abraham Health McConkle	CC: Maria Padilla Health McConkle	PO #: GPC10684198	PROJECT NAME/STATE: PLANT MITCHELL / GA	PROJECT #: Phase II CCR	
Collection DATE	Collection TIME	MATRIX CODE	COM P	G R A B	SAMPLE IDENTIFICATION	CONTAINER TYPE	ANALYSIS REQUESTED	CONTAINER TYPE	PRESERVATION
3-22-17	11:15	GW	✓	✓	P2-16	4	Metals App. III & IV EPA 6020/7470 IC (C, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320	P- PLASTIC	1 - HCl, 56°C
3-22-17	14:35	GW	✓	✓	P2-25	4	Metals App. III & IV EPA 6020/7470 IC (C, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320	A - AMBER GLASS	2 - H <sub>2</sub> SO <sub>4</sub> , 56°C
3-22-17	-	GW	✓	✓	DUF-02	4	Metals App. III & IV EPA 6020/7470 IC (C, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320	G - CLEAR GLASS	3 - HNO <sub>3</sub>
<p>RECEIVED BY LAB: <i>Yola Annan</i> (log) No NA Yes No NA Mac</p> <p>RECEIVED BY: <i>MARKET-PARKER mgr.</i> DATE/TIME: 3-22-17 / 11:15</p> <p>RELINQUISHED BY: <i>Demetrius Parker</i> DATE/TIME: 3-22-17 / 17:10</p> <p>RELINQUISHED BY: <i>[Signature]</i> DATE/TIME: 3-22-17</p> <p>SAMPLE SHIPPED VIA: UPS (FED-EX) USPS COURIER CLIENT OTHER FS</p> <p>DATE/TIME: 3-22-17 / 11:15</p> <p>DATE/TIME: 3-22-17 / 17:10</p> <p>DATE/TIME: 3-22-17</p> <p>DATE/TIME: 3-22-17</p> <p>TEMPERATURE: 11°C</p> <p>INTACT Broken Not Present</p> <p>ENTERED INTO LIMS: 810796997782</p> <p>LAB #: AACO831</p> <p>FOR LAB USE ONLY</p>									



**PACE ANALYTICAL SERVICES, LLC.**

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

**LOG-IN CHECKLIST**

**Printed: 3/23/2017 11:48:20AM**

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 03/23/17 09:20

**Work Order:** AAC0831

**Logged In By:** Mohammad M. Rahman

**OBSERVATIONS**

**#Samples:** 3

**#Containers:** 12

**Minimum Temp(C):** 1.0

**Maximum Temp(C):** 1.0

**Custody Seal(s) Used:** Yes

**CHECKLIST ITEMS**

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

**Comments:**

April 17, 2017

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: AAC0831 Plant Mitchell  
Pace Project No.: 30214102

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on March 24, 2017. 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,



Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
(724)850-5612  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
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## CERTIFICATIONS

Project: AAC0831 Plant Mitchell  
Pace Project No.: 30214102

### **Pennsylvania Certification IDs**

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH-0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana DHH/TNI Certification #: LA140008  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: PA00091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification  
Missouri Certification #: 235

Montana Certification #: Cert 0082  
Nebraska Certification #: NE-05-29-14  
Nevada Certification #: PA014572015-1  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188-14-8  
Utah/TNI Certification #: PA014572015-5  
USDA Soil Permit #: P330-14-00213  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 460198  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Certification  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: AAC0831 Plant Mitchell

Pace Project No.: 30214102

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30214102001	PZ-16	Water	03/22/17 11:15	03/24/17 09:50
30214102002	PZ-25	Water	03/22/17 14:35	03/24/17 09:50
30214102003	Dup-02	Water	03/22/17 00:00	03/24/17 09:50

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### SAMPLE ANALYTE COUNT

Project: AAC0831 Plant Mitchell

Pace Project No.: 30214102

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30214102001	PZ-16	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214102002	PZ-25	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214102003	Dup-02	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC0831 Plant Mitchell

Pace Project No.: 30214102

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	<b>0.116 ± 0.123 (0.231)</b> C:76% T:NA	pCi/L	04/03/17 14:41	13982-63-3	
Radium-228		EPA 9320	<b>0.319 ± 0.367 (0.772)</b> C:77% T:83%	pCi/L	04/06/17 12:27	15262-20-1	
Total Radium		Total Radium Calculation	<b>0.435 ± 0.490 (1.00)</b>	pCi/L	04/17/17 10:51	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	<b>0.271 ± 0.145 (0.182)</b> C:88% T:NA	pCi/L	04/04/17 08:55	13982-63-3	
Radium-228		EPA 9320	<b>0.581 ± 0.448 (0.868)</b> C:77% T:90%	pCi/L	04/11/17 20:30	15262-20-1	
Total Radium		Total Radium Calculation	<b>0.852 ± 0.593 (1.05)</b>	pCi/L	04/17/17 10:51	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	<b>0.0791 ± 0.0917 (0.181)</b> C:94% T:NA	pCi/L	04/04/17 08:55	13982-63-3	
Radium-228		EPA 9320	<b>-0.197 ± 0.414 (1.02)</b> C:77% T:87%	pCi/L	04/11/17 20:29	15262-20-1	
Total Radium		Total Radium Calculation	<b>0.0791 ± 0.506 (1.20)</b>	pCi/L	04/17/17 10:51	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC0831 Plant Mitchell

Pace Project No.: 30214102

QC Batch: 254541

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30214102002, 30214102003

METHOD BLANK: 1253314

Matrix: Water

Associated Lab Samples: 30214102002, 30214102003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.455 ± 0.376 (0.747) C:80% T:76%	pCi/L	04/11/17 17:17	

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: AAC0831 Plant Mitchell

Pace Project No.: 30214102

QC Batch: 253453

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 30214102001

METHOD BLANK: 1247540

Matrix: Water

Associated Lab Samples: 30214102001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0167 ± 0.0727 (0.192) C:92% T:NA	pCi/L	04/03/17 21:59	

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: AAC0831 Plant Mitchell

Pace Project No.: 30214102

QC Batch: 253473

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30214102001

METHOD BLANK: 1247572

Matrix: Water

Associated Lab Samples: 30214102001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0392 ± 0.312 (0.719) C:77% T:82%	pCi/L	04/06/17 12:28	

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: AAC0831 Plant Mitchell

Pace Project No.: 30214102

---

QC Batch: 253625	Analysis Method: EPA 9315
QC Batch Method: EPA 9315	Analysis Description: 9315 Total Radium
Associated Lab Samples: 30214102002, 30214102003	

---

METHOD BLANK: 1248390	Matrix: Water
Associated Lab Samples: 30214102002, 30214102003	

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00202 ± 0.0654 (0.190) C:94% T:NA	pCi/L	04/03/17 14:41	

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: AAC0831 Plant Mitchell

Pace Project No.: 30214102

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

WO#: 30214102



30214102

Chain of Custody



Workorder: AAC0831

Worker Name: Plant Mitchell

Owner Received Date:

Results Requested By: 4/17/2017

Report To:

Subcontract To:

Requested Analysis

Betsy McDaniel  
 Pace Analytical Atlanta  
 110 Technology Parkway  
 Peachtree Corners, GA 30092  
 Phone (770)-734-4200

Pace - Pittsburgh  
 1638 Roseytown Road  
 Stes. 2,3,4  
 Greensburg, PA 15601  
 Phone (724) 850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers			Date/Time	Comments
						NO	HO	EH		
1	PZ-16	G	3/22/2017 11:15	AAC0831-01	GW	2				
2	PZ-25	G	3/22/2017 14:35	AAC0831-02	GW	2				
3	Dup-02	G	3/22/2017 0:00	AAC0831-03	GW	2				
4										
5										
6										
7										
8										
9										
10										
Transfers Released By: <i>M. Dabman</i> Date/Time: <i>03/23/17</i> Received By: <i>Paul</i> Date/Time: <i>3-24-17 0950</i>										
1	Radium 226, 228, Total									
2										
3										

Cooler Temperature on Receipt MP °C Custody Seal Y or N Received on Ice Y or N Sample Intact Y or N

\*\*\* In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC. This chain of custody is considered complete as is since this information is available in the owner laboratory.

Friday, June 17, 2016 11:01:34 AM

FMT-ALL-C-002rev.00 24March2009

Page 1 of 1



30214102

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

PAGE: 1 OF 1

CHAIN OF CUSTODY RECORD

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Joiu Abraham Health McCorkle <b>CC:</b> Maria Padilla <b>PO #:</b> GPC10684198	
<b>REQUESTED COMPLETION DATE:</b> STANDARD TAT		<b>PROJECT NAME/STATE:</b> PLANT MITCHELL / GA Phase II CCR	
<b>REPORT TO:</b> Joiu Abraham Health McCorkle <b>CC:</b> Maria Padilla <b>PO #:</b> GPC10684198		<b>PROJECT #:</b> Phase II CCR	
Collection DATE	Collection TIME	MATRIX CODE*	SAMPLE IDENTIFICATION
3-22-17	11:15	GW	PZ-16
3-22-17	14:35	GW	PZ-25
3-22-17	-	GW	DUP-02

CONTAINER TYPE	PRESERVATION	ANALYSIS REQUESTED	CONTAINERS		
			# of	CONTAINER TYPE	PRESERVATION
P	3	EPA 60207470 Metals App. III & IV	4	P	3
P	7	EPA 300.0 TDS	2	P	7
P	3	IC (Cl, F, SO4) SW-2540C	2	P	3
P	7	USGS Radium 226 & 228 SW-846 8316/8320	2	P	7

LAB ID NUMBER	CONTAINER TYPE	PRESERVATION	REMARKS/ADDITIONAL INFORMATION
1	P- PLASTIC	1- HCl, 56°C	
2	A- AMBER GLASS	2- H2SO4, 56°C	
3	G- CLEAR GLASS	3- HNO3	
	V- VOA VIAL	4- NaOH, 56°C	
	S- STERILE	5- NaOH/ZnAc, 56°C	
	O- OTHER	6- Na2S2O3, 56°C	
		7- 56°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	

RECEIVED BY LAB: Joiu Abraham 3-22-17 11:15 DATE/TIME: 3-22-17 / 11:15	RECEIVED BY: James T. Parker 3-22-17 17:10 DATE/TIME: 3-22-17 / 17:10
RECEIVED BY LAB: Joiu Abraham 3-22-17 14:35 DATE/TIME: 3-22-17 / 14:35	RECEIVED BY: James T. Parker 3-22-17 17:10 DATE/TIME: 3-22-17 / 17:10

SAMPLED BY AND DATE: James T. Parker 3-22-17	DATE/TIME: 3-22-17 / 11:15
RECEIVED BY: Joiu Abraham	DATE/TIME: 3-22-17 / 17:10

LAB #: AAC0831	FOR LAB USE ONLY
Entered into LIMS: 8107 9699 7782	Tracking #:

Sample Condition Upon Receipt Pittsburgh



Client Name: Pace, GA

Project # 30214102

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 1812 5103 2208

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

Thermometer Used N/A    Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp \_\_\_\_\_ °C    Correction Factor: \_\_\_\_\_ °C    Final Temp: \_\_\_\_\_ °C  
 Temp should be above freezing to 6°C

Date and Initials of person examining contents: AGA 3-24-17

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC:	X			5.
-Includes date/time/ID      Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used:		X		
Containers Intact:	X			11.
Orthophosphate field filtered			X	12.
Organic Samples checked for dechlorination:			X	13.
Filtered volume received for Dissolved tests			X	14.
All containers have been checked for preservation.	X			15.
All containers needing preservation are found to be in compliance with EPA recommendation.	X			<u>PH12</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>AGA</u> Date/time of preservation: _____ Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):			X	16.
Trip Blank Present:		X		17.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: <u>AGA</u> Date: <u>3-24-17</u>

Client Notification/ Resolution:  
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

A check in this box indicates that additional information has been stored in ereports.

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)  
 \*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228  
Analyst: JLW  
Date: 4/18/2017  
Worklist: 34997  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1253314
MB concentration:	0.455
MB Counting Uncertainty:	0.368
MB MDC:	0.747
MB Numerical Performance Indicator:	2.42
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	N
Count Date:		LCSD34997	LCSD34997
Spike I.D.:		4/11/2017	
Spike Concentration (pCi/mL):		17-005	
Aliquot Volume (L, g, F):		24.810	
Target Conc. (pCi/L, g, F):		0.20	
Uncertainty (Calculated):		0.802	
Result (pCi/L, g, F):		6.188	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):		6.656	
Numerical Performance Indicator:		0.99	
Percent Recovery:		107.55%	
Status vs Numerical Indicator:		N/A	
Status vs Recovery:		Pass	

Duplicate Sample Assessment	
Sample I.D.:	30214099004
Duplicate Sample I.D.:	30214099004DUP
Sample Result (pCi/L, g, F):	0.236
Sample Duplicate Result (pCi/L, g, F):	0.307
Sample Result Counting Uncertainty (pCi/L, g, F):	0.434
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.294
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-0.912
Duplicate RPD:	59.04%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision.

*Handwritten signature and initials*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
Duplicate Status vs Numerical Indicator:	
Duplicate Status vs RPD:	
MS/MSD Duplicate Status vs RPD:	

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JC2  
Date: 3/31/2017  
Worklist: 34857  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1248390
MB concentration:	0.002
M/B Counting Uncertainty:	0.065
MB MDC:	0.190
MB Numerical Performance Indicator:	0.06
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS34857	N
LCS34857	LCS34857
Count Date:	4/4/2017
Spike I.D.:	17-003
Spike Concentration (pCi/mL):	38.230
Volume Used (mL):	0.25
Aliquot Volume (L, g, F):	0.504
Target Conc. (pCi/L, g, F):	18.949
Uncertainty (Calculated):	0.891
Result (pCi/L, g, F):	15.378
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.910
Numerical Performance Indicator:	-5.49
Percent Recovery:	81.16%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30214099001
Duplicate Sample I.D.:	30214099001DUP
Sample Result (pCi/L, g, F):	0.087
Sample Result Counting Uncertainty (pCi/L, g, F):	0.097
Sample Duplicate Result (pCi/L, g, F):	0.074
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.086
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	0.207
Duplicate RPD:	16.96%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

*Handwritten signature*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
M/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MSD Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: JLW  
Date: 4/4/2017  
Worklist: 34835  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1247572
MB concentration:	0.039
M/B Counting Uncertainty:	0.312
MB MDC:	0.719
MB Numerical Performance Indicator:	0.25
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	4/6/2017
Spike I.D.:	17-005
Spike Concentration (pCi/mL):	24.852
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.800
Target Conc. (pCi/L, g, F):	6.211
Uncertainty (Calculated):	0.447
Result (pCi/L, g, F):	6.553
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.838
Numerical Performance Indicator:	0.71
Percent Recovery:	105.52%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30213981001
Duplicate Sample I.D.:	30213981001DUP
Sample Result (pCi/L, g, F):	0.483
Sample Result Counting Uncertainty (pCi/L, g, F):	0.346
Sample Duplicate Result (pCi/L, g, F):	0.187
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.277
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	1.308
Duplicate RPD:	88.28%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

*Handwritten signature*

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: LAL  
Date: 3/31/2017  
Worklist: 34821  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1247540
MB concentration:	0.017
M/B Counting Uncertainty:	0.073
MB MDC:	0.192
MB Numerical Performance Indicator:	0.45
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS (Y or N)?	N
		LCS34821	LCS34821
Count Date:	4/3/2017		
Spike I.D.:	17-003		
Spike Concentration (pCi/mL):	38.230		
Volume Used (mL):	0.25		
Aliquot Volume (L, g, F):	0.501		
Target Conc. (pCi/L, g, F):	19.060		
Uncertainty (Calculated):	0.897		
Result (pCi/L, g, F):	14.690		
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.075		
Numerical Performance Indicator:	-6.12		
Percent Recovery:	77.07%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		

Duplicate Sample Assessment	
Sample I.D.:	30213978004
Duplicate Sample I.D.:	30213978004DUP
Sample Result (pCi/L, g, F):	0.032
Sample Result Counting Uncertainty (pCi/L, g, F):	0.082
Sample Duplicate Result (pCi/L, g, F):	0.106
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.108
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-1.064
Duplicate RPD:	106.36%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail**

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

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MS Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	



**PACE ANALYTICAL SERVICES, LLC.**

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

**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AAC0832**

**April 03, 2017**

**Project: CCR Event**

**Project #: Plant Mitchell**

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

Approved:

A handwritten signature in black ink, appearing to read "Betty McDaniel", written over a horizontal line.

Project Manager

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





**PACE ANALYTICAL SERVICES, LLC.**

---

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

Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
PZ-17	AAC0832-01	Ground Water	03/22/17 10:44	03/23/17 09:20
PZ-18	AAC0832-02	Ground Water	03/22/17 12:00	03/23/17 09:20
PZ-7D	AAC0832-03	Ground Water	03/22/17 14:08	03/23/17 09:20





**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

April 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAC0832

Project: CCR Event

Client ID: PZ-17

Lab Number ID: AAC0832-01

Date/Time Sampled: 3/22/2017 10:44:00AM

Date/Time Received: 3/23/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	456	25	10	mg/L	SM 2540 C		1	03/27/17 15:10	03/27/17 15:10	7030811	JPT
<b>Inorganic Anions</b>											
Chloride	7.3	0.25	0.01	mg/L	EPA 300.0		1	03/27/17 10:16	03/28/17 01:57	7030810	RLC
Fluoride	0.09	0.30	0.004	mg/L	EPA 300.0	J	1	03/27/17 10:16	03/28/17 01:57	7030810	RLC
Sulfate	100	10	0.92	mg/L	EPA 300.0		10	03/27/17 10:16	03/28/17 15:04	7030810	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:29	7030738	CSW
Arsenic	0.0007	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 01:29	7030738	CSW
Barium	0.0821	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/31/17 14:21	7030738	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:29	7030738	CSW
Boron	0.342	0.0400	0.0060	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:29	7030738	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:29	7030738	CSW
Calcium	113	25.0	0.522	mg/L	EPA 6020B		50	03/24/17 06:30	03/28/17 01:35	7030738	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:29	7030738	CSW
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 01:29	7030738	CSW
Lead	ND	0.0050	0.00005	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:29	7030738	CSW
Molybdenum	0.0004	0.0100	0.0002	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 01:29	7030738	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:29	7030738	CSW
Thallium	ND	0.0010	0.00003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:29	7030738	CSW
Lithium	0.0021	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 01:29	7030738	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 16:01	7030756	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0832

Project: CCR Event

Client ID: PZ-18

Lab Number ID: AAC0832-02

Date/Time Sampled: 3/22/2017 12:00:00PM

Date/Time Received: 3/23/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	469	25	10	mg/L	SM 2540 C		1	03/27/17 15:10	03/27/17 15:10	7030811	JPT
<b>Inorganic Anions</b>											
Chloride	6.8	0.25	0.01	mg/L	EPA 300.0		1	03/27/17 10:16	03/28/17 02:18	7030810	RLC
Fluoride	0.08	0.30	0.004	mg/L	EPA 300.0	J	1	03/27/17 10:16	03/28/17 02:18	7030810	RLC
Sulfate	95	10	0.92	mg/L	EPA 300.0		10	03/27/17 10:16	03/28/17 14:43	7030810	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:52	7030738	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:52	7030738	CSW
Barium	0.0273	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/31/17 14:27	7030738	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:52	7030738	CSW
Boron	0.405	0.0400	0.0060	mg/L	EPA 6020B		1	03/24/17 06:30	03/31/17 14:27	7030738	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:52	7030738	CSW
Calcium	122	25.0	0.522	mg/L	EPA 6020B		50	03/24/17 06:30	03/28/17 01:58	7030738	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:52	7030738	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:52	7030738	CSW
Lead	ND	0.0050	0.00005	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:52	7030738	CSW
Molybdenum	ND	0.0100	0.0002	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:52	7030738	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 01:52	7030738	CSW
Thallium	0.00004	0.0010	0.00003	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 01:52	7030738	CSW
Lithium	0.0029	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 01:52	7030738	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 16:04	7030756	MTC



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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

**Report No.:** AAC0832

**Project:** CCR Event

**Client ID:** PZ-7D

**Lab Number ID:** AAC0832-03

**Date/Time Sampled:** 3/22/2017 2:08:00PM

**Date/Time Received:** 3/23/2017 9:20:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	409	25	10	mg/L	SM 2540 C		1	03/27/17 15:10	03/27/17 15:10	7030811	JPT
<b>Inorganic Anions</b>											
Chloride	7.2	0.25	0.01	mg/L	EPA 300.0		1	03/27/17 10:16	03/28/17 02:39	7030810	RLC
Fluoride	0.09	0.30	0.004	mg/L	EPA 300.0	J	1	03/27/17 10:16	03/28/17 02:39	7030810	RLC
Sulfate	61	5.0	0.46	mg/L	EPA 300.0		5	03/27/17 10:16	03/28/17 18:10	7030810	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 02:04	7030738	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 02:04	7030738	CSW
Barium	0.0114	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/31/17 14:33	7030738	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 02:04	7030738	CSW
Boron	0.365	0.0400	0.0060	mg/L	EPA 6020B		1	03/24/17 06:30	03/31/17 14:33	7030738	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 02:04	7030738	CSW
Calcium	111	25.0	0.522	mg/L	EPA 6020B		50	03/24/17 06:30	03/28/17 02:09	7030738	CSW
Chromium	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 02:04	7030738	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 02:04	7030738	CSW
Lead	ND	0.0050	0.00005	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 02:04	7030738	CSW
Molybdenum	ND	0.0100	0.0002	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 02:04	7030738	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/24/17 06:30	03/28/17 02:04	7030738	CSW
Thallium	0.0002	0.0010	0.00003	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 02:04	7030738	CSW
Lithium	0.0025	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/28/17 02:04	7030738	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 16:06	7030756	MTC



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April 03, 2017

**Report No.: AAC0832**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030811 - SM 2540 C</b>											
<b>Blank (7030811-BLK1)</b>						Prepared & Analyzed: 03/27/17					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (7030811-BS1)</b>						Prepared & Analyzed: 03/27/17					
Total Dissolved Solids	399	25	10	mg/L	400.00		100	84-108			
<b>Duplicate (7030811-DUP1)</b>						Source: AAC0828-01 Prepared & Analyzed: 03/27/17					
Total Dissolved Solids	150	25	10	mg/L		137			9	10	
<b>Duplicate (7030811-DUP2)</b>						Source: AAC0858-06 Prepared & Analyzed: 03/27/17					
Total Dissolved Solids	621	25	10	mg/L		599			4	10	



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**Report No.: AAC0832**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030810 - EPA 300.0</b>											
<b>Blank (7030810-BLK1)</b>						Prepared & Analyzed: 03/27/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
<b>LCS (7030810-BS1)</b>						Prepared & Analyzed: 03/27/17					
Chloride	9.29	0.25	0.01	mg/L	10.010		93	90-110			
Fluoride	9.77	0.30	0.004	mg/L	10.020		98	90-110			
Sulfate	9.50	1.0	0.09	mg/L	10.020		95	90-110			
<b>Matrix Spike (7030810-MS1)</b>						Source: AAC0796-08 Prepared & Analyzed: 03/27/17					
Chloride	99.2	0.25	0.01	mg/L	10.010	99.7	NR	90-110			QM-02
Fluoride	11.0	0.30	0.004	mg/L	10.020	0.46	105	90-110			
Sulfate	186	1.0	0.09	mg/L	10.020	192	NR	90-110			QM-02
<b>Matrix Spike (7030810-MS2)</b>						Source: AAC0832-03 Prepared: 03/27/17 Analyzed: 03/28/17					
Chloride	17.2	0.25	0.01	mg/L	10.010	7.20	100	90-110			
Fluoride	10.7	0.30	0.004	mg/L	10.020	0.09	106	90-110			
Sulfate	66.7	1.0	0.09	mg/L	10.020	63.1	36	90-110			QM-02
<b>Matrix Spike Dup (7030810-MSD1)</b>						Source: AAC0796-08 Prepared & Analyzed: 03/27/17					
Chloride	99.4	0.25	0.01	mg/L	10.010	99.7	NR	90-110	0.2	15	QM-02
Fluoride	11.0	0.30	0.004	mg/L	10.020	0.46	105	90-110	0.4	15	
Sulfate	186	1.0	0.09	mg/L	10.020	192	NR	90-110	0.2	15	QM-02



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April 03, 2017

**Report No.: AAC0832**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 7030738 - EPA 3005A**

**Blank (7030738-BLK1)**

Prepared: 03/24/17 Analyzed: 03/27/17

Antimony	ND	0.0030	0.0003	mg/L							
Arsenic	ND	0.0050	0.0004	mg/L							
Barium	ND	0.0100	0.0003	mg/L							
Beryllium	ND	0.0030	0.00007	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.000060	mg/L							
Calcium	ND	0.500	0.0104	mg/L							
Chromium	ND	0.0100	0.0003	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0002	mg/L							
Lead	ND	0.0050	0.00005	mg/L							
Molybdenum	ND	0.0100	0.0002	mg/L							
Nickel	ND	0.0100	0.0003	mg/L							
Selenium	ND	0.0100	0.0014	mg/L							
Silver	ND	0.0100	0.0003	mg/L							
Thallium	ND	0.0010	0.00003	mg/L							
Vanadium	ND	0.0100	0.0014	mg/L							
Zinc	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0011	mg/L							

**LCS (7030738-BS1)**

Prepared: 03/24/17 Analyzed: 03/27/17

Antimony	0.104	0.0030	0.0003	mg/L	0.10000		104	80-120			
Arsenic	0.0980	0.0050	0.0004	mg/L	0.10000		98	80-120			
Barium	0.0966	0.0100	0.0003	mg/L	0.10000		97	80-120			
Beryllium	0.101	0.0030	0.00007	mg/L	0.10000		101	80-120			
Boron	0.985	0.0400	0.0060	mg/L	1.0000		98	80-120			
Cadmium	0.102	0.0010	0.000060	mg/L	0.10000		102	80-120			
Calcium	0.996	0.500	0.0104	mg/L	1.0000		100	80-120			
Chromium	0.107	0.0100	0.0003	mg/L	0.10000		107	80-120			
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Copper	0.105	0.0250	0.0002	mg/L	0.10000		105	80-120			
Lead	0.0974	0.0050	0.00005	mg/L	0.10000		97	80-120			
Molybdenum	0.107	0.0100	0.0002	mg/L	0.10000		107	80-120			
Nickel	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Selenium	0.104	0.0100	0.0014	mg/L	0.10000		104	80-120			
Silver	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Thallium	0.0985	0.0010	0.00003	mg/L	0.10000		98	80-120			
Vanadium	0.108	0.0100	0.0014	mg/L	0.10000		108	80-120			
Zinc	0.101	0.0100	0.0013	mg/L	0.10000		101	80-120			
Lithium	0.110	0.0500	0.0011	mg/L	0.10000		110	80-120			



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April 03, 2017

**Report No.: AAC0832**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030738 - EPA 3005A</b>											
<b>Matrix Spike (7030738-MS1)</b>			<b>Source: AAC0796-02</b>			<b>Prepared: 03/24/17 Analyzed: 03/27/17</b>					
Antimony	0.103	0.0030	0.0003	mg/L	0.10000	ND	103	75-125			
Arsenic	0.101	0.0050	0.0004	mg/L	0.10000	ND	101	75-125			
Barium	0.243	0.0100	0.0003	mg/L	0.10000	0.0950	148	75-125			QM-02
Beryllium	0.101	0.0030	0.00007	mg/L	0.10000	0.0001	101	75-125			
Boron	1.00	0.0400	0.0060	mg/L	1.0000	0.0349	97	75-125			
Cadmium	0.104	0.0010	0.000060	mg/L	0.10000	0.00007	104	75-125			
Calcium	20.1	25.0	0.522	mg/L	1.0000	18.6	157	75-125			QM-02, J
Chromium	0.104	0.0100	0.0003	mg/L	0.10000	ND	104	75-125			
Cobalt	0.127	0.0100	0.0005	mg/L	0.10000	0.0251	102	75-125			
Copper	0.0995	0.0250	0.0002	mg/L	0.10000	0.0004	99	75-125			
Lead	0.0937	0.0050	0.00005	mg/L	0.10000	0.00006	94	75-125			
Molybdenum	0.108	0.0100	0.0002	mg/L	0.10000	ND	108	75-125			
Nickel	0.104	0.0100	0.0003	mg/L	0.10000	0.0035	100	75-125			
Selenium	0.102	0.0100	0.0014	mg/L	0.10000	ND	102	75-125			
Silver	0.106	0.0100	0.0003	mg/L	0.10000	ND	106	75-125			
Thallium	0.0969	0.0010	0.00003	mg/L	0.10000	0.00003	97	75-125			
Vanadium	0.108	0.0100	0.0014	mg/L	0.10000	ND	108	75-125			
Zinc	0.103	0.0100	0.0013	mg/L	0.10000	0.0067	96	75-125			
Lithium	0.109	0.0500	0.0011	mg/L	0.10000	0.0012	108	75-125			
<b>Matrix Spike Dup (7030738-MSD1)</b>			<b>Source: AAC0796-02</b>			<b>Prepared: 03/24/17 Analyzed: 03/27/17</b>					
Antimony	0.103	0.0030	0.0003	mg/L	0.10000	ND	103	75-125	0.6	20	
Arsenic	0.101	0.0050	0.0004	mg/L	0.10000	ND	101	75-125	0.1	20	
Barium	0.238	0.0100	0.0003	mg/L	0.10000	0.0950	143	75-125	2	20	QM-02
Beryllium	0.104	0.0030	0.00007	mg/L	0.10000	0.0001	104	75-125	3	20	
Boron	0.991	0.0400	0.0060	mg/L	1.0000	0.0349	96	75-125	1	20	
Cadmium	0.104	0.0010	0.000060	mg/L	0.10000	0.00007	104	75-125	0.4	20	
Calcium	19.5	25.0	0.522	mg/L	1.0000	18.6	93	75-125	3	20	J
Chromium	0.105	0.0100	0.0003	mg/L	0.10000	ND	105	75-125	1	20	
Cobalt	0.128	0.0100	0.0005	mg/L	0.10000	0.0251	103	75-125	1	20	
Copper	0.103	0.0250	0.0002	mg/L	0.10000	0.0004	102	75-125	3	20	
Lead	0.0967	0.0050	0.00005	mg/L	0.10000	0.00006	97	75-125	3	20	
Molybdenum	0.110	0.0100	0.0002	mg/L	0.10000	ND	110	75-125	2	20	
Nickel	0.107	0.0100	0.0003	mg/L	0.10000	0.0035	104	75-125	4	20	
Selenium	0.104	0.0100	0.0014	mg/L	0.10000	ND	104	75-125	1	20	
Silver	0.102	0.0100	0.0003	mg/L	0.10000	ND	102	75-125	3	20	
Thallium	0.100	0.0010	0.00003	mg/L	0.10000	0.00003	100	75-125	3	20	
Vanadium	0.110	0.0100	0.0014	mg/L	0.10000	ND	110	75-125	2	20	
Zinc	0.106	0.0100	0.0013	mg/L	0.10000	0.0067	99	75-125	3	20	
Lithium	0.112	0.0500	0.0011	mg/L	0.10000	0.0012	111	75-125	3	20	



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April 03, 2017

**Report No.: AAC0832**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030738 - EPA 3005A</b>											
<b>Post Spike (7030738-PS1)</b>			<b>Source: AAC0796-02</b>			<b>Prepared: 03/24/17 Analyzed: 03/27/17</b>					
Antimony	105			ug/L	100.00	0.0435	105	80-120			
Arsenic	102			ug/L	100.00	0.288	102	80-120			
Barium	244			ug/L	100.00	95.0	149	80-120			QM-02
Beryllium	98.9			ug/L	100.00	0.102	99	80-120			
Boron	973			ug/L	1000.0	34.9	94	80-120			
Cadmium	109			ug/L	100.00	0.0678	109	80-120			
Calcium	19300			ug/L	1000.0	18600	75	80-120			QM-02
Chromium	110			ug/L	100.00	0.166	109	80-120			
Cobalt	133			ug/L	100.00	25.1	108	80-120			
Copper	103			ug/L	100.00	0.372	103	80-120			
Lead	95.8			ug/L	100.00	0.0583	96	80-120			
Molybdenum	110			ug/L	100.00	0.0712	110	80-120			
Nickel	110			ug/L	100.00	3.52	107	80-120			
Selenium	101			ug/L	100.00	-0.0331	101	80-120			
Silver	103			ug/L	100.00	0.0046	103	80-120			
Thallium	97.8			ug/L	100.00	0.0328	98	80-120			
Vanadium	111			ug/L	100.00	-0.185	111	80-120			
Zinc	107			ug/L	100.00	6.73	100	80-120			
Lithium	108			ug/L	100.00	1.18	107	80-120			

**Batch 7030756 - EPA 7470A**

<b>Blank (7030756-BLK1)</b>				<b>Prepared &amp; Analyzed: 03/24/17</b>							
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (7030756-BS1)</b>				<b>Prepared &amp; Analyzed: 03/24/17</b>							
Mercury	0.00242	0.00050	0.000041	mg/L	2.5000E-3		97	80-120			





**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

**Report No.: AAC0832**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030756 - EPA 7470A</b>											
<b>Matrix Spike (7030756-MS1)</b>			<b>Source: AAC0831-03</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	0.00222	0.00050	0.000041	mg/L	2.5000E-3	ND	89	75-125			
<b>Matrix Spike Dup (7030756-MSD1)</b>			<b>Source: AAC0831-03</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	0.00233	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125	5	20	
<b>Post Spike (7030756-PS1)</b>			<b>Source: AAC0831-03</b>			<b>Prepared &amp; Analyzed: 03/24/17</b>					
Mercury	1.68			ug/L	1.6667	0.0112	100	80-120			



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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

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## Legend

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### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

### Definition of Qualifiers

**QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

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

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

Tenn

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

PAGE: 1 OF 1

# CHAIN OF CUSTODY RECORD

**CLIENT NAME:** Georgia Power  
**CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:** 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239  
**REPORT TO:** Joju Abraham  
**CC:** Maria Padilla Health McCorkle  
**REQUESTED COMPLETION DATE:** STANBARD TMT  
**PO #:** GPC:10684198  
**PROJECT NAME/STATE:** PLANT MITCHELL / GA  
**PROJECT #:** Phase II CCR

CONTAINER TYPE	ANALYSIS REQUESTED	DATE/TIME	CLIENT	OTHER	FS
3	Metals App. III & IV EPA 6020/7470	3-22-17 10:44	Jamaica		
7	IC (Cl, F, SO4) EPA 300.0	3-22-17 10:44	Jamaica		
7	TDS SM 2540C	3-22-17 10:44	Jamaica		
3	Radium 226 & 228 SW-646 9315/9320	3-22-17 17:10	Jamaica		

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

**PRESERVATION**  
 1 - HCl, ≤6°C  
 2 - H<sub>2</sub>SO<sub>4</sub>, ≤6°C  
 3 - HNO<sub>3</sub>  
 4 - NaOH, ≤6°C  
 5 - NaOH/ZnAc, ≤6°C  
 6 - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, ≤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**

**LAB #:** A AC 0832  
**FOR LAB USE ONLY**  
**Tracking #:** 8102 9472 5038  
**Entered into LIMS:**

Collection DATE	Collection TIME	MATRIX CODE*	SAMPLE IDENTIFICATION	DATE/TIME	RELINQUISHED BY	DATE/TIME
3-22-17	10:44	GW	PZ-17	3-22-17 / 10:44	Jamaica	3-22-17 / 17:10
3-22-17	12:00	GW	PZ-18	3-22-17 / 10:44	Jamaica	3-22-17 / 17:10
3-22-17	14:08	GW	PZ-7D	3-22-17 / 10:44	Jamaica	3-22-17 / 17:10

**SAMPLED BY AND TITLE:** JAMAICA  
**RECEIVED BY:** [Signature]  
**DATE/TIME:** 3-22-17 / 10:44  
**RELINQUISHED BY:** [Signature]  
**DATE/TIME:** 3-22-17 / 17:10

**RECEIVED BY LAB:** [Signature]  
**DATE/TIME:** 3/20/17 10:20  
**Temperature:** 10°C Min: 1°C Max: 1°C

**SAMPLE SHIPPED VIA:** UPS  
**USPS:** [ ]  
**FED-EX:** [ ]  
**Broken:** [ ]  
**Not Present:** [ ]  
**Courier # of Copies:** 1  
**Cooler ID:**

Pace COC Revised.xlsx



**PACE ANALYTICAL SERVICES, LLC.**

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

**LOG-IN CHECKLIST**

**Printed: 3/23/2017 11:51:47AM**

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 03/23/17 09:20

**Work Order:** AAC0832

**Logged In By:** Mohammad M. Rahman

**OBSERVATIONS**

**#Samples:** 3

**#Containers:** 12

**Minimum Temp(C):** 1.0

**Maximum Temp(C):** 1.0

**Custody Seal(s) Used:** Yes

**CHECKLIST ITEMS**

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

**Comments:**

April 17, 2017

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: AAC0832 Plant Mitchell  
Pace Project No.: 30214101

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on March 24, 2017. 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,



Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
(724)850-5612  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
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## CERTIFICATIONS

Project: AAC0832 Plant Mitchell  
Pace Project No.: 30214101

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH-0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana DHH/TNI Certification #: LA140008  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: PA00091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification  
Missouri Certification #: 235

Montana Certification #: Cert 0082  
Nebraska Certification #: NE-05-29-14  
Nevada Certification #: PA014572015-1  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188-14-8  
Utah/TNI Certification #: PA014572015-5  
USDA Soil Permit #: P330-14-00213  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 460198  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Certification  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: AAC0832 Plant Mitchell

Pace Project No.: 30214101

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30214101001	PZ-17	Water	03/22/17 10:44	03/24/17 09:50
30214101002	PZ-18	Water	03/22/17 12:00	03/24/17 09:50
30214101003	PZ-7D	Water	03/22/17 14:08	03/24/17 09:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: AAC0832 Plant Mitchell

Pace Project No.: 30214101

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30214101001	PZ-17	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214101002	PZ-18	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214101003	PZ-7D	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC0832 Plant Mitchell

Pace Project No.: 30214101

**Sample: PZ-17**      **Lab ID: 30214101001**      Collected: 03/22/17 10:44      Received: 03/24/17 09:50      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.132 ± 0.138 (0.274)</b> C:91% T:NA	pCi/L	04/03/17 13:05	13982-63-3	
Radium-228	EPA 9320	<b>0.434 ± 0.328 (0.646)</b> C:82% T:91%	pCi/L	04/06/17 12:27	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.566 ± 0.466 (0.920)</b>	pCi/L	04/17/17 10:51	7440-14-4	

**Sample: PZ-18**      **Lab ID: 30214101002**      Collected: 03/22/17 12:00      Received: 03/24/17 09:50      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.102 ± 0.116 (0.227)</b> C:82% T:NA	pCi/L	04/03/17 13:05	13982-63-3	
Radium-228	EPA 9320	<b>0.697 ± 0.358 (0.633)</b> C:79% T:98%	pCi/L	04/06/17 12:27	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.799 ± 0.474 (0.860)</b>	pCi/L	04/17/17 10:51	7440-14-4	

**Sample: PZ-7D**      **Lab ID: 30214101003**      Collected: 03/22/17 14:08      Received: 03/24/17 09:50      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.0195 ± 0.0849 (0.224)</b> C:80% T:NA	pCi/L	04/03/17 13:05	13982-63-3	
Radium-228	EPA 9320	<b>0.259 ± 0.305 (0.643)</b> C:80% T:91%	pCi/L	04/06/17 12:26	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.279 ± 0.390 (0.867)</b>	pCi/L	04/17/17 10:51	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC0832 Plant Mitchell

Pace Project No.: 30214101

QC Batch: 253453 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Associated Lab Samples: 30214101001, 30214101002, 30214101003

METHOD BLANK: 1247540 Matrix: Water

Associated Lab Samples: 30214101001, 30214101002, 30214101003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0167 ± 0.0727 (0.192) C:92% T:NA	pCi/L	04/03/17 21:59	

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: AAC0832 Plant Mitchell

Pace Project No.: 30214101

QC Batch: 253473

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30214101001, 30214101002, 30214101003

METHOD BLANK: 1247572

Matrix: Water

Associated Lab Samples: 30214101001, 30214101002, 30214101003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0392 ± 0.312 (0.719) C:77% T:82%	pCi/L	04/06/17 12:28	

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: AAC0832 Plant Mitchell

Pace Project No.: 30214101

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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WO#: 30214101



Chain of Custody



Workorder: AAC0832

Workorder Name: Plant Mitchell

Owner Received Date:

Results Requested By: 4/17/2017

Report To:	Subcontract To:		Collect Date/Time		Lab ID	Matrix	Preserved Containers		Requested Analysis									
Betsy McDaniel	Pace - Pittsburgh						NO3											
Pace Analytical Atlanta	1638 Roseytown Road							Radium 226, 228, Total										
110 Technology Parkway	Stes. 2,3,4																	
Peachtree Corners, GA 30092	Greensburg, PA 15601																	
Phone (770)-734-4200	Phone (724) 850-5600																	
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	NO3											LAB USE ONLY	
1	PZ-17	G	3/22/2017 10:44	AAC0832-01	GW	2		X										001
2	PZ-18	G	3/22/2017 12:00	AAC0832-02	GW	2		X										002
3	PZ-7D	G	3/22/2017 14:08	AAC0832-03	GW	2		X										003
4																		
5																		
6																		
7																		
8																		
9																		
10																		
Transfers	Released By	Date/Time	Date/Time	Received By	Date/Time	Comments												
1	M. Dalman	03/23/17		D. S. Brown	3-24-17/0950													
2																		
3																		

Cooler Temperature on Receipt N/A Custody Seal Y or N N Received on Ice Y or N N Sample Intact Y or N N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC  
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Friday, June 17, 2016 11:01:34 AM

FMT-ALL-C-002rev.00 24March2009

Page 1 of 1

30214101

Tennis

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

CHAIN OF CUSTODY RECORD

PAGE: 1 OF 1

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239 <b>REPORT TO:</b> Jaju Abraham <b>CC:</b> Maria Padilla Health McCorntle <b>REQUESTED COMPLETION DATE:</b> STANDARD TAT <b>PROJECT NAME/STATE:</b> PLANT MITCHELL / GA <b>PROJECT #:</b> Phase II CCR		<b>CONTAINER TYPE:</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER <b>PRESERVATION:</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/HZnAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C 7 - 56°C not frozen	
<b>ANALYSIS REQUESTED</b> P P P P P P P P P P 3 7 7 7 3 # of CONTAINERS → 4 4 4		<b>MATRIX CODES:</b> 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 <b>REMARKS/ADDITIONAL INFORMATION</b>	
<b>LABORATORY INFORMATION</b> RELINQUISHED BY: <i>James T. Pender</i> DATE/TIME: 3-22-17 / 17:10 RELINQUISHED BY: DATE/TIME:		<b>CLIENT INFORMATION</b> CLIENT: OTHER FS COURIER: <i>1</i> (if Georgia) OTHER: FS COCIDER ID:	
<b>SAMPLED BY AND TITLE:</b> <i>STAN MITCHELL HSR</i> DATE/TIME: 3-22-17 / 10:44 <b>RECEIVED BY:</b> DATE/TIME:		<b>SAMPLE SHIPPED VIA:</b> UPS FED-EX CUSTODY STATE: Broken Not Present DATE/TIME: 3/20/17 10:20 RECEIVED BY: <i>MAN</i> DATE/TIME: 3/20/17 10:20	
<b>COLLECTION DATA</b> Collection DATE: 3-22-17 10:44 Matrix Code: GW Sample ID: PZ-17 Collection DATE: 3-22-17 12:00 Matrix Code: GW Sample ID: PZ-18 Collection DATE: 3-22-17 14:08 Matrix Code: GW Sample ID: PZ-7D <i>3-22-17</i>		<b>ANALYSIS REQUESTED</b> Metals App. III & IV EPA 6020/7470 IC (Cl, F, SO <sub>4</sub> ) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320	

Pace COC Revised.xlsx

Sample Condition Upon Receipt Pittsburgh

ANL



Client Name: Pace, GA

Project # 30214101

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 6812 5103 2208

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

Thermometer Used N/A    Type of Ice: Wet Blue None

Cooler Temperature    Observed Temp \_\_\_\_\_ °C    Correction Factor: \_\_\_\_\_ °C    Final Temp: \_\_\_\_\_ °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: ANL 3-24-17

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC:	X			5.
-Includes date/time/ID      Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used:		X		
Containers Intact:	X			11.
Orthophosphate field filtered			X	12.
Organic Samples checked for dechlorination:			X	13.
Filtered volume received for Dissolved tests			X	14.
All containers have been checked for preservation.	X			15.
All containers needing preservation are found to be in compliance with EPA recommendation.	X			
exceptions: VOA, coliform, TOC, O&G, Phenolics				
				Initial when completed: <u>ANL</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			X	16.
Trip Blank Present:		X		17.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: <u>ANL</u> Date: <u>3-24-17</u>

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

A check in this box indicates that additional information has been stored in ereports.

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)  
 \*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: JLW  
Date: 4/4/2017  
Worklist: 34835  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1247572
MB concentration:	0.039
M/B Counting Uncertainty:	0.312
MB MDC:	0.719
MB Numerical Performance Indicator:	0.25
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	4/6/2017
Spike I.D.:	17-005
Spike Concentration (pCi/mL):	24.852
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.800
Target Conc. (pCi/L, g, F):	6.211
Uncertainty (Calculated):	0.447
Result (pCi/L, g, F):	6.553
LCS/LOSD Counting Uncertainty (pCi/L, g, F):	0.838
Numerical Performance Indicator:	0.71
Percent Recovery:	105.52%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30213981001
Duplicate Sample I.D.:	30213981001DUP
Sample Result (pCi/L, g, F):	0.463
Sample Result Counting Uncertainty (pCi/L, g, F):	0.346
Sample Duplicate Result (pCi/L, g, F):	0.187
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.277
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	1.308
Duplicate RPD:	86.28%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail**

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

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision.

*April 17, 2017*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	Sample I.D.
Sample MS I.D.	Sample MSD I.D.
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike I.D.:
Spike Volume Used in MS (mL):	MS/MSD Target Conc. (pCi/L, g, F):
Spike Volume Used in MSD (mL):	MSD Target Conc. (pCi/L, g, F):
MS Aliquot (L, g, F):	Spike uncertainty (calculated):
MSD Aliquot (L, g, F):	Sample Result
MSD Target Conc. (pCi/L, g, F):	Sample Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Result	Sample Matrix Spike Result
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result
Sample Matrix Spike Duplicate Result	MS Numerical Performance Indicator:
MS Numerical Performance Indicator:	MSD Numerical Performance Indicator:
MS Percent Recovery:	MSD Percent Recovery:
MS Status vs Numerical Indicator:	MS Status vs Numerical Indicator:
MSD Status vs Numerical Indicator:	MS Status vs Recovery:
MSD Status vs Recovery:	MSD Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.	Sample MS I.D.
Sample MSD I.D.	Sample Matrix Spike Result
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result
Sample Matrix Spike Duplicate Result	Duplicate Numerical Performance Indicator
Duplicate Numerical Performance Indicator	(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:
MS/ MSD Duplicate Status vs Numerical Indicator:	MS/ MSD Duplicate Status vs RPD:



# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: LAL  
Date: 3/31/2017  
Worklist: 34821  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1247540
MB concentration:	0.017
M/B Counting Uncertainty:	0.073
MB MDC:	0.192
MB Numerical Performance Indicator:	0.45
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	4/3/2017
Spike I.D.:	17-003
Spike Concentration (pCi/mL):	38.230
Volume Used (mL):	0.25
Aliquot Volume (L, g, F):	0.501
Target Conc. (pCi/L, g, F):	19.060
Uncertainty (Calculated):	0.897
Result (pCi/L, g, F):	14.690
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.075
Numerical Performance Indicator:	-6.12
Percent Recovery:	77.07%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30213978004
Duplicate Sample I.D.:	30213978004DUP
Duplicate Result (pCi/L, g, F):	0.032
Sample Result Counting Uncertainty (pCi/L, g, F):	0.082
Sample Duplicate Result (pCi/L, g, F):	0.106
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.108
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-1.064
Duplicate RPD:	106.36%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision.

*Handwritten signature: J. L. ...*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	



**PACE ANALYTICAL SERVICES, LLC.**

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

**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AAC0880**

**March 31, 2017**

**Project: CCR Event**

**Project #: Plant Mitchell**

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

Approved:

A handwritten signature in black ink that reads "Betsy McDaniel" written over a horizontal line.

Project Manager

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All test results relate only to the samples analyzed.



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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
EB-01	AAC0880-01	Water	03/23/17 08:30	03/24/17 09:00
PZ-19	AAC0880-02	Ground Water	03/23/17 10:02	03/24/17 09:00
PZ-32	AAC0880-03	Ground Water	03/23/17 12:12	03/24/17 09:00



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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0880

Project: CCR Event

Client ID: EB-01

Lab Number ID: AAC0880-01

Date/Time Sampled: 3/23/2017 8:30:00AM

Date/Time Received: 3/24/2017 9:00:00AM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	03/28/17 11:50	03/28/17 11:50	7030845	JPT
<b>Inorganic Anions</b>											
Chloride	0.10	0.25	0.01	mg/L	EPA 300.0	J	1	03/28/17 09:48	03/29/17 01:24	7030839	RLC
Fluoride	0.009	0.30	0.004	mg/L	EPA 300.0	J	1	03/28/17 09:48	03/29/17 01:24	7030839	RLC
Sulfate	0.13	1.0	0.09	mg/L	EPA 300.0	J	1	03/28/17 09:48	03/29/17 01:24	7030839	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:31	7030796	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:31	7030796	CSW
Barium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:31	7030796	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:31	7030796	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:31	7030796	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:31	7030796	CSW
Calcium	0.0493	0.500	0.0104	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 21:31	7030796	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:31	7030796	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:31	7030796	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:31	7030796	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:31	7030796	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:31	7030796	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:31	7030796	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:31	7030796	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/29/17 13:10	03/30/17 13:43	7030864	MTC



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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0880

Project: CCR Event

Client ID: PZ-19

Lab Number ID: AAC0880-02

Date/Time Sampled: 3/23/2017 10:02:00AM

Date/Time Received: 3/24/2017 9:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	482	25	10	mg/L	SM 2540 C		1	03/28/17 11:50	03/28/17 11:50	7030845	JPT
<b>Inorganic Anions</b>											
Chloride	6.6	0.25	0.01	mg/L	EPA 300.0		1	03/28/17 09:48	03/29/17 01:44	7030839	RLC
Fluoride	0.14	0.30	0.004	mg/L	EPA 300.0	J	1	03/28/17 09:48	03/29/17 01:44	7030839	RLC
Sulfate	90	5.0	0.46	mg/L	EPA 300.0		5	03/28/17 09:48	03/29/17 18:48	7030839	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:36	7030796	CSW
Arsenic	0.0007	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 21:36	7030796	CSW
Barium	0.0591	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:36	7030796	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:36	7030796	CSW
Boron	0.703	0.0400	0.0060	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:36	7030796	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:36	7030796	CSW
Calcium	137	25.0	0.522	mg/L	EPA 6020B		50	03/27/17 10:30	03/28/17 21:42	7030796	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:36	7030796	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:36	7030796	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:36	7030796	CSW
Molybdenum	0.0025	0.0100	0.0006	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 21:36	7030796	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:36	7030796	CSW
Thallium	0.0003	0.0010	0.00005	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 21:36	7030796	CSW
Lithium	0.0122	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 21:36	7030796	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/29/17 13:10	03/30/17 13:46	7030864	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0880

Project: CCR Event

Client ID: PZ-32

Lab Number ID: AAC0880-03

Date/Time Sampled: 3/23/2017 12:12:00PM

Date/Time Received: 3/24/2017 9:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	165	25	10	mg/L	SM 2540 C		1	03/28/17 11:50	03/28/17 11:50	7030845	JPT
<b>Inorganic Anions</b>											
Chloride	2.9	0.25	0.01	mg/L	EPA 300.0		1	03/28/17 09:48	03/29/17 02:05	7030839	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	03/28/17 09:48	03/29/17 02:05	7030839	RLC
Sulfate	1.7	1.0	0.09	mg/L	EPA 300.0		1	03/28/17 09:48	03/29/17 02:05	7030839	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:59	7030796	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:59	7030796	CSW
Barium	0.0175	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:59	7030796	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:59	7030796	CSW
Boron	0.0103	0.0400	0.0060	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 21:59	7030796	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:59	7030796	CSW
Calcium	59.1	25.0	0.522	mg/L	EPA 6020B		50	03/27/17 10:30	03/28/17 22:05	7030796	CSW
Chromium	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 21:59	7030796	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:59	7030796	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 21:59	7030796	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:59	7030796	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:59	7030796	CSW
Thallium	0.00008	0.0010	0.00005	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 21:59	7030796	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:59	7030796	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/29/17 13:10	03/30/17 13:48	7030864	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

**Report No.: AAC0880**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030845 - SM 2540 C</b>											
<b>Blank (7030845-BLK1)</b>						Prepared & Analyzed: 03/28/17					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (7030845-BS1)</b>						Prepared & Analyzed: 03/28/17					
Total Dissolved Solids	406	25	10	mg/L	400.00		102	84-108			
<b>Duplicate (7030845-DUP1)</b>						Source: AAC0881-01 Prepared & Analyzed: 03/28/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
<b>Duplicate (7030845-DUP2)</b>						Source: AAC0905-03 Prepared & Analyzed: 03/28/17					
Total Dissolved Solids	273	25	10	mg/L		291			6	10	



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March 31, 2017

**Report No.: AAC0880**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030839 - EPA 300.0</b>											
<b>Blank (7030839-BLK1)</b>						Prepared & Analyzed: 03/28/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
<b>LCS (7030839-BS1)</b>						Prepared & Analyzed: 03/28/17					
Chloride	9.99	0.25	0.01	mg/L	10.010		100	90-110			
Fluoride	10.3	0.30	0.004	mg/L	10.020		103	90-110			
Sulfate	10.1	1.0	0.09	mg/L	10.020		101	90-110			
<b>Matrix Spike (7030839-MS1)</b>						Source: AAC0858-02 Prepared & Analyzed: 03/28/17					
Chloride	83.2	0.25	0.01	mg/L	10.010	81.8	14	90-110			QM-02
Fluoride	10.7	0.30	0.004	mg/L	10.020	0.34	104	90-110			
Sulfate	145	1.0	0.09	mg/L	10.020	150	NR	90-110			QM-02
<b>Matrix Spike (7030839-MS2)</b>						Source: AAC0858-08 Prepared: 03/28/17 Analyzed: 03/29/17					
Chloride	125	0.25	0.01	mg/L	10.010	128	NR	90-110			QM-02
Fluoride	10.9	0.30	0.004	mg/L	10.020	0.42	104	90-110			
Sulfate	181	1.0	0.09	mg/L	10.020	189	NR	90-110			QM-02
<b>Matrix Spike Dup (7030839-MSD1)</b>						Source: AAC0858-02 Prepared & Analyzed: 03/28/17					
Chloride	82.8	0.25	0.01	mg/L	10.010	81.8	10	90-110	0.5	15	QM-02
Fluoride	10.8	0.30	0.004	mg/L	10.020	0.34	105	90-110	0.8	15	
Sulfate	145	1.0	0.09	mg/L	10.020	150	NR	90-110	0.04	15	QM-02





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Attention: Mr. Joju Abraham

March 31, 2017

**Report No.: AAC0880**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030796 - EPA 3005A</b>											
<b>Blank (7030796-BLK1)</b>											
						Prepared: 03/27/17 Analyzed: 03/28/17					
Antimony	ND	0.0030	0.0003	mg/L							
Arsenic	ND	0.0050	0.0004	mg/L							
Barium	ND	0.0100	0.0003	mg/L							
Beryllium	ND	0.0030	0.00007	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.00006	mg/L							
Calcium	ND	0.500	0.0104	mg/L							
Chromium	ND	0.0100	0.0003	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	0.0003	0.0250	0.0003	mg/L							J
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0006	mg/L							
Nickel	ND	0.0100	0.0003	mg/L							
Selenium	ND	0.0100	0.0014	mg/L							
Silver	ND	0.0100	0.0003	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0014	mg/L							
Zinc	0.0014	0.0100	0.0013	mg/L							J
Lithium	ND	0.0500	0.0011	mg/L							
<b>LCS (7030796-BS1)</b>											
						Prepared: 03/27/17 Analyzed: 03/28/17					
Antimony	0.102	0.0030	0.0003	mg/L	0.10000		102	80-120			
Arsenic	0.0993	0.0050	0.0004	mg/L	0.10000		99	80-120			
Barium	0.0993	0.0100	0.0003	mg/L	0.10000		99	80-120			
Beryllium	0.103	0.0030	0.00007	mg/L	0.10000		103	80-120			
Boron	1.00	0.0400	0.0060	mg/L	1.0000		100	80-120			
Cadmium	0.103	0.0010	0.00006	mg/L	0.10000		103	80-120			
Calcium	1.00	0.500	0.0104	mg/L	1.0000		100	80-120			
Chromium	0.101	0.0100	0.0003	mg/L	0.10000		101	80-120			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000		102	80-120			
Copper	0.104	0.0250	0.0003	mg/L	0.10000		104	80-120			
Lead	0.0994	0.0050	0.00007	mg/L	0.10000		99	80-120			
Molybdenum	0.102	0.0100	0.0006	mg/L	0.10000		102	80-120			
Nickel	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Selenium	0.101	0.0100	0.0014	mg/L	0.10000		101	80-120			
Silver	0.0993	0.0100	0.0003	mg/L	0.10000		99	80-120			
Thallium	0.102	0.0010	0.00005	mg/L	0.10000		102	80-120			
Vanadium	0.0967	0.0100	0.0014	mg/L	0.10000		97	80-120			
Zinc	0.101	0.0100	0.0013	mg/L	0.10000		101	80-120			
Lithium	0.102	0.0500	0.0011	mg/L	0.10000		102	80-120			



**PACE ANALYTICAL SERVICES, LLC.**

Environmental Monitoring & Laboratory Analysis  
 110 Technology Parkway, Peachtree Corners, GA 30092  
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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

**Report No.: AAC0880**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030796 - EPA 3005A</b>											
<b>Matrix Spike (7030796-MS1)</b>			<b>Source: AAC0858-01</b>				Prepared: 03/27/17 Analyzed: 03/28/17				
Antimony	0.106	0.0030	0.0003	mg/L	0.10000	ND	106	75-125			
Arsenic	0.106	0.0050	0.0004	mg/L	0.10000	0.0008	106	75-125			
Barium	0.290	0.0100	0.0003	mg/L	0.10000	0.122	168	75-125			QM-02
Beryllium	0.0915	0.0030	0.00007	mg/L	0.10000	ND	91	75-125			
Boron	2.79	0.0400	0.0060	mg/L	1.0000	1.99	80	75-125			
Cadmium	0.0987	0.0010	0.00006	mg/L	0.10000	0.00007	99	75-125			
Calcium	185	25.0	0.522	mg/L	1.0000	183	185	75-125			QM-02
Chromium	0.103	0.0100	0.0003	mg/L	0.10000	ND	103	75-125			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	0.0005	101	75-125			
Copper	0.0976	0.0250	0.0003	mg/L	0.10000	ND	98	75-125			
Lead	0.0960	0.0050	0.00007	mg/L	0.10000	ND	96	75-125			
Molybdenum	0.129	0.0100	0.0006	mg/L	0.10000	0.0219	107	75-125			
Nickel	0.101	0.0100	0.0003	mg/L	0.10000	0.0008	100	75-125			
Selenium	0.107	0.0100	0.0014	mg/L	0.10000	ND	107	75-125			
Silver	0.0958	0.0100	0.0003	mg/L	0.10000	ND	96	75-125			
Thallium	0.0999	0.0010	0.00005	mg/L	0.10000	ND	100	75-125			
Vanadium	0.103	0.0100	0.0014	mg/L	0.10000	ND	103	75-125			
Zinc	0.0979	0.0100	0.0013	mg/L	0.10000	ND	98	75-125			
Lithium	0.0984	0.0500	0.0011	mg/L	0.10000	0.0043	94	75-125			
<b>Matrix Spike Dup (7030796-MSD1)</b>			<b>Source: AAC0858-01</b>				Prepared: 03/27/17 Analyzed: 03/28/17				
Antimony	0.103	0.0030	0.0003	mg/L	0.10000	ND	103	75-125	4	20	
Arsenic	0.104	0.0050	0.0004	mg/L	0.10000	0.0008	103	75-125	2	20	
Barium	0.290	0.0100	0.0003	mg/L	0.10000	0.122	168	75-125	0.002	20	QM-02
Beryllium	0.0968	0.0030	0.00007	mg/L	0.10000	ND	97	75-125	6	20	
Boron	2.89	0.0400	0.0060	mg/L	1.0000	1.99	90	75-125	3	20	
Cadmium	0.102	0.0010	0.00006	mg/L	0.10000	0.00007	102	75-125	3	20	
Calcium	185	25.0	0.522	mg/L	1.0000	183	164	75-125	0.1	20	QM-02
Chromium	0.105	0.0100	0.0003	mg/L	0.10000	ND	105	75-125	2	20	
Cobalt	0.107	0.0100	0.0005	mg/L	0.10000	0.0005	106	75-125	5	20	
Copper	0.101	0.0250	0.0003	mg/L	0.10000	ND	101	75-125	3	20	
Lead	0.0950	0.0050	0.00007	mg/L	0.10000	ND	95	75-125	1	20	
Molybdenum	0.131	0.0100	0.0006	mg/L	0.10000	0.0219	109	75-125	1	20	
Nickel	0.104	0.0100	0.0003	mg/L	0.10000	0.0008	103	75-125	3	20	
Selenium	0.106	0.0100	0.0014	mg/L	0.10000	ND	106	75-125	1	20	
Silver	0.0939	0.0100	0.0003	mg/L	0.10000	ND	94	75-125	2	20	
Thallium	0.0987	0.0010	0.00005	mg/L	0.10000	ND	99	75-125	1	20	
Vanadium	0.107	0.0100	0.0014	mg/L	0.10000	ND	107	75-125	3	20	
Zinc	0.105	0.0100	0.0013	mg/L	0.10000	ND	105	75-125	7	20	
Lithium	0.0993	0.0500	0.0011	mg/L	0.10000	0.0043	95	75-125	0.9	20	



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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

**Report No.: AAC0880**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030796 - EPA 3005A</b>											
<b>Post Spike (7030796-PS1)</b>			<b>Source: AAC0858-01</b>			<b>Prepared: 03/27/17 Analyzed: 03/28/17</b>					
Antimony	101			ug/L	100.00	0.118	101	80-120			
Arsenic	106			ug/L	100.00	0.759	105	80-120			
Barium	288			ug/L	100.00	122	167	80-120			QM-02
Beryllium	90.9			ug/L	100.00	0.0019	91	80-120			
Boron	2820			ug/L	1000.0	1990	82	80-120			
Cadmium	102			ug/L	100.00	0.0663	102	80-120			
Calcium	180000			ug/L	1000.0	183000	NR	80-120			QM-02
Chromium	109			ug/L	100.00	0.212	109	80-120			
Cobalt	104			ug/L	100.00	0.542	103	80-120			
Copper	98.6			ug/L	100.00	0.225	98	80-120			
Lead	95.8			ug/L	100.00	0.0463	96	80-120			
Molybdenum	128			ug/L	100.00	21.9	106	80-120			
Nickel	102			ug/L	100.00	0.829	101	80-120			
Selenium	108			ug/L	100.00	0.530	107	80-120			
Silver	94.0			ug/L	100.00	0.0035	94	80-120			
Thallium	99.4			ug/L	100.00	0.0423	99	80-120			
Vanadium	106			ug/L	100.00	0.223	105	80-120			
Zinc	98.9			ug/L	100.00	1.11	98	80-120			
Lithium	97.5			ug/L	100.00	4.32	93	80-120			

**Batch 7030864 - EPA 7470A**

<b>Blank (7030864-BLK1)</b>					<b>Prepared: 03/29/17 Analyzed: 03/30/17</b>						
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (7030864-BS1)</b>					<b>Prepared: 03/29/17 Analyzed: 03/30/17</b>						
Mercury	0.00240	0.00050	0.000041	mg/L	2.5000E-3		96	80-120			



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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

**Report No.: AAC0880**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030864 - EPA 7470A</b>											
<b>Matrix Spike (7030864-MS1)</b>			<b>Source: AAC0880-02</b>			Prepared: 03/29/17 Analyzed: 03/30/17					
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125			
<b>Matrix Spike Dup (7030864-MSD1)</b>			<b>Source: AAC0880-02</b>			Prepared: 03/29/17 Analyzed: 03/30/17					
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125	0.3	20	
<b>Post Spike (7030864-PS1)</b>			<b>Source: AAC0880-02</b>			Prepared: 03/29/17 Analyzed: 03/30/17					
Mercury	1.72			ug/L	1.6667	-0.00214	103	80-120			



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2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

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## Legend

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### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

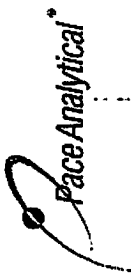
1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

### Definition of Qualifiers

**QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

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

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



Pace Analytical Services, Inc.  
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092  
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**CHAIN OF CUSTODY RECORD**

PAGE: 1 OF 1

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Joju Abraham Health McCorkle		<b>CC:</b> Mania Padilla <b>PO #:</b> GPC10684198	
<b>REQUESTED COMPLETION DATE:</b> STAN DARA TRAZ		<b>PROJECT NAME/STATE:</b> Plant Mitchell / GA			
<b>PROJECT #:</b> Phase II CER					
Collection DATE	Collection TIME	MATRIX CODE	GRA B	SAMPLE IDENTIFICATION	
3/23/17	08:30	W	✓	EB-01	
3/23/17	10:02	GW	✓	PZ-19	
3/23/17	12:12	GW	✓	PZ-32	
<del>           3/23/17 14:00 SITE            3/23/17 16:00 SITE            3/23/17 18:00 SITE            3/23/17 20:00 SITE            3/23/17 22:00 SITE         </del>					
<b>SAMPLED BY AND TITLE:</b> Janet Parker / MGR.		<b>DATE/TIME:</b> 3-23-17 / 08:30		<b>RELINQUISHED BY:</b> [Signature]	
<b>RECEIVED BY:</b>		<b>DATE/TIME:</b> 3-23-17 / 16:00		<b>RELINQUISHED BY:</b> [Signature]	
<b>RECEIVED BY LAB:</b> Adaluman		<b>DATE/TIME:</b> 03/24/17 09:00		<b>SAMPLE SHIPPED VIA:</b> UPS	
No. NA	No. NA	No. NA	No. NA	Broken	Not Present
No. NA	No. NA	No. NA	Broken	Not Present	# of Coolers
<b>LAB #:</b> AAC 0880		<b>FOR LAB USE ONLY</b>		<b>CLIENT:</b>	
<b>Entered into LIMS:</b>		<b>Tracking #:</b> 810796997793		<b>COURIER:</b>	

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H <sub>2</sub> SO <sub>4</sub> , ≤6°C
G - CLEAR GLASS	3 - HNO <sub>3</sub>
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , ≤6°C
	7 - ≤6°C not frozen

MATRIX CODES:	REMARKS/ADDITIONAL INFORMATION
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

L A B I D N U M B E R	CONTAINER TYPE	PRESERVATION	# OF CONTAINERS	ANALYSIS REQUESTED	DATE/TIME
1			4	Metals App. III & IV EPA 6020/7470	3-23-17 / 16:00
2			4	IC (Cl, F, SO <sub>4</sub> ) EPA 300.0	
3			4	TDS SM 2540C	
				Radium 226 & 228 SW-846 9315/9320	

Pace COC Revised.mlx



**PACE ANALYTICAL SERVICES, LLC.**

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**LOG-IN CHECKLIST**

**Printed: 3/27/2017 11:15:38AM**

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 03/24/17 09:00

**Work Order:** AAC0880

**Logged In By:** Mohammad M. Rahman

**OBSERVATIONS**

**#Samples:** 3

**#Containers:** 12

**Minimum Temp(C):** 1.0

**Maximum Temp(C):** 1.0

**Custody Seal(s) Used:** Yes

**CHECKLIST ITEMS**

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

**Comments:**

April 19, 2017

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: AAC0880 Plant Mitchell  
Pace Project No.: 30214377

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on March 28, 2017. 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,



Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
(724)850-5612  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: AAC0880 Plant Mitchell

Pace Project No.: 30214377

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: AAC0880 Plant Mitchell  
Pace Project No.: 30214377

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30214377001	EB-01	Water	03/23/17 08:30	03/28/17 10:10
30214377002	PZ-19	Water	03/23/17 10:02	03/28/17 10:10
30214377003	PZ-32	Water	03/23/17 12:12	03/28/17 10:10

## REPORT OF LABORATORY ANALYSIS

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**SAMPLE ANALYTE COUNT**

Project: AAC0880 Plant Mitchell  
Pace Project No.: 30214377

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30214377001	EB-01	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214377002	PZ-19	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214377003	PZ-32	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1

**REPORT OF LABORATORY ANALYSIS**

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC0880 Plant Mitchell  
Pace Project No.: 30214377

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	<b>-0.0424 ± 0.0626 (0.250)</b> C:76% T:NA	pCi/L	04/07/17 08:32	13982-63-3	
Radium-228		EPA 9320	<b>0.563 ± 0.430 (0.852)</b> C:77% T:78%	pCi/L	04/13/17 12:27	15262-20-1	
Total Radium		Total Radium Calculation	<b>0.563 ± 0.493 (1.10)</b>	pCi/L	04/19/17 06:37	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	<b>0.195 ± 0.129 (0.171)</b> C:93% T:NA	pCi/L	04/07/17 10:17	13982-63-3	
Radium-228		EPA 9320	<b>0.871 ± 0.442 (0.774)</b> C:78% T:80%	pCi/L	04/13/17 12:27	15262-20-1	
Total Radium		Total Radium Calculation	<b>1.07 ± 0.571 (0.945)</b>	pCi/L	04/19/17 06:37	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	<b>0.142 ± 0.174 (0.369)</b> C:83% T:NA	pCi/L	04/07/17 10:17	13982-63-3	
Radium-228		EPA 9320	<b>0.236 ± 0.358 (0.773)</b> C:79% T:80%	pCi/L	04/13/17 12:27	15262-20-1	
Total Radium		Total Radium Calculation	<b>0.378 ± 0.532 (1.14)</b>	pCi/L	04/19/17 06:37	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC0880 Plant Mitchell

Pace Project No.: 30214377

---

QC Batch: 253968	Analysis Method: EPA 9315
QC Batch Method: EPA 9315	Analysis Description: 9315 Total Radium
Associated Lab Samples: 30214377002, 30214377003	

---

METHOD BLANK: 1250174 Matrix: Water

Associated Lab Samples: 30214377002, 30214377003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0348 ± 0.0843 (0.204) C:94% T:NA	pCi/L	04/07/17 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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC0880 Plant Mitchell

Pace Project No.: 30214377

QC Batch: 253967

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 30214377001

METHOD BLANK: 1250173

Matrix: Water

Associated Lab Samples: 30214377001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0394 ± 0.0986 (0.239) C:91% T:NA	pCi/L	04/07/17 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: AAC0880 Plant Mitchell

Pace Project No.: 30214377

QC Batch: 254543

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30214377001, 30214377002, 30214377003

METHOD BLANK: 1253320

Matrix: Water

Associated Lab Samples: 30214377001, 30214377002, 30214377003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.123 ± 0.298 (0.731) C:79% T:79%	pCi/L	04/13/17 12:29	

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: AAC0880 Plant Mitchell  
Pace Project No.: 30214377

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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WO#: 30214377



Chain of Custody



Results Requested By: 4/19/2017

Owner Received Date:

Plant Mitchell

Workorder Name:

Workorder: AAC0880

Report To:		Subcontract To:		Requested Analysis			
Betsy McDaniel		Pace - Pittsburgh					
Pace Analytical Atlanta		1638 Roseytown Road					
110 Technology Parkway		Stes. 2,3,4					
Peachtree Corners, GA 30092		Greensburg, PA 15601					
Phone (770)-734-4200		Phone (724) 850-5600					
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	LAB USE ONLY
1	EB-01	G	3/23/2017 8:30	AAC0880-01	GW	2	001
2	PZ-19	G	3/23/2017 10:02	AAC0880-02	GW	2	002
3	PZ-32	G	3/23/2017 12:12	AAC0880-03	GW	2	003
4							
5							
6							
7							
8							
9							
10							
Transfers	Released By	Date/Time	Received By	Date/Time	Comments		
1	<i>M. Goldman</i>	3/27/17	<i>M. Pace</i>	3/28/17 10:10		Radium 226, 228, Total	
2							
3							

Cooler Temperature on Receipt N/A °C      Custody Seal Y or N      Received on Ice Y or N      Sample Intact Y or N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC

This chain of custody is considered complete as is since this information is available in the owner laboratory.

**CHAIN OF CUSTODY RECORD**

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

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Jolu Abraham Health McCorkle PO #: GPC10684198		<b>PROJECT #:</b> Phase I CCR		<b>PROJECT NAME/STATE:</b> Plant Mitchell / GA	
Collection DATE	Collection TIME	MATRIX CODE	GRA B	SAMPLE IDENTIFICATION	ANALYSIS REQUESTED	CONTAINER TYPE	LAB #
3/23/17	08:30	W		1EB-01	IC (Cl, F, SO4) EPA 300.0 TDS 5M 2540C Radium 226 & 228 SW-846 9315/9320	P 3 P 7 P 7 P 3	1
3/23/17	10:02	GW		1PZ-19	IC (Cl, F, SO4) EPA 300.0 TDS 5M 2540C Radium 226 & 228 SW-846 9315/9320	P 3 P 7 P 7 P 3	2
3/23/17	12:12	GW		1PZ-32	IC (Cl, F, SO4) EPA 300.0 TDS 5M 2540C Radium 226 & 228 SW-846 9315/9320	P 3 P 7 P 7 P 3	3
CONTAINERS → 4 → 4 → 4							
RELINQUISHED BY: <i>[Signature]</i> DATE/TIME: 3-23-17 16:00 RELINQUISHED BY: <i>[Signature]</i> DATE/TIME: 3-23-17 16:00							
SAMPLED BY AND TITLE: <i>[Signature]</i> DATE/TIME: 3-23-17 08:30 RECEIVED BY: <i>[Signature]</i> DATE/TIME: 3-23-17 16:00							
RECEIVED BY LAB: <i>[Signature]</i> DATE/TIME: 03/24/17 09:00 Temperature: 1°C Yes No NA Yes No NA Yes No NA							
SAMPLE SHIPPED VIA: UPS (Fed-Ex) Courier # of Coolers Broken Not Present							
CLIENT: OTHER FS Cooler ID:							
FOR LAB USE ONLY LAB #: AAC0880 Entered into LIMS: 810796997793 Tracking #:							

Pace COC Revised.xlsx

Sample Condition Upon Receipt Pittsburgh

RTB



Client Name: Pace GA Project # 30214377

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 6812 5103 2675

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

Thermometer Used N/A Type of Ice: Wet Blue None

Cooler Temperature Observed Temp N/A °C Correction Factor: N/A °C Final Temp: N/A °C  
Temp should be above freezing to 6°C

Date and Initials of person examining contents: RTB 3/28/17

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC:	X			5.
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used:	X			
Containers Intact:	X			11.
Orthophosphate field filtered			X	12.
Organic Samples checked for dechlorination:			X	13.
Filtered volume received for Dissolved tests			X	14.
All containers have been checked for preservation.	X			15.
All containers needing preservation are found to be in compliance with EPA recommendation.	X			
exceptions: VOA, coliform, TOC, O&G, Phenolics				
				Initial when completed: <u>3/28/17 RTB</u> Date/time of preservation: _____
				Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):			X	16.
Trip Blank Present:			X	17.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: <u>RTB</u> Date: <u>3/28/17</u>

PHC2

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

A check in this box indicates that additional information has been stored in ereports.

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)  
\*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

# Quality Control Sample Performance Assessment



Test: Ra-226  
Analyst: JC2  
Date: 4/4/2017  
Worklist: 34920  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1250173
MB Concentration:	0.039
M/B Counting Uncertainty:	0.098
MB MDC:	0.239
MB Numerical Performance Indicator:	0.78
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	4/7/2017
Spike I.D.:	17-003
Spike Concentration (pCi/mL):	38.230
Volume Used (mL):	0.25
Aliquot Volume (L, g, F):	0.504
Target Conc. (pCi/L, g, F):	18.984
Uncertainty (Calculated):	0.892
Result (pCi/L, g, F):	15.009
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.095
Numerical Performance Indicator:	-5.48
Percent Recovery:	79.15%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS34920
Duplicate Sample I.D.:	LCS34920
Sample Result (pCi/L, g, F):	15.009
Sample Duplicate Result (pCi/L, g, F):	1.096
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	15.339
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	-0.425
Duplicate RPD:	2.17%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

*[Signature]* 4/18/17

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	Sample I.D.
Sample MS I.D.	Sample MS I.D.
Sample MSD I.D.	Sample MSD I.D.
Spike I.D.:	Spike I.D.:
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike Volume Used in MS (mL):
Spike Volume Used in MSD (mL):	MS Aliquot (L, g, F):
MS Target Conc. (pCi/L, g, F):	MSD Aliquot (L, g, F):
MSD Target Conc. (pCi/L, g, F):	Spike Uncertainty (calculated):
Spike uncertainty (calculated):	Sample Result:
Sample Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Result:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	MS Numerical Performance Indicator:
MS Numerical Performance Indicator:	MS Percent Recovery:
MS Percent Recovery:	MS Status vs Numerical Indicator:
MS Status vs Numerical Indicator:	MS Status vs Recovery:
MS Status vs Recovery:	MSD Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.	Sample I.D.
Sample MS I.D.	Sample MS I.D.
Sample MSD I.D.	Sample MSD I.D.
Spike I.D.:	Spike I.D.:
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike Volume Used in MS (mL):
Spike Volume Used in MSD (mL):	MS Aliquot (L, g, F):
MS Target Conc. (pCi/L, g, F):	MSD Aliquot (L, g, F):
MSD Target Conc. (pCi/L, g, F):	Spike Uncertainty (calculated):
Spike uncertainty (calculated):	Sample Result:
Sample Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Result:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	MS Numerical Performance Indicator:
MS Numerical Performance Indicator:	MS Percent Recovery:
MS Percent Recovery:	MS Status vs Numerical Indicator:
MS Status vs Numerical Indicator:	MS Status vs Recovery:
MS Status vs Recovery:	MSD Status vs Recovery:

# Quality Control Sample Performance Assessment



Test: Ra-226  
Analyst: JC2  
Date: 4/4/2017  
Worklist: 34921  
Matrix: DW

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

**Method Blank Assessment**

MB Sample ID	1250174
MB concentration:	0.035
MB Counting Uncertainty:	0.084
MB MDC:	0.204
MB Numerical Performance Indicator:	0.81
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

**Laboratory Control Sample Assessment**

LCS (Y or N)?	Y
LCS34921	LCS34921
Count Date:	4/7/2017
Spike I.D.:	17-003
Spike Concentration (pCi/mL):	38.230
Volume Used (mL):	0.25
Aliquot Volume (L, g, F):	0.510
Target Conc. (pCi/L, g, F):	18.715
Uncertainty (Calculated):	0.881
Result (pCi/L, g, F):	15.468
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.007
Numerical Performance Indicator:	-4.79
Percent Recovery:	82.55%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

**Duplicate Sample Assessment**

Sample I.D.:	LCS34921
Duplicate Sample I.D.:	LCS34921
Sample Result (pCi/L, g, F):	15.468
Sample Result Counting Uncertainty (pCi/L, g, F):	1.007
Sample Duplicate Result (pCi/L, g, F):	15.332
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.026
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	0.186
Duplicate RPD:	0.88%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Spike I.D.:

MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
Spike Volume Used in MS (mL):  
Spike Volume Used in MSD (mL):  
MS Aliquot (L, g, F):  
MS Target Conc. (pCi/L, g, F):  
MSD Aliquot (L, g, F):  
MSD Target Conc. (pCi/L, g, F):  
Spike uncertainty (calculated):

Sample Result Counting Uncertainty (pCi/L, g, F):  
Sample Result:  
Sample Matrix Spike Result:  
Sample Matrix Spike Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Sample Matrix Spike Duplicate Uncertainty (pCi/L, g, F):  
MS Numerical Performance Indicator:  
MSD Numerical Performance Indicator:  
MS Percent Recovery:  
MSD Percent Recovery:  
MS Status vs Numerical Indicator:  
MSD Status vs Numerical Indicator:  
MS Status vs Recovery:  
MSD Status vs Recovery:

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:

Sample Matrix Spike Result:  
Sample Matrix Spike Duplicate Result:  
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):  
Duplicate Numerical Performance Indicator:  
MS/MSD Duplicate RPD:  
MS/MSD Duplicate Status vs Numerical Indicator:  
MS/MSD Duplicate Status vs RPD:

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

Comments:

*Handwritten signature*



# Quality Control Sample Performance Assessment

Test: Ra-228  
Analyst: JJY  
Date: 4/8/2017  
Worklist: 34998  
Matrix: DW

**Method Blank Assessment**

MB Sample ID: 1253320  
MB Concentration: -0.123  
MB Counting Uncertainty: 0.297  
MB MDC: 0.731  
MB Numerical Performance Indicator: -0.81  
MB Status vs Numerical Indicator: N/A  
MB Status vs. MDC: Pass

**Laboratory Control Sample Assessment**

Count Date:	LCSD (Y or N)?
4/13/2017	LCSD34998
17-005	4/13/2017
24.795	17-005
0.20	24.795
0.812	0.20
6.108	0.815
0.440	6.085
5.638	0.438
0.731	6.026
-1.08	0.847
92.30%	-0.12
N/A	99.03%
Pass	N/A
Pass	Pass

Count Date: 4/13/2017  
Spike I.D.: 17-005  
Spike Concentration (pCi/mL): 24.795  
Volume Used (mL): 0.20  
Aliquot Volume (L, g, F): 0.812  
Target Conc. (pCi/L, g, F): 6.108  
Uncertainty (Calculated): 0.440  
Result (pCi/L, g, F): 5.638  
LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.731  
Numerical Performance Indicator: -1.08  
Percent Recovery: 92.30%  
Status vs Numerical Indicator: N/A  
Status vs Recovery: Pass

**Duplicate Sample Assessment**

Sample I.D.: LCS34998  
Duplicate Sample I.D.: LCS34998  
Sample Result (pCi/L, g, F): 5.638  
Sample Duplicate Result (pCi/L, g, F): 0.731  
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 6.026  
Are sample and/or duplicate results below MDC? NO  
Duplicate Numerical Performance Indicator: -0.690  
Duplicate Status vs Numerical Indicator: 7.03%  
Duplicate Status vs RPD: N/A  
Pass

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

Comments:

*Ally Johnson*

Analyst Must Manually Enter All Fields Highlighted in Yellow.

**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Spike I.D.:  
MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
Spike Volume Used in MS (mL):  
Spike Volume Used in MSD (mL):  
MS Aliquot (L, g, F):  
MS Target Conc. (pCi/L, g, F):  
MSD Aliquot (L, g, F):  
MSD Target Conc. (pCi/L, g, F):  
Spike uncertainty (calculated):  
Sample Result:  
Sample Result Counting Uncertainty (pCi/L, g, F):  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
MS Numerical Performance Indicator:  
MSD Numerical Performance Indicator:  
MS Percent Recovery:  
MSD Percent Recovery:  
MS Status vs Numerical Indicator:  
MSD Status vs Numerical Indicator:  
MS Status vs Recovery:  
MSD Status vs Recovery:

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Spike I.D.:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Result:  
Sample Matrix Spike Duplicate Result:  
Duplicate Numerical Performance Indicator:  
Duplicate Status vs Numerical Indicator:  
MS/MSD Duplicate Status vs RPD:  
MS/MSD Duplicate Status vs RPD:



**PACE ANALYTICAL SERVICES, LLC.**

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

**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AAC0881**

**March 31, 2017**

**Project: CCR Event**

**Project #: Plant Mitchell**

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

Approved:

A handwritten signature in black ink that reads "Betsy McDaniel" written over a horizontal line.

Project Manager

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



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
FB-01	AAC0881-01	Water	03/23/17 08:40	03/24/17 09:00
PZ-33	AAC0881-02	Ground Water	03/23/17 15:20	03/24/17 09:00





**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0881

Project: CCR Event

Client ID: FB-01

Lab Number ID: AAC0881-01

Date/Time Sampled: 3/23/2017 8:40:00AM

Date/Time Received: 3/24/2017 9:00:00AM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	03/28/17 11:50	03/28/17 11:50	7030845	JPT
<b>Inorganic Anions</b>											
Chloride	0.08	0.25	0.01	mg/L	EPA 300.0	J	1	03/28/17 09:48	03/29/17 02:26	7030839	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	03/28/17 09:48	03/29/17 02:26	7030839	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	03/28/17 09:48	03/29/17 02:26	7030839	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:11	7030796	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:11	7030796	CSW
Barium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:11	7030796	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:11	7030796	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:11	7030796	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:11	7030796	CSW
Calcium	0.0315	0.500	0.0104	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 22:11	7030796	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:11	7030796	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:11	7030796	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:11	7030796	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:11	7030796	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:11	7030796	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:11	7030796	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:11	7030796	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/29/17 13:10	03/30/17 13:50	7030864	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0881

Project: CCR Event

Client ID: PZ-33

Lab Number ID: AAC0881-02

Date/Time Sampled: 3/23/2017 3:20:00PM

Date/Time Received: 3/24/2017 9:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	430	25	10	mg/L	SM 2540 C		1	03/28/17 11:50	03/28/17 11:50	7030845	JPT
<b>Inorganic Anions</b>											
Chloride	6.2	0.25	0.01	mg/L	EPA 300.0		1	03/28/17 09:48	03/29/17 02:46	7030839	RLC
Fluoride	0.18	0.30	0.004	mg/L	EPA 300.0	J	1	03/28/17 09:48	03/29/17 02:46	7030839	RLC
Sulfate	100	5.0	0.46	mg/L	EPA 300.0		5	03/28/17 09:48	03/29/17 19:08	7030839	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:22	7030796	CSW
Arsenic	0.0007	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 22:22	7030796	CSW
Barium	0.0753	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:22	7030796	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:22	7030796	CSW
Boron	0.396	0.0400	0.0060	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:22	7030796	CSW
Cadmium	0.0001	0.0010	0.00006	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 22:22	7030796	CSW
Calcium	122	25.0	0.522	mg/L	EPA 6020B		50	03/27/17 10:30	03/28/17 22:28	7030796	CSW
Chromium	0.0017	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 22:22	7030796	CSW
Cobalt	0.0008	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 22:22	7030796	CSW
Lead	0.00009	0.0050	0.00007	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 22:22	7030796	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:22	7030796	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:22	7030796	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 22:22	7030796	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 22:22	7030796	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/29/17 13:10	03/30/17 13:58	7030864	MTC



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March 31, 2017

**Report No.: AAC0881**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030845 - SM 2540 C</b>											
<b>Blank (7030845-BLK1)</b>						Prepared & Analyzed: 03/28/17					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (7030845-BS1)</b>						Prepared & Analyzed: 03/28/17					
Total Dissolved Solids	406	25	10	mg/L	400.00		102	84-108			
<b>Duplicate (7030845-DUP1)</b>						Source: AAC0881-01 Prepared & Analyzed: 03/28/17					
Total Dissolved Solids	ND	25	10	mg/L		ND			6	10	
<b>Duplicate (7030845-DUP2)</b>						Source: AAC0905-03 Prepared & Analyzed: 03/28/17					
Total Dissolved Solids	273	25	10	mg/L		291			6	10	



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**Report No.: AAC0881**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030839 - EPA 300.0</b>											
<b>Blank (7030839-BLK1)</b>						Prepared & Analyzed: 03/28/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
<b>LCS (7030839-BS1)</b>						Prepared & Analyzed: 03/28/17					
Chloride	9.99	0.25	0.01	mg/L	10.010		100	90-110			
Fluoride	10.3	0.30	0.004	mg/L	10.020		103	90-110			
Sulfate	10.1	1.0	0.09	mg/L	10.020		101	90-110			
<b>Matrix Spike (7030839-MS1)</b>						Source: AAC0858-02 Prepared & Analyzed: 03/28/17					
Chloride	83.2	0.25	0.01	mg/L	10.010	81.8	14	90-110			QM-02
Fluoride	10.7	0.30	0.004	mg/L	10.020	0.34	104	90-110			
Sulfate	145	1.0	0.09	mg/L	10.020	150	NR	90-110			QM-02
<b>Matrix Spike (7030839-MS2)</b>						Source: AAC0858-08 Prepared: 03/28/17 Analyzed: 03/29/17					
Chloride	125	0.25	0.01	mg/L	10.010	128	NR	90-110			QM-02
Fluoride	10.9	0.30	0.004	mg/L	10.020	0.42	104	90-110			
Sulfate	181	1.0	0.09	mg/L	10.020	189	NR	90-110			QM-02
<b>Matrix Spike Dup (7030839-MSD1)</b>						Source: AAC0858-02 Prepared & Analyzed: 03/28/17					
Chloride	82.8	0.25	0.01	mg/L	10.010	81.8	10	90-110	0.5	15	QM-02
Fluoride	10.8	0.30	0.004	mg/L	10.020	0.34	105	90-110	0.8	15	
Sulfate	145	1.0	0.09	mg/L	10.020	150	NR	90-110	0.04	15	QM-02



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**Report No.: AAC0881**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030796 - EPA 3005A</b>											
<b>Blank (7030796-BLK1)</b>											
						Prepared: 03/27/17 Analyzed: 03/28/17					
Antimony	ND	0.0030	0.0003	mg/L							
Arsenic	ND	0.0050	0.0004	mg/L							
Barium	ND	0.0100	0.0003	mg/L							
Beryllium	ND	0.0030	0.00007	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.00006	mg/L							
Calcium	ND	0.500	0.0104	mg/L							
Chromium	ND	0.0100	0.0003	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	0.0003	0.0250	0.0003	mg/L							J
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0006	mg/L							
Nickel	ND	0.0100	0.0003	mg/L							
Selenium	ND	0.0100	0.0014	mg/L							
Silver	ND	0.0100	0.0003	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0014	mg/L							
Zinc	0.0014	0.0100	0.0013	mg/L							J
Lithium	ND	0.0500	0.0011	mg/L							
<b>LCS (7030796-BS1)</b>											
						Prepared: 03/27/17 Analyzed: 03/28/17					
Antimony	0.102	0.0030	0.0003	mg/L	0.10000		102	80-120			
Arsenic	0.0993	0.0050	0.0004	mg/L	0.10000		99	80-120			
Barium	0.0993	0.0100	0.0003	mg/L	0.10000		99	80-120			
Beryllium	0.103	0.0030	0.00007	mg/L	0.10000		103	80-120			
Boron	1.00	0.0400	0.0060	mg/L	1.0000		100	80-120			
Cadmium	0.103	0.0010	0.00006	mg/L	0.10000		103	80-120			
Calcium	1.00	0.500	0.0104	mg/L	1.0000		100	80-120			
Chromium	0.101	0.0100	0.0003	mg/L	0.10000		101	80-120			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000		102	80-120			
Copper	0.104	0.0250	0.0003	mg/L	0.10000		104	80-120			
Lead	0.0994	0.0050	0.00007	mg/L	0.10000		99	80-120			
Molybdenum	0.102	0.0100	0.0006	mg/L	0.10000		102	80-120			
Nickel	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Selenium	0.101	0.0100	0.0014	mg/L	0.10000		101	80-120			
Silver	0.0993	0.0100	0.0003	mg/L	0.10000		99	80-120			
Thallium	0.102	0.0010	0.00005	mg/L	0.10000		102	80-120			
Vanadium	0.0967	0.0100	0.0014	mg/L	0.10000		97	80-120			
Zinc	0.101	0.0100	0.0013	mg/L	0.10000		101	80-120			
Lithium	0.102	0.0500	0.0011	mg/L	0.10000		102	80-120			



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March 31, 2017

**Report No.: AAC0881**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030796 - EPA 3005A</b>											
<b>Matrix Spike (7030796-MS1)</b>			<b>Source: AAC0858-01</b>				Prepared: 03/27/17 Analyzed: 03/28/17				
Antimony	0.106	0.0030	0.0003	mg/L	0.10000	ND	106	75-125			
Arsenic	0.106	0.0050	0.0004	mg/L	0.10000	0.0008	106	75-125			
Barium	0.290	0.0100	0.0003	mg/L	0.10000	0.122	168	75-125			QM-02
Beryllium	0.0915	0.0030	0.00007	mg/L	0.10000	ND	91	75-125			
Boron	2.79	0.0400	0.0060	mg/L	1.0000	1.99	80	75-125			
Cadmium	0.0987	0.0010	0.00006	mg/L	0.10000	0.00007	99	75-125			
Calcium	185	25.0	0.522	mg/L	1.0000	183	185	75-125			QM-02
Chromium	0.103	0.0100	0.0003	mg/L	0.10000	ND	103	75-125			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	0.0005	101	75-125			
Copper	0.0976	0.0250	0.0003	mg/L	0.10000	ND	98	75-125			
Lead	0.0960	0.0050	0.00007	mg/L	0.10000	ND	96	75-125			
Molybdenum	0.129	0.0100	0.0006	mg/L	0.10000	0.0219	107	75-125			
Nickel	0.101	0.0100	0.0003	mg/L	0.10000	0.0008	100	75-125			
Selenium	0.107	0.0100	0.0014	mg/L	0.10000	ND	107	75-125			
Silver	0.0958	0.0100	0.0003	mg/L	0.10000	ND	96	75-125			
Thallium	0.0999	0.0010	0.00005	mg/L	0.10000	ND	100	75-125			
Vanadium	0.103	0.0100	0.0014	mg/L	0.10000	ND	103	75-125			
Zinc	0.0979	0.0100	0.0013	mg/L	0.10000	ND	98	75-125			
Lithium	0.0984	0.0500	0.0011	mg/L	0.10000	0.0043	94	75-125			
<b>Matrix Spike Dup (7030796-MSD1)</b>			<b>Source: AAC0858-01</b>				Prepared: 03/27/17 Analyzed: 03/28/17				
Antimony	0.103	0.0030	0.0003	mg/L	0.10000	ND	103	75-125	4	20	
Arsenic	0.104	0.0050	0.0004	mg/L	0.10000	0.0008	103	75-125	2	20	
Barium	0.290	0.0100	0.0003	mg/L	0.10000	0.122	168	75-125	0.002	20	QM-02
Beryllium	0.0968	0.0030	0.00007	mg/L	0.10000	ND	97	75-125	6	20	
Boron	2.89	0.0400	0.0060	mg/L	1.0000	1.99	90	75-125	3	20	
Cadmium	0.102	0.0010	0.00006	mg/L	0.10000	0.00007	102	75-125	3	20	
Calcium	185	25.0	0.522	mg/L	1.0000	183	164	75-125	0.1	20	QM-02
Chromium	0.105	0.0100	0.0003	mg/L	0.10000	ND	105	75-125	2	20	
Cobalt	0.107	0.0100	0.0005	mg/L	0.10000	0.0005	106	75-125	5	20	
Copper	0.101	0.0250	0.0003	mg/L	0.10000	ND	101	75-125	3	20	
Lead	0.0950	0.0050	0.00007	mg/L	0.10000	ND	95	75-125	1	20	
Molybdenum	0.131	0.0100	0.0006	mg/L	0.10000	0.0219	109	75-125	1	20	
Nickel	0.104	0.0100	0.0003	mg/L	0.10000	0.0008	103	75-125	3	20	
Selenium	0.106	0.0100	0.0014	mg/L	0.10000	ND	106	75-125	1	20	
Silver	0.0939	0.0100	0.0003	mg/L	0.10000	ND	94	75-125	2	20	
Thallium	0.0987	0.0010	0.00005	mg/L	0.10000	ND	99	75-125	1	20	
Vanadium	0.107	0.0100	0.0014	mg/L	0.10000	ND	107	75-125	3	20	
Zinc	0.105	0.0100	0.0013	mg/L	0.10000	ND	105	75-125	7	20	
Lithium	0.0993	0.0500	0.0011	mg/L	0.10000	0.0043	95	75-125	0.9	20	



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March 31, 2017

**Report No.: AAC0881**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030796 - EPA 3005A</b>											
<b>Post Spike (7030796-PS1)</b>			<b>Source: AAC0858-01</b>			<b>Prepared: 03/27/17 Analyzed: 03/28/17</b>					
Antimony	101			ug/L	100.00	0.118	101	80-120			
Arsenic	106			ug/L	100.00	0.759	105	80-120			
Barium	288			ug/L	100.00	122	167	80-120			QM-02
Beryllium	90.9			ug/L	100.00	0.0019	91	80-120			
Boron	2820			ug/L	1000.0	1990	82	80-120			
Cadmium	102			ug/L	100.00	0.0663	102	80-120			
Calcium	180000			ug/L	1000.0	183000	NR	80-120			QM-02
Chromium	109			ug/L	100.00	0.212	109	80-120			
Cobalt	104			ug/L	100.00	0.542	103	80-120			
Copper	98.6			ug/L	100.00	0.225	98	80-120			
Lead	95.8			ug/L	100.00	0.0463	96	80-120			
Molybdenum	128			ug/L	100.00	21.9	106	80-120			
Nickel	102			ug/L	100.00	0.829	101	80-120			
Selenium	108			ug/L	100.00	0.530	107	80-120			
Silver	94.0			ug/L	100.00	0.0035	94	80-120			
Thallium	99.4			ug/L	100.00	0.0423	99	80-120			
Vanadium	106			ug/L	100.00	0.223	105	80-120			
Zinc	98.9			ug/L	100.00	1.11	98	80-120			
Lithium	97.5			ug/L	100.00	4.32	93	80-120			

**Batch 7030864 - EPA 7470A**

<b>Blank (7030864-BLK1)</b>				<b>Prepared: 03/29/17 Analyzed: 03/30/17</b>							
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (7030864-BS1)</b>				<b>Prepared: 03/29/17 Analyzed: 03/30/17</b>							
Mercury	0.00240	0.00050	0.000041	mg/L	2.5000E-3		96	80-120			



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**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7030864 - EPA 7470A</b>											
<b>Matrix Spike (7030864-MS1)</b>			<b>Source: AAC0880-02</b>			Prepared: 03/29/17 Analyzed: 03/30/17					
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125			
<b>Matrix Spike Dup (7030864-MSD1)</b>			<b>Source: AAC0880-02</b>			Prepared: 03/29/17 Analyzed: 03/30/17					
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125	0.3	20	
<b>Post Spike (7030864-PS1)</b>			<b>Source: AAC0880-02</b>			Prepared: 03/29/17 Analyzed: 03/30/17					
Mercury	1.72			ug/L	1.6667	-0.00214	103	80-120			





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March 31, 2017

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## Legend

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### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

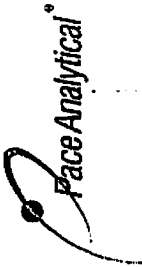
1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

### Definition of Qualifiers

**QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

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

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



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

**CHAIN OF CUSTODY RECORD**

PAGE: 1 OF 1

CLIENT NAME: Georgia Power  
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239  
REPORT TO: Joju Abraham Heath McCorkle  
REQUESTED COMPLETION DATE: STANFORD TROT  
PROJECT NAME/STATE: Plant Mitchell / GA  
CC: Mania Padilla  
PO #: GPC10684198

CONTAINER TYPE	P	P	P	P	P	P	P	P	P	ANALYSIS REQUESTED	CONTAINER TYPE	P	P	P	P	P	P	P	P	P
LAB	3	7	7	7	7	7	7	7	3	Metals App. III & IV EPA 6020/7470 IC (Cl, F, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 GW-646 9315/9320	LAB	3	7	7	7	7	7	7	7	3
LAB	4	1	1	1	1	1	1	1	2		LAB	4	1	1	1	1	1	2		
LAB	4	1	1	1	1	1	1	1	2		LAB	4	1	1	1	1	1	2		

PROJECT #: Phase II CCR  
Collection DATE: 3/23/17 08:40 W  
Collection TIME: 08:40 W  
Collection DATE: 3/23/17 15:20 GW  
Collection TIME: 15:20 GW  
MATRIX CODE\*: W  
MATRIX CODE\*: GW  
SAMPLE IDENTIFICATION: FB-01  
SAMPLE IDENTIFICATION: PZ-33  
RECEIVED BY: [Signature] DATE/TIME: 3/23/17 08:40  
RECEIVED BY: [Signature] DATE/TIME: 3/23/17 15:20

CONTAINER TYPE: P - PLASTIC, A - AMBER GLASS, G - CLEAR GLASS, V - VOA VIAL, S - STERILE, O - OTHER  
PRESERVATION: 1 - HCl, 56°C, 2 - H2SO4, 56°C, 3 - HNO3, 4 - NaOH, 56°C, 5 - NaOH/ZnAc, 56°C, 6 - Na2S2O3, 56°C, 7 - 56°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: FOR LAB USE ONLY  
LAB #: AAC0881  
Entered into LIMS: 810796997808  
Tracking #: 810796997808

RECEIVED BY LAB: [Signature] DATE/TIME: 3/23/17 08:40  
RECEIVED BY: [Signature] DATE/TIME: 3/23/17 15:20  
SAMPLED BY AND TITLE: [Signature] DATE/TIME: 3/23/17 08:40  
RECEIVED BY: [Signature] DATE/TIME: 3/23/17 15:20  
SAMPLE SHIPPED VIA: UPS (Fed-Ex) # of Coolers: 1  
COURIER: [Signature] CLIENT: FS  
Cooler ID: [Signature]  
Temperature: 10C Min: 10C Max: 10C  
Checked: [Signature] No: NA Yes: No NA: NA  
Pace COC Revised.xlsx



**PACE ANALYTICAL SERVICES, LLC.**

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

**LOG-IN CHECKLIST**

**Printed: 3/27/2017 11:24:34AM**

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 03/24/17 09:00

**Work Order:** AAC0881

**Logged In By:** Mohammad M. Rahman

**OBSERVATIONS**

**#Samples:** 2

**#Containers:** 8

**Minimum Temp(C):** 1.0

**Maximum Temp(C):** 1.0

**Custody Seal(s) Used:** Yes

**CHECKLIST ITEMS**

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

**Comments:**

April 19, 2017

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: AAC0881 Plant Mitchell  
Pace Project No.: 30214379

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on March 28, 2017. 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,



Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
(724)850-5612  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
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## CERTIFICATIONS

Project: AAC0881 Plant Mitchell

Pace Project No.: 30214379

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: AAC0881 Plant Mitchell  
Pace Project No.: 30214379

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30214379001	FB-01	Water	03/23/17 08:40	03/28/17 10:10
30214379002	PZ-33	Water	03/23/17 15:30	03/28/17 10:10

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: AAC0881 Plant Mitchell

Pace Project No.: 30214379

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30214379001	FB-01	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214379002	PZ-33	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC0881 Plant Mitchell

Pace Project No.: 30214379

**Sample: FB-01**      **Lab ID: 30214379001**      Collected: 03/23/17 08:40      Received: 03/28/17 10:10      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>-0.0508 ± 0.0352 (0.186)</b> <b>C:92% T:NA</b>	pCi/L	04/04/17 08:55	13982-63-3	
Radium-228	EPA 9320	<b>0.473 ± 0.424 (0.859)</b> <b>C:73% T:77%</b>	pCi/L	04/13/17 12:27	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.473 ± 0.459 (1.05)</b>	pCi/L	04/19/17 06:37	7440-14-4	

**Sample: PZ-33**      **Lab ID: 30214379002**      Collected: 03/23/17 15:30      Received: 03/28/17 10:10      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.188 ± 0.134 (0.204)</b> <b>C:80% T:NA</b>	pCi/L	04/04/17 08:55	13982-63-3	
Radium-228	EPA 9320	<b>0.256 ± 0.396 (0.857)</b> <b>C:74% T:84%</b>	pCi/L	04/13/17 12:28	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.444 ± 0.530 (1.06)</b>	pCi/L	04/19/17 06:37	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC0881 Plant Mitchell

Pace Project No.: 30214379

QC Batch: 253625

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 30214379001, 30214379002

METHOD BLANK: 1248390

Matrix: Water

Associated Lab Samples: 30214379001, 30214379002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00202 ± 0.0654 (0.190) C:94% T:NA	pCi/L	04/03/17 14:41	

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: AAC0881 Plant Mitchell

Pace Project No.: 30214379

QC Batch: 254543

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30214379001, 30214379002

METHOD BLANK: 1253320

Matrix: Water

Associated Lab Samples: 30214379001, 30214379002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.123 ± 0.298 (0.731) C:79% T:79%	pCi/L	04/13/17 12:29	

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: AAC0881 Plant Mitchell

Pace Project No.: 30214379

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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WO#: 30214379



30214379

Chain of Custody



Workorder: AAC0881

Workorder Name: Plant Mitchell

Results Requested By: 4/19/2017

Report To:	Subcontract To:	Owner Received Date:	Requested Analysis							
Betsy McDaniel	Pace - Pittsburgh 1638 Roseytown Road Stes. 2,3,4 Greensburg, PA 15601 Phone (724) 850-5600									
Pace Analytical Atlanta										
110 Technology Parkway										
Peachtree Corners, GA 30092										
Phone (770)-734-4200										
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	Date/Time	Received By	Date/Time	Comments
1	FB-01	G	3/23/2017 8:40	AAC0881-01	GW	2				
2	PZ-33	G	3/23/2017 15:20	AAC0881-02	GW	2				
3										
4										
5										
6										
7										
8										
9										
10										
Transfers		Released By	Date/Time	Received By	Date/Time					
1		<i>M. A. ...</i>	3/27/17	Pace	3/28/17					
2										
3										

Cooler Temperature on Receipt N/A °C Custody Seal Y or N Received on Ice Y or N Sample Intact Y or N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC. This chain of custody is considered complete as is since this information is available in the owner laboratory.

Friday, June 17, 2016 11:01:34 AM

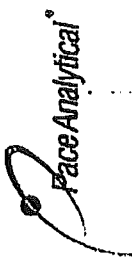
FMT-ALL-C-002rev.00 24March2009

Page 1 of 1

30214379

PAGE: 1 OF 1

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



**CHAIN OF CUSTODY RECORD**

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239 <b>REPORT TO:</b> Jouli Abraham <b>CC:</b> Maria Padilla Heath McCorkle <b>REQUESTED COMPLETION DATE:</b> STANDARD TAT <b>PO #:</b> GPC10684198 <b>PROJECT NAME/STATE:</b> Plant Mitchell / GA <b>PROJECT #:</b> Phase II CCR				<b>CONTAINER TYPE:</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER <b>PRESERVATION:</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub> , 56°C 7 - 56°C not frozen																												
<b>ANALYSIS REQUESTED:</b> CONTAINER TYPE: P P P P PRESERVATION: 3 7 7 3 # of CONTAINERS → 4 4 <table border="1"> <thead> <tr> <th>CONTAINER TYPE</th> <th>P</th> <th>P</th> <th>P</th> <th>P</th> </tr> </thead> <tbody> <tr> <td>EPA 6020/7470 Metals App. III &amp; IV</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>(C) (Cl, F, SO<sub>4</sub>) EPA 300.0</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>TDS SM 2540C</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>Radium 226 &amp; 228 SW-846 8315/8320</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> </tbody> </table>				CONTAINER TYPE	P	P	P	P	EPA 6020/7470 Metals App. III & IV	1	1	1	1	(C) (Cl, F, SO <sub>4</sub> ) EPA 300.0	1	1	1	1	TDS SM 2540C	1	1	1	1	Radium 226 & 228 SW-846 8315/8320	1	1	1	1	<b>CONTAINER TYPE:</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER <b>PRESERVATION:</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub> , 56°C 7 - 56°C not frozen			
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<b>LAB NUMBER</b> → 1 2				<b>MATRIX CODES:</b> <table border="1"> <tr> <td>DW - DRINKING WATER</td> <td>S - SOIL</td> </tr> <tr> <td>WW - WASTEWATER</td> <td>SL - SLUDGE</td> </tr> <tr> <td>GW - GROUNDWATER</td> <td>SD - SOLID</td> </tr> <tr> <td>SW - SURFACE WATER</td> <td>A - AIR</td> </tr> <tr> <td>ST - STORM WATER</td> <td>L - LIQUID</td> </tr> <tr> <td>W - WATER</td> <td>P - PRODUCT</td> </tr> </table>				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													
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<b>RECEIVED BY AND TITLE:</b> RECEIVED BY: [Signature] TITLE: [Signature] DATE/TIME: 3/23/17 / 08:40 <b>RECEIVED BY:</b> [Signature] DATE/TIME: 3/23/17 / 08:40				<b>RECEIVED BY LAB:</b> RECEIVED BY: [Signature] DATE/TIME: 3/23/17 / 08:40 <b>LAB #:</b> AAC0881 <b>Tracking #:</b> 81079699-7808																												
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Sample Condition Upon Receipt Pittsburgh

RTB



Client Name: Pace GA

Project # 30214379

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 6812 5103 2675

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

Thermometer Used N/A Type of Ice: Wet Blue None

Cooler Temperature Observed Temp N/A °C Correction Factor: N/A °C Final Temp: N/A °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: RTB 3/28/17

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC:	X			5.
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used:	X			
Containers Intact:	X			11.
Orthophosphate field filtered			X	12.
Organic Samples checked for dechlorination:			X	13.
Filtered volume received for Dissolved tests			X	14.
All containers have been checked for preservation.	X			15.
All containers needing preservation are found to be in compliance with EPA recommendation.	X			
exceptions: VOA, coliform, TOC, O&G, Phenolics				
				Initial when completed: <u>3/28/17 RTB</u> Date/time of preservation: _____
				Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):			X	16.
Trip Blank Present:			X	17.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: <u>RTB</u> Date: <u>3/28/17</u>

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

A check in this box indicates that additional information has been stored in ereports.

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)

\*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
 Analyst: JC2  
 Date: 3/31/2017  
 Worklist: 34857  
 Matrix: DW

Method Blank Assessment	
MB Sample ID	1248390
MB Concentration:	0.002
M/B Counting Uncertainty:	0.065
MB MDC:	0.190
MB Numerical Performance Indicator:	0.06
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	4/4/2017
Spike I.D.:	17-003
Spike Concentration (pCi/mL):	38.230
Volume Used (mL):	0.25
Aliquot Volume (L, g, F):	0.504
Target Conc. (pCi/L, g, F):	18.949
Uncertainty (Calculated):	0.891
Result (pCi/L, g, F):	15.378
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.910
Numerical Performance Indicator:	-5.49
Percent Recovery:	81.16%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30214099001
Duplicate Sample I.D.:	30214099001DUP
Sample Result (pCi/L, g, F):	0.087
Sample Duplicate Result (pCi/L, g, F):	0.097
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.074
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.086
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	0.207
Duplicate RPD:	16.96%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

*Amelia*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	



# Quality Control Sample Performance Assessment

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

Test: Ra-228  
Analyst: JULY  
Date: 4/8/2017  
Worklist: 34998  
Matrix: DW

**Method Blank Assessment**

MB Sample ID: 1253320  
MB Concentration: -0.123  
MIB Counting Uncertainty: 0.297  
MB MDC: 0.731  
MB Numerical Performance Indicator: -0.81  
MB Status vs Numerical Indicator: N/A  
MB Status vs MDC: Pass

**Laboratory Control Sample Assessment**

Count Date:	LCSID (Y or N)?	Y
4/13/2017	LCS34998	4/13/2017
17-005	17-005	24.795
24.795	0.20	0.815
0.20	0.812	6.085
0.812	6.108	0.438
6.108	0.440	6.026
0.440	5.638	0.847
5.638	0.731	-0.12
0.731	-1.08	99.03%
-1.08	92.30%	N/A
92.30%	N/A	Pass
N/A	Pass	

Count Date: 4/13/2017  
Spike I.D.: 17-005  
Spike Concentration (pCi/mL): 24.795  
Volume Used (mL): 0.20  
Aliquot Volume (L, g, F): 0.812  
Target Conc. (pCi/L, g, F): 6.108  
Uncertainty (Calculated): 0.440  
Result (pCi/L, g, F): 5.638  
LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.731  
Numerical Performance Indicator: -1.08  
Percent Recovery: 92.30%  
Status vs Numerical Indicator: N/A  
Status vs Recovery: Pass

**Duplicate Sample Assessment**

Sample I.D.: LCS34998  
Duplicate Sample I.D.: LCS34998  
Sample Result Counting Uncertainty (pCi/L, g, F): 5.638  
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.731  
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 6.026  
Are sample and/or duplicate results below MDC? NO  
Duplicate Numerical Performance Indicator: -0.680  
Duplicate Numerical Performance Indicator: 7.03%  
Duplicate Status vs Numerical Indicator: N/A  
Duplicate Status vs RPD: Pass

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

**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Spike I.D.:  
MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
Spike Volume Used in MS (mL):  
Spike Volume Used in MSD (mL):  
MS Aliquot (L, g, F):  
MS Target Conc. (pCi/L, g, F):  
MSD Aliquot (L, g, F):  
MSD Target Conc. (pCi/L, g, F):  
Spike uncertainty (calculated):  
Sample Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Result:  
Sample Matrix Spike Result:  
Sample Matrix Spike Duplicate Result:  
MS Numerical Performance Indicator:  
MSD Numerical Performance Indicator:  
MS Percent Recovery:  
MSD Percent Recovery:  
MS Status vs Numerical Indicator:  
MSD Status vs Numerical Indicator:  
MS Status vs Recovery:  
MSD Status vs Recovery:

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Sample Matrix Spike Result:  
Sample Matrix Spike Duplicate Result:  
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):  
Duplicate Numerical Performance Indicator:  
Duplicate Numerical Performance Indicator:  
MS/MSD Duplicate Status vs Numerical Indicator:  
MS/MSD Duplicate Status vs RPD:

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

*Handwritten signature*





**PACE ANALYTICAL SERVICES, LLC.**

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

**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AAG0332**

**July 24, 2017**

**Project: CCR Event**

**Project #:Plant Mitchell**

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

Approved:

A handwritten signature in black ink that reads "Betsy McDaniel" written over a horizontal line.

Project Manager

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



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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 24, 2017

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
PZ-1D	AAG0332-01	Ground Water	07/11/17 09:32	07/13/17 09:15
PZ-32	AAG0332-02	Ground Water	07/11/17 11:00	07/13/17 09:15
PZ-2S	AAG0332-03	Ground Water	07/11/17 13:04	07/13/17 09:15
PZ-31	AAG0332-04	Ground Water	07/11/17 11:11	07/13/17 09:15
PZ-14	AAG0332-05	Ground Water	07/11/17 14:16	07/13/17 09:15
PZ-23	AAG0332-06	Ground Water	07/11/17 15:51	07/13/17 09:15
PZ-16	AAG0332-07	Ground Water	07/11/17 14:45	07/13/17 09:15
PZ-25	AAG0332-08	Ground Water	07/11/17 16:40	07/13/17 09:15
Dup-02	AAG0332-09	Ground Water	07/11/17 00:00	07/13/17 09:15
PZ-15	AAG0332-10	Ground Water	07/12/17 08:45	07/13/17 09:15
PZ-17	AAG0332-11	Ground Water	07/12/17 10:05	07/13/17 09:15
PZ-18	AAG0332-12	Ground Water	07/12/17 12:25	07/13/17 09:15
PZ-33	AAG0332-13	Ground Water	07/12/17 11:48	07/13/17 09:15
Dup-01	AAG0332-14	Ground Water	07/12/17 00:00	07/13/17 09:15
PZ-19	AAG0332-15	Ground Water	07/12/17 14:17	07/13/17 09:15
EB-01	AAG0332-16	Water	07/12/17 13:20	07/13/17 09:15
FB-01	AAG0332-17	Water	07/12/17 13:40	07/13/17 09:15
PZ-7D	AAG0332-18	Ground Water	07/12/17 09:42	07/13/17 09:15



**PACE ANALYTICAL SERVICES, LLC.**

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Attention: Mr. Joju Abraham

July 24, 2017

**Case Narrative**

The Radium analysis by methods EPA 9315/9320 was performed by Pace-Pittsburgh, 1638 Roseytown Road - Suites 2, 3, 4, Greensburg PA 15601. The Pace-Pittsburgh lab contact is Jacquelyn Collins at 724-850-5612.



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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

July 24, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0332

Project: CCR Event

Client ID: PZ-1D

Lab Number ID: AAG0332-01

Date/Time Sampled: 7/11/2017 9:32:00AM

Date/Time Received: 7/13/2017 9:15:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	138	25	10	mg/L	SM 2540 C		1	07/17/17 19:50	07/17/17 19:50	7070376	JPT
<b>Inorganic Anions</b>											
Chloride	3.4	0.25	0.01	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 14:48	7070356	RLC
Fluoride	0.05	0.30	0.004	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 14:48	7070356	RLC
Sulfate	2.6	1.0	0.09	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 14:48	7070356	RLC
<b>Metals, Total</b>											
Antimony	0.0035	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:00	7070301	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:00	7070301	CSW
Barium	0.0305	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:00	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:00	7070301	CSW
Boron	0.0067	0.0400	0.0060	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 17:00	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:00	7070301	CSW
Calcium	47.4	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/18/17 17:06	7070301	CSW
Chromium	0.0054	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 17:00	7070301	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:00	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:00	7070301	CSW
Molybdenum	0.0018	0.0100	0.0010	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 17:00	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:00	7070301	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:00	7070301	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:00	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 11:12	7070370	MTC



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 2480 Maner Road  
 Atlanta GA, 30339

July 24, 2017

Attention: Mr. Joju Abraham

**Report No.:** AAG0332

**Project:** CCR Event

**Client ID:** PZ-32

**Lab Number ID:** AAG0332-02

**Date/Time Sampled:** 7/11/2017 11:00:00AM

**Date/Time Received:** 7/13/2017 9:15:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	162	25	10	mg/L	SM 2540 C		1	07/17/17 19:50	07/17/17 19:50	7070376	JPT
<b>Inorganic Anions</b>											
Chloride	3.1	0.25	0.01	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 15:09	7070356	RLC
Fluoride	0.02	0.30	0.004	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 15:09	7070356	RLC
Sulfate	1.8	1.0	0.09	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 15:09	7070356	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:49	7070301	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:49	7070301	CSW
Barium	0.0161	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:49	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:49	7070301	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:49	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:49	7070301	CSW
Calcium	59.7	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/18/17 17:55	7070301	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:49	7070301	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:49	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:49	7070301	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:49	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:49	7070301	CSW
Thallium	0.00007	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 17:49	7070301	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 17:49	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 11:14	7070370	MTC



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 Atlanta GA, 30339

July 24, 2017

Attention: Mr. Joju Abraham

**Report No.:** AAG0332

**Project:** CCR Event

**Client ID:** PZ-2S

**Lab Number ID:** AAG0332-03

**Date/Time Sampled:** 7/11/2017 1:04:00PM

**Date/Time Received:** 7/13/2017 9:15:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	137	25	10	mg/L	SM 2540 C		1	07/17/17 19:50	07/17/17 19:50	7070376	JPT
<b>Inorganic Anions</b>											
Chloride	3.1	0.25	0.01	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 15:30	7070356	RLC
Fluoride	0.02	0.30	0.004	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 15:30	7070356	RLC
Sulfate	1.2	1.0	0.09	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 15:30	7070356	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:01	7070301	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:01	7070301	CSW
Barium	0.0088	0.0100	0.0004	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 18:01	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:01	7070301	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:01	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:01	7070301	CSW
Calcium	50.7	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/18/17 18:06	7070301	CSW
Chromium	0.0033	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 18:01	7070301	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:01	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:01	7070301	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:01	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:01	7070301	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:01	7070301	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:01	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 11:17	7070370	MTC



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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

July 24, 2017

Attention: Mr. Joju Abraham

**Report No.:** AAG0332

**Project:** CCR Event

**Client ID:** PZ-31

**Lab Number ID:** AAG0332-04

**Date/Time Sampled:** 7/11/2017 11:11:00AM

**Date/Time Received:** 7/13/2017 9:15:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	244	25	10	mg/L	SM 2540 C		1	07/17/17 19:50	07/17/17 19:50	7070376	JPT
<b>Inorganic Anions</b>											
Chloride	4.7	0.25	0.01	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 15:51	7070356	RLC
Fluoride	0.06	0.30	0.004	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 15:51	7070356	RLC
Sulfate	4.8	1.0	0.09	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 15:51	7070356	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:12	7070301	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:12	7070301	CSW
Barium	0.0139	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:12	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:12	7070301	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:12	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:12	7070301	CSW
Calcium	86.0	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/18/17 18:18	7070301	CSW
Chromium	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 18:12	7070301	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:12	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:12	7070301	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:12	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:12	7070301	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:12	7070301	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:12	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 11:19	7070370	MTC



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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

July 24, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0332

Project: CCR Event

Client ID: PZ-14

Lab Number ID: AAG0332-05

Date/Time Sampled: 7/11/2017 2:16:00PM

Date/Time Received: 7/13/2017 9:15:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	263	25	10	mg/L	SM 2540 C		1	07/17/17 19:50	07/17/17 19:50	7070376	JPT
<b>Inorganic Anions</b>											
Chloride	5.0	0.25	0.01	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 16:13	7070356	RLC
Fluoride	0.05	0.30	0.004	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 16:13	7070356	RLC
Sulfate	2.0	1.0	0.09	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 16:13	7070356	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:23	7070301	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:23	7070301	CSW
Barium	0.0360	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:23	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:23	7070301	CSW
Boron	0.0137	0.0400	0.0060	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 18:23	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:23	7070301	CSW
Calcium	97.1	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/18/17 18:29	7070301	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:23	7070301	CSW
Cobalt	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 18:23	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:23	7070301	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:23	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:23	7070301	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:23	7070301	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:23	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 11:21	7070370	MTC





**PACE ANALYTICAL SERVICES, LLC.**

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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

July 24, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0332

Project: CCR Event

Client ID: PZ-23

Lab Number ID: AAG0332-06

Date/Time Sampled: 7/11/2017 3:51:00PM

Date/Time Received: 7/13/2017 9:15:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	414	25	10	mg/L	SM 2540 C		1	07/17/17 19:50	07/17/17 19:50	7070376	JPT
<b>Inorganic Anions</b>											
Chloride	5.7	0.25	0.01	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 16:34	7070356	RLC
Fluoride	0.05	0.30	0.004	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 16:34	7070356	RLC
Sulfate	37	1.0	0.09	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 16:34	7070356	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:35	7070301	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:35	7070301	CSW
Barium	0.0574	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:35	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:35	7070301	CSW
Boron	0.149	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:35	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:35	7070301	CSW
Calcium	139	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/18/17 18:41	7070301	CSW
Chromium	0.0016	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 18:35	7070301	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:35	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:35	7070301	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:35	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:35	7070301	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 18:35	7070301	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:35	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 11:29	7070370	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 24, 2017

**Report No.:** AAG0332

**Project:** CCR Event

**Client ID:** PZ-16

**Lab Number ID:** AAG0332-07

**Date/Time Sampled:** 7/11/2017 2:45:00PM

**Date/Time Received:** 7/13/2017 9:15:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	265	25	10	mg/L	SM 2540 C		1	07/17/17 19:50	07/17/17 19:50	7070376	JPT
<b>Inorganic Anions</b>											
Chloride	8.1	0.25	0.01	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 16:55	7070356	RLC
Fluoride	0.05	0.30	0.004	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 16:55	7070356	RLC
Sulfate	52	5.0	0.46	mg/L	EPA 300.0		5	07/16/17 11:58	07/20/17 11:18	7070356	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:58	7070301	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:58	7070301	CSW
Barium	0.0467	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:58	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:58	7070301	CSW
Boron	0.180	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:58	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:58	7070301	CSW
Calcium	77.3	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/18/17 19:03	7070301	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:58	7070301	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:58	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:58	7070301	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:58	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:58	7070301	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 18:58	7070301	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 18:58	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 11:31	7070370	MTC



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 Atlanta GA, 30339

July 24, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0332

Project: CCR Event

Client ID: PZ-25

Lab Number ID: AAG0332-08

Date/Time Sampled: 7/11/2017 4:40:00PM

Date/Time Received: 7/13/2017 9:15:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	301	25	10	mg/L	SM 2540 C		1	07/17/17 19:50	07/17/17 19:50	7070376	JPT
<b>Inorganic Anions</b>											
Chloride	3.0	0.25	0.01	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 17:16	7070356	RLC
Fluoride	0.23	0.30	0.004	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 17:16	7070356	RLC
Sulfate	51	5.0	0.46	mg/L	EPA 300.0		5	07/16/17 11:58	07/20/17 11:38	7070356	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:09	7070301	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:09	7070301	CSW
Barium	0.102	0.0500	0.0021	mg/L	EPA 6020B		5	07/14/17 12:50	07/19/17 10:45	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:09	7070301	CSW
Boron	0.194	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:09	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:09	7070301	CSW
Calcium	93.0	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/18/17 19:15	7070301	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:09	7070301	CSW
Cobalt	0.0010	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 19:09	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:09	7070301	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:09	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:09	7070301	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:09	7070301	CSW
Lithium	0.0059	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 19:09	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 11:33	7070370	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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 Atlanta GA, 30339

July 24, 2017

Attention: Mr. Joju Abraham

**Report No.:** AAG0332

**Project:** CCR Event

**Client ID:** Dup-02

**Lab Number ID:** AAG0332-09

**Date/Time Sampled:** 7/11/2017 12:00:00AM

**Date/Time Received:** 7/13/2017 9:15:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	259	25	10	mg/L	SM 2540 C		1	07/17/17 19:50	07/17/17 19:50	7070376	JPT
<b>Inorganic Anions</b>											
Chloride	8.0	0.25	0.01	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 17:38	7070356	RLC
Fluoride	0.05	0.30	0.004	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 17:38	7070356	RLC
Sulfate	51	5.0	0.46	mg/L	EPA 300.0		5	07/16/17 11:58	07/20/17 11:59	7070356	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:21	7070301	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:21	7070301	CSW
Barium	0.0458	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:21	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:21	7070301	CSW
Boron	0.175	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:21	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:21	7070301	CSW
Calcium	79.5	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/18/17 19:26	7070301	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:21	7070301	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:21	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:21	7070301	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:21	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:21	7070301	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 19:21	7070301	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:21	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 11:36	7070370	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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 Atlanta GA, 30339

July 24, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0332

Project: CCR Event

Client ID: PZ-15

Lab Number ID: AAG0332-10

Date/Time Sampled: 7/12/2017 8:45:00AM

Date/Time Received: 7/13/2017 9:15:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	308	25	10	mg/L	SM 2540 C		1	07/17/17 19:50	07/17/17 19:50	7070376	JPT
<b>Inorganic Anions</b>											
Chloride	8.0	0.25	0.01	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 17:59	7070356	RLC
Fluoride	0.23	0.30	0.004	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 17:59	7070356	RLC
Sulfate	78	5.0	0.46	mg/L	EPA 300.0		5	07/16/17 11:58	07/20/17 12:20	7070356	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:32	7070301	CSW
Arsenic	0.0006	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 19:32	7070301	CSW
Barium	0.0613	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:32	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:32	7070301	CSW
Boron	0.184	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:32	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:32	7070301	CSW
Calcium	91.4	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/18/17 19:38	7070301	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:32	7070301	CSW
Cobalt	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 19:32	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:32	7070301	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:32	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:32	7070301	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:32	7070301	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:32	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 11:38	7070370	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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 Atlanta GA, 30339

July 24, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0332

Project: CCR Event

Client ID: PZ-17

Lab Number ID: AAG0332-11

Date/Time Sampled: 7/12/2017 10:05:00AM

Date/Time Received: 7/13/2017 9:15:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	445	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
<b>Inorganic Anions</b>											
Chloride	7.4	0.25	0.01	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 19:45	7070356	RLC
Fluoride	0.21	0.30	0.004	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 19:45	7070356	RLC
Sulfate	100	10	0.92	mg/L	EPA 300.0		10	07/16/17 11:58	07/20/17 12:40	7070356	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:43	7070301	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:43	7070301	CSW
Barium	0.0805	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:43	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:43	7070301	CSW
Boron	0.278	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:43	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:43	7070301	CSW
Calcium	110	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/18/17 19:49	7070301	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:43	7070301	CSW
Cobalt	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 19:43	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:43	7070301	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:43	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:43	7070301	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 19:43	7070301	CSW
Lithium	0.0020	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 19:43	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 11:40	7070370	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

July 24, 2017

Attention: Mr. Joju Abraham

**Report No.:** AAG0332

**Project:** CCR Event

**Client ID:** PZ-18

**Lab Number ID:** AAG0332-12

**Date/Time Sampled:** 7/12/2017 12:25:00PM

**Date/Time Received:** 7/13/2017 9:15:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	432	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
<b>Inorganic Anions</b>											
Chloride	6.7	0.25	0.01	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 20:48	7070356	RLC
Fluoride	0.17	0.30	0.004	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 20:48	7070356	RLC
Sulfate	96	10	0.92	mg/L	EPA 300.0		10	07/16/17 11:58	07/20/17 13:01	7070356	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:06	7070301	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:06	7070301	CSW
Barium	0.0269	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:06	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:06	7070301	CSW
Boron	0.350	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:06	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:06	7070301	CSW
Calcium	129	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/18/17 20:12	7070301	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:06	7070301	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:06	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:06	7070301	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:06	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:06	7070301	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:06	7070301	CSW
Lithium	0.0024	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 20:06	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 11:43	7070370	MTC



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 Atlanta GA, 30339

July 24, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0332

Project: CCR Event

Client ID: PZ-33

Lab Number ID: AAG0332-13

Date/Time Sampled: 7/12/2017 11:48:00AM

Date/Time Received: 7/13/2017 9:15:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	438	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
<b>Inorganic Anions</b>											
Chloride	6.0	0.25	0.01	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 21:10	7070356	RLC
Fluoride	0.06	0.30	0.004	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 21:10	7070356	RLC
Sulfate	97	10	0.92	mg/L	EPA 300.0		10	07/16/17 11:58	07/20/17 13:22	7070356	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:18	7070301	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:18	7070301	CSW
Barium	0.0756	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:18	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:18	7070301	CSW
Boron	0.343	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:18	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:18	7070301	CSW
Calcium	124	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/18/17 20:23	7070301	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:18	7070301	CSW
Cobalt	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 20:18	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:18	7070301	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:18	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:18	7070301	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 20:18	7070301	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:18	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 11:45	7070370	MTC





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 Atlanta GA, 30339

July 24, 2017

Attention: Mr. Joju Abraham

**Report No.:** AAG0332

**Project:** CCR Event

**Client ID:** Dup-01

**Lab Number ID:** AAG0332-14

**Date/Time Sampled:** 7/12/2017 12:00:00AM

**Date/Time Received:** 7/13/2017 9:15:00AM

**Matrix:** Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	441	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
<b>Inorganic Anions</b>											
Chloride	6.1	0.25	0.01	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 21:31	7070356	RLC
Fluoride	0.04	0.30	0.004	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 21:31	7070356	RLC
Sulfate	96	10	0.92	mg/L	EPA 300.0		10	07/16/17 11:58	07/20/17 13:42	7070356	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:29	7070301	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:29	7070301	CSW
Barium	0.0725	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:29	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:29	7070301	CSW
Boron	0.357	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:29	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:29	7070301	CSW
Calcium	131	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/18/17 20:35	7070301	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:29	7070301	CSW
Cobalt	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 20:29	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:29	7070301	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:29	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:29	7070301	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 20:29	7070301	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:29	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 11:48	7070370	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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 Atlanta GA, 30339

July 24, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0332

Project: CCR Event

Client ID: PZ-19

Lab Number ID: AAG0332-15

Date/Time Sampled: 7/12/2017 2:17:00PM

Date/Time Received: 7/13/2017 9:15:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	497	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
<b>Inorganic Anions</b>											
Chloride	6.6	0.25	0.01	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 21:52	7070356	RLC
Fluoride	0.07	0.30	0.004	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 21:52	7070356	RLC
Sulfate	93	10	0.92	mg/L	EPA 300.0		10	07/16/17 11:58	07/20/17 14:03	7070356	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:40	7070301	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:40	7070301	CSW
Barium	0.0604	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:40	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:40	7070301	CSW
Boron	0.598	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:40	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:40	7070301	CSW
Calcium	145	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/18/17 20:46	7070301	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:40	7070301	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:40	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:40	7070301	CSW
Molybdenum	0.0022	0.0100	0.0010	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 20:40	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:40	7070301	CSW
Thallium	0.0004	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 20:40	7070301	CSW
Lithium	0.0130	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 20:40	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 11:50	7070370	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 24, 2017

Report No.: AAG0332

Project: CCR Event

Client ID: EB-01

Lab Number ID: AAG0332-16

Date/Time Sampled: 7/12/2017 1:20:00PM

Date/Time Received: 7/13/2017 9:15:00AM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
<b>Inorganic Anions</b>											
Chloride	0.08	0.25	0.01	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 22:13	7070356	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 22:13	7070356	RLC
Sulfate	0.10	1.0	0.09	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 22:13	7070356	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:52	7070301	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:52	7070301	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:52	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:52	7070301	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:52	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:52	7070301	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:52	7070301	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:52	7070301	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:52	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:52	7070301	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:52	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:52	7070301	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:52	7070301	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:52	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 11:57	7070370	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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 Atlanta GA, 30339

July 24, 2017

Attention: Mr. Joju Abraham

**Report No.:** AAG0332

**Project:** CCR Event

**Client ID:** FB-01

**Lab Number ID:** AAG0332-17

**Date/Time Sampled:** 7/12/2017 1:40:00PM

**Date/Time Received:** 7/13/2017 9:15:00AM

**Matrix:** Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
<b>Inorganic Anions</b>											
Chloride	0.08	0.25	0.01	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 22:35	7070356	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 22:35	7070356	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 22:35	7070356	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:58	7070301	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:58	7070301	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:58	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:58	7070301	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:58	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:58	7070301	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:58	7070301	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:58	7070301	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:58	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:58	7070301	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:58	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:58	7070301	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:58	7070301	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 20:58	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 11:59	7070370	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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 110 Technology Parkway, Peachtree Corners, GA 30092  
 (770) 734-4200 FAX (770) 734-4201

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

July 24, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0332

Project: CCR Event

Client ID: PZ-7D

Lab Number ID: AAG0332-18

Date/Time Sampled: 7/12/2017 9:42:00AM

Date/Time Received: 7/13/2017 9:15:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	374	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
<b>Inorganic Anions</b>											
Chloride	7.3	0.25	0.01	mg/L	EPA 300.0		1	07/16/17 11:58	07/16/17 22:56	7070356	RLC
Fluoride	0.02	0.30	0.004	mg/L	EPA 300.0	J	1	07/16/17 11:58	07/16/17 22:56	7070356	RLC
Sulfate	53	5.0	0.46	mg/L	EPA 300.0		5	07/16/17 11:58	07/20/17 14:24	7070356	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 21:15	7070301	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 21:15	7070301	CSW
Barium	0.0097	0.0100	0.0004	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 21:15	7070301	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 21:15	7070301	CSW
Boron	0.267	0.200	0.0298	mg/L	EPA 6020B		5	07/14/17 12:50	07/19/17 09:19	7070301	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 21:15	7070301	CSW
Calcium	119	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/18/17 21:20	7070301	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 21:15	7070301	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 21:15	7070301	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 21:15	7070301	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 21:15	7070301	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 21:15	7070301	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 21:15	7070301	CSW
Lithium	0.0033	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/18/17 21:15	7070301	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 12:02	7070370	MTC



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**Report No.: AAG0332**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7070376 - SM 2540 C</b>											
<b>Blank (7070376-BLK1)</b>						Prepared & Analyzed: 07/17/17					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (7070376-BS1)</b>						Prepared & Analyzed: 07/17/17					
Total Dissolved Solids	340	25	10	mg/L	400.00		85	84-108			
<b>Duplicate (7070376-DUP1)</b>						Source: AAG0277-09 Prepared & Analyzed: 07/17/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
<b>Duplicate (7070376-DUP2)</b>						Source: AAG0387-03 Prepared & Analyzed: 07/17/17					
Total Dissolved Solids	236	25	10	mg/L		238			0.8	10	
<b>Batch 7070410 - SM 2540 C</b>											
<b>Blank (7070410-BLK1)</b>						Prepared & Analyzed: 07/18/17					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (7070410-BS1)</b>						Prepared & Analyzed: 07/18/17					
Total Dissolved Solids	380	25	10	mg/L	400.00		95	84-108			
<b>Duplicate (7070410-DUP1)</b>						Source: AAG0332-17 Prepared & Analyzed: 07/18/17					
Total Dissolved Solids	14	25	10	mg/L		ND				10	J
<b>Duplicate (7070410-DUP2)</b>						Source: AAG0338-01 Prepared & Analyzed: 07/18/17					
Total Dissolved Solids	221	25	10	mg/L		218			1	10	



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**Report No.: AAG0332**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7070356 - EPA 300.0</b>											
<b>Blank (7070356-BLK1)</b>						Prepared & Analyzed: 07/16/17					
Chloride	ND	0.25	0.02	mg/L							
Fluoride	ND	0.30	0.03	mg/L							
Sulfate	ND	1.0	0.02	mg/L							
<b>LCS (7070356-BS1)</b>						Prepared & Analyzed: 07/16/17					
Chloride	10.2	0.25	0.02	mg/L	10.020		101	90-110			
Fluoride	9.94	0.30	0.03	mg/L	10.020		99	90-110			
Sulfate	10.4	1.0	0.02	mg/L	10.050		103	90-110			
<b>Matrix Spike (7070356-MS1)</b>						Source: AAG0332-11 Prepared & Analyzed: 07/16/17					
Chloride	17.5	0.25	0.02	mg/L	10.020	7.42	101	90-110			
Fluoride	10.3	0.30	0.03	mg/L	10.020	0.21	101	90-110			
Sulfate	93.3	1.0	0.02	mg/L	10.050	93.0	4	90-110			QM-02
<b>Matrix Spike (7070356-MS2)</b>						Source: AAG0332-18 Prepared: 07/16/17 Analyzed: 07/17/17					
Chloride	17.4	0.25	0.02	mg/L	10.020	7.29	101	90-110			
Fluoride	10.3	0.30	0.03	mg/L	10.020	ND	103	90-110			
Sulfate	58.4	1.0	0.02	mg/L	10.050	53.4	49	90-110			QM-02
<b>Matrix Spike Dup (7070356-MSD1)</b>						Source: AAG0332-11 Prepared & Analyzed: 07/16/17					
Chloride	17.6	0.25	0.02	mg/L	10.020	7.42	101	90-110	0.3	15	
Fluoride	10.4	0.30	0.03	mg/L	10.020	0.21	102	90-110	0.8	15	
Sulfate	93.5	1.0	0.02	mg/L	10.050	93.0	6	90-110	0.2	15	QM-02



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**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 7070301 - EPA 3005A**

**Blank (7070301-BLK1)**

Prepared: 07/14/17 Analyzed: 07/18/17

Antimony	ND	0.0030	0.0006	mg/L							
Arsenic	ND	0.0050	0.0005	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00009	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.0001	mg/L							
Calcium	ND	0.500	0.0404	mg/L							
Chromium	ND	0.0100	0.0005	mg/L							
Cobalt	ND	0.0100	0.0003	mg/L							
Copper	ND	0.0250	0.0003	mg/L							
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0012	mg/L							
Zinc	ND	0.0100	0.0012	mg/L							
Lithium	ND	0.0500	0.0015	mg/L							

**LCS (7070301-BS1)**

Prepared: 07/14/17 Analyzed: 07/18/17

Antimony	0.101	0.0030	0.0006	mg/L	0.10000		101	80-120			
Arsenic	0.0972	0.0050	0.0005	mg/L	0.10000		97	80-120			
Barium	0.101	0.0100	0.0004	mg/L	0.10000		101	80-120			
Beryllium	0.105	0.0030	0.00009	mg/L	0.10000		105	80-120			
Boron	0.986	0.0400	0.0060	mg/L	1.0000		99	80-120			
Cadmium	0.103	0.0010	0.0001	mg/L	0.10000		103	80-120			
Calcium	1.01	0.500	0.0404	mg/L	1.0000		101	80-120			
Chromium	0.105	0.0100	0.0005	mg/L	0.10000		105	80-120			
Cobalt	0.102	0.0100	0.0003	mg/L	0.10000		102	80-120			
Copper	0.101	0.0250	0.0003	mg/L	0.10000		101	80-120			
Lead	0.103	0.0050	0.00007	mg/L	0.10000		103	80-120			
Molybdenum	0.102	0.0100	0.0010	mg/L	0.10000		102	80-120			
Nickel	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			
Selenium	0.0991	0.0100	0.0018	mg/L	0.10000		99	80-120			
Silver	0.102	0.0100	0.0002	mg/L	0.10000		102	80-120			
Thallium	0.104	0.0010	0.00005	mg/L	0.10000		104	80-120			
Vanadium	0.102	0.0100	0.0012	mg/L	0.10000		102	80-120			
Zinc	0.103	0.0100	0.0012	mg/L	0.10000		103	80-120			
Lithium	0.104	0.0500	0.0015	mg/L	0.10000		104	80-120			





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July 24, 2017

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**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7070301 - EPA 3005A</b>											
<b>Matrix Spike (7070301-MS1)</b>			<b>Source: AAG0332-01</b>				Prepared: 07/14/17 Analyzed: 07/18/17				
Antimony	0.108	0.0030	0.0006	mg/L	0.10000	0.0035	105	75-125			
Arsenic	0.103	0.0050	0.0005	mg/L	0.10000	ND	103	75-125			
Barium	0.110	0.0100	0.0004	mg/L	0.10000	0.0305	79	75-125			
Beryllium	0.107	0.0030	0.00009	mg/L	0.10000	ND	107	75-125			
Boron	1.01	0.0400	0.0060	mg/L	1.0000	0.0067	100	75-125			
Cadmium	0.106	0.0010	0.0001	mg/L	0.10000	ND	106	75-125			
Calcium	48.1	25.0	2.02	mg/L	1.0000	47.4	76	75-125			
Chromium	0.110	0.0100	0.0005	mg/L	0.10000	0.0054	105	75-125			
Cobalt	0.0997	0.0100	0.0003	mg/L	0.10000	ND	100	75-125			
Copper	0.102	0.0250	0.0003	mg/L	0.10000	ND	102	75-125			
Lead	0.104	0.0050	0.00007	mg/L	0.10000	ND	104	75-125			
Molybdenum	0.107	0.0100	0.0010	mg/L	0.10000	0.0018	106	75-125			
Nickel	0.102	0.0100	0.0005	mg/L	0.10000	ND	102	75-125			
Selenium	0.101	0.0100	0.0018	mg/L	0.10000	ND	101	75-125			
Silver	0.102	0.0100	0.0002	mg/L	0.10000	ND	102	75-125			
Thallium	0.104	0.0010	0.00005	mg/L	0.10000	ND	104	75-125			
Vanadium	0.108	0.0100	0.0012	mg/L	0.10000	ND	108	75-125			
Zinc	0.104	0.0100	0.0012	mg/L	0.10000	ND	104	75-125			
Lithium	0.104	0.0500	0.0015	mg/L	0.10000	ND	104	75-125			
<b>Matrix Spike Dup (7070301-MSD1)</b>			<b>Source: AAG0332-01</b>				Prepared: 07/14/17 Analyzed: 07/18/17				
Antimony	0.104	0.0030	0.0006	mg/L	0.10000	0.0035	101	75-125	3	20	
Arsenic	0.0997	0.0050	0.0005	mg/L	0.10000	ND	100	75-125	3	20	
Barium	0.107	0.0100	0.0004	mg/L	0.10000	0.0305	76	75-125	3	20	
Beryllium	0.103	0.0030	0.00009	mg/L	0.10000	ND	103	75-125	3	20	
Boron	1.01	0.0400	0.0060	mg/L	1.0000	0.0067	100	75-125	0.5	20	
Cadmium	0.106	0.0010	0.0001	mg/L	0.10000	ND	106	75-125	0.09	20	
Calcium	46.8	25.0	2.02	mg/L	1.0000	47.4	NR	75-125	3	20	QM-02
Chromium	0.111	0.0100	0.0005	mg/L	0.10000	0.0054	106	75-125	0.8	20	
Cobalt	0.101	0.0100	0.0003	mg/L	0.10000	ND	101	75-125	2	20	
Copper	0.101	0.0250	0.0003	mg/L	0.10000	ND	101	75-125	1	20	
Lead	0.103	0.0050	0.00007	mg/L	0.10000	ND	103	75-125	0.7	20	
Molybdenum	0.105	0.0100	0.0010	mg/L	0.10000	0.0018	103	75-125	2	20	
Nickel	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125	0.7	20	
Selenium	0.102	0.0100	0.0018	mg/L	0.10000	ND	102	75-125	0.2	20	
Silver	0.101	0.0100	0.0002	mg/L	0.10000	ND	101	75-125	1	20	
Thallium	0.105	0.0010	0.00005	mg/L	0.10000	ND	105	75-125	1	20	
Vanadium	0.107	0.0100	0.0012	mg/L	0.10000	ND	107	75-125	0.8	20	
Zinc	0.101	0.0100	0.0012	mg/L	0.10000	ND	101	75-125	3	20	
Lithium	0.102	0.0500	0.0015	mg/L	0.10000	ND	102	75-125	2	20	



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**Report No.: AAG0332**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7070301 - EPA 3005A</b>											
<b>Post Spike (7070301-PS1)</b>			<b>Source: AAG0332-01</b>			Prepared: 07/14/17 Analyzed: 07/18/17					
Antimony	101			ug/L	100.00	3.47	98	80-120			
Arsenic	101			ug/L	100.00	0.0426	101	80-120			
Barium	106			ug/L	100.00	30.5	75	80-120			QM-05
Beryllium	100			ug/L	100.00	0.0051	100	80-120			
Boron	1020			ug/L	1000.0	6.71	101	80-120			
Cadmium	103			ug/L	100.00	0.0104	103	80-120			
Calcium	46600			ug/L	1000.0	47400	NR	80-120			QM-02
Chromium	110			ug/L	100.00	5.43	105	80-120			
Cobalt	100			ug/L	100.00	0.0112	100	80-120			
Copper	100			ug/L	100.00	0.215	100	80-120			
Lead	101			ug/L	100.00	0.0203	101	80-120			
Molybdenum	107			ug/L	100.00	1.79	105	80-120			
Nickel	98.9			ug/L	100.00	0.0651	99	80-120			
Selenium	102			ug/L	100.00	0.0424	102	80-120			
Silver	100			ug/L	100.00	0.0010	100	80-120			
Thallium	103			ug/L	100.00	0.0270	103	80-120			
Vanadium	108			ug/L	100.00	0.687	107	80-120			
Zinc	101			ug/L	100.00	0.424	100	80-120			
Lithium	102			ug/L	100.00	0.515	101	80-120			

**Batch 7070370 - EPA 7470A**

<b>Blank (7070370-BLK1)</b>					Prepared & Analyzed: 07/20/17						
Mercury	ND	0.00050	0.000041	mg/L							
<b>LCS (7070370-BS1)</b>					Prepared & Analyzed: 07/20/17						
Mercury	0.00221	0.00050	0.000041	mg/L	2.5000E-3		88	80-120			



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**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7070370 - EPA 7470A</b>											
<b>Matrix Spike (7070370-MS1)</b>			<b>Source: AAG0332-02</b>			<b>Prepared &amp; Analyzed: 07/20/17</b>					
Mercury	0.00224	0.00050	0.000041	mg/L	2.5000E-3	ND	90	75-125			
<b>Matrix Spike Dup (7070370-MSD1)</b>			<b>Source: AAG0332-02</b>			<b>Prepared &amp; Analyzed: 07/20/17</b>					
Mercury	0.00224	0.00050	0.000041	mg/L	2.5000E-3	ND	90	75-125	0	20	
<b>Post Spike (7070370-PS1)</b>			<b>Source: AAG0332-02</b>			<b>Prepared &amp; Analyzed: 07/20/17</b>					
Mercury	1.64			ug/L	1.6667	0.0124	98	80-120			



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Attention: Mr. Joju Abraham

July 24, 2017

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## Legend

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### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

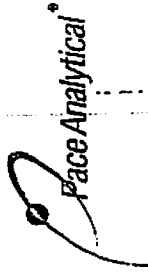
Maleic acid and maleic anhydride are reported as dimethyl malate

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

### Definition of Qualifiers

- QM-05** The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.
- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

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



Pace Analytical Services, Inc.  
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PAGE: 1 OF 1

**CHAIN OF CUSTODY RECORD**

CONTAINER TYPE	ANALYSIS REQUESTED	LAB #	REMARKS/ADDITIONAL INFORMATION
P - PLASTIC	P P P P P P P P P P	AA60332	
A - AMBER GLASS			
G - CLEAR GLASS			
V - VOA VIAL			
S - STERILE			
O - OTHER			

CONTAINER TYPE	ANALYSIS REQUESTED	LAB #	REMARKS/ADDITIONAL INFORMATION
P 3	Metals App. III & IV EPA 620/7470		
P 7	IC (Cl, F, SO4) EPA 300.0		
P 7	TDS SM 2540C		
P 3	Radium 226 & 228 GW-46 9315/9320		

CONTAINER TYPE	ANALYSIS REQUESTED	LAB #	REMARKS/ADDITIONAL INFORMATION
L A B	I D N U M B E R		
1	1		
2	2		
3	3		

RELINQUISHED BY: *[Signature]* DATE/TIME: 7/12/17 15:40  
 RELINQUISHED BY: *[Signature]* DATE/TIME:  
 SAMPLE SHIPPED VIA: UPS (FED-EX) COURIER # of Coolers: 1 CLIENT OTHER FS  
 RECEIVED BY: *[Signature]* DATE/TIME: 7-11-17/09:33  
 RECEIVED BY LAB: *[Signature]* DATE/TIME: 07/13/17 0915  
 Temperature: Min: 4.2 Max: 4.2  
 Broken Not Present  
 Custody Seal: Intact

CLIENT NAME: Georgia Power  
 CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:  
 241 Ralph McGill Blvd SE  
 Atlanta, GA 30308  
 404-506-7239  
 REPORT TO: Joju Abraham  
 CC: Maria Padilla  
 Health McCorkle  
 PO #: GPC10684198  
 PROJECT NAME/STATE: Plant Mitchell/GA  
 PROJECT #: Phase II CCR EVENT 4  
 COLLECTION DATE: 7-11-17 09:32 GW ✓ PZ-1D  
 7-11-17 11:00 GW ✓ PZ-32  
 7-11-17 13:04 GW ✓ PZ-2S  
 MATRIX CODE: GW  
 SAMPLE IDENTIFICATION: PZ-1D, PZ-32, PZ-2S  
 DATE/TIME: 7-11-17/09:33  
 RECEIVED BY: *[Signature]*  
 RECEIVED BY LAB: *[Signature]* DATE/TIME: 07/13/17 0915  
 Temperature: Min: 4.2 Max: 4.2  
 Broken Not Present  
 Custody Seal: Intact  
 Pace COC Revised.xlsx

**Sample Condition Upon Receipt**



Client Name: GA - Power

Project # Plant Mitchell

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 8107 9699 7841

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

Optional:
Proj. Due Date:
Proj. Name:

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used IR-2    Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 4.2  
Temp should be above freezing to 6°C

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 7/13/17 MR

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

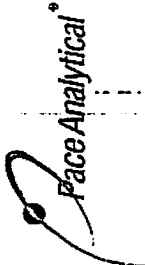
Client Notification/ Resolution: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Field Data Required? Y / N

Person Contacted: \_\_\_\_\_

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, Inc.  
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092  
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

**CHAIN OF CUSTODY RECORD**

PAGE: 1 OF 1

<b>CLIENT NAME:</b> Georgia Power		<b>ANALYSIS REQUESTED</b>		<b>CONTAINER TYPE</b>		<b>PRESERVATION</b>	
<b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>CONTAINER TYPE:</b> P 3 P 7 P 7 P 3		<b>P 3 P 7 P 7 P 3</b>		1 - HCl, ≤6°C 2 - H <sub>2</sub> SO <sub>4</sub> , ≤6°C 3 - HNO <sub>3</sub> 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub> , ≤6°C 7 - ≤6°C not frozen	
<b>REPORT TO:</b> Joju Abraham		<b># of CONTAINERS</b> 4		<b>C O N T A I N E R S</b> ↓		<b>MATRIX CODES:</b> 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	
<b>REQUESTED COMPLETION DATE:</b> GPC10684198		<b>PROJECT NAME/STATE:</b> Plant Mitchell / GA		<b>REMARKS/ADDITIONAL INFORMATION</b>			
<b>CC:</b> Maria Padilla Heath McCorkle		<b>PO #:</b> GPC10684198					
<b>PROJECT #:</b> Phase II CCR, Event 4							
<b>Collection DATE</b>	<b>Collection TIME</b>	<b>MATRIX CODE</b>	<b>SAMPLE IDENTIFICATION</b>	<b>IC (C, T, SO4)</b>	<b>EP A 800.0</b>	<b>TDS</b>	<b>SM 2540C</b>
7-11-17	11:11	GW	✓ PZ-31	1 1 → 2	1 1 → 2	→ 2	→ 2
7-11-17	14:16	GW	✓ PZ-14	1 1 → 2	1 1 → 2	→ 2	→ 2
7-11-17	15:51	GW	✓ PZ-23	1 1 → 2	1 1 → 2	→ 2	→ 2
				<i>Signature</i>			
<b>SAMPLED BY AND TITLE:</b> DANIEL HOWARD / CHEMIST		<b>DATE/TIME:</b> 7-11-17 / 11:11		<b>RELINQUISHED BY:</b> <i>Signature</i>		<b>DATE/TIME:</b> 7-15-17 / 15:49	
<b>RECEIVED BY:</b> W. A. Luman		<b>DATE/TIME:</b> 8-13-17 / 10:15		<b>RELINQUISHED BY:</b> <i>Signature</i>		<b>DATE/TIME:</b> 8-10-17 / 9:52	
<b>LAB #:</b> AA 620332		<b>FOR LAB USE ONLY</b>		<b>CLIENT</b>		<b>OTHER</b>	
<b>Entered into LIMS:</b>		<b>Tracking #:</b> 8107 9699 7852		<b>COURIER</b>		<b>FS</b>	
<b>Tracker #:</b> Cooler #2		<b>USPS</b>		<b># of Coolers</b>		<b>Broken</b>	
<b>Temperature:</b> Min: 4.2 Max:		<b>USPS</b>		<b>Not Present</b>		<b>Other</b>	
<b>Checked:</b> No NA Yes No NA		<b>USPS</b>		<b>Not Present</b>		<b>Other</b>	

**Sample Condition Upon Receipt**

Face Analytical

Client Name: GLA - Power

Project # Plant Mitchell

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 8107 9699 7852

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 1R-2    Type of Ice: Wet Blue None  Samples on Ice, cooling process has begun

Cooler Temperature 4.2

Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: <u>7/13/17 MR</u>
---

Comments:

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

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

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

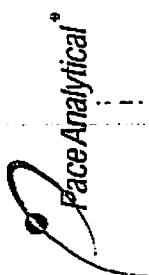
\_\_\_\_\_

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





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PAGE: 1 OF 1

**CHAIN OF CUSTODY RECORD**

**CLIENT NAME:** Georgia Power  
**CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:** 241 Ralph McGill Blvd SE, Atlanta, GA 30308, 404-506-7239  
**REPORT TO:** Joju Abraham  
**CC:** Maria Padilla, Health McCorkle  
**REQUESTED COMPLETION DATE:** PO #: GPC10684198  
**PROJECT NAME/STATE:** Plant Mitchell / GA  
**PROJECT #:** Phase II CCR EVENT 4

Collection DATE	Collection TIME	MATRIX CODE	GRA B	COM P	SAMPLE IDENTIFICATION	CONTAINER TYPE	PRESEVATION	# of	P	P	P	P	P	P	ANALYSIS REQUESTED	L	A	B	CONTAINER TYPE	PRESEVATION
7-11-17	14:45	GW	✓		PZ-16	4	EPA 6020/470 Metals App. III & IV IC (C, T, SO4) EPA 300.0 TDS SM 2540C Radium 226 & 228 SM-46 9315/9320	3	7	7	3								P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	1 - HCl, ≤6°C 2 - H <sub>2</sub> SO <sub>4</sub> , ≤6°C 3 - HNO <sub>3</sub> 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , ≤6°C 7 - ≤6°C not frozen
7-11-17	16:40	GW	✓		PZ-25	4													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
7-11-17	-	GW	✓		DWP-02	4														

**RECEIVED BY LAB:** [Signature] No NA (es) No NA (es) Max: 4.2  
**RECEIVED BY:** [Signature] No NA (es) No NA (es) Max: 4.2  
**SAMPLED BY AND TITLE:** [Signature] Site  
**RECEIVED BY:** [Signature] [Signature]  
**DATE/TIME:** 7-11-17 / 14:45  
**DATE/TIME:** 7-11-17 / 14:45  
**RELINQUISHED BY:** [Signature] DATE/TIME: 7-12-17 / 15:34  
**RELINQUISHED BY:** [Signature] DATE/TIME: 7-12-17 / 15:34  
**REMARKS/ADDITIONAL INFORMATION:**

**LAB #:** AAG0332  
**Entered into LIMS:** 8/07 9699 7863  
**Tracking #:** Cooler #3  
**FOR LAB USE ONLY:**  
**RECEIVED BY LAB:** [Signature] No NA (es) No NA (es) Max: 4.2  
**RECEIVED BY:** [Signature] No NA (es) No NA (es) Max: 4.2  
**SAMPLED BY AND TITLE:** [Signature] Site  
**RECEIVED BY:** [Signature] [Signature]  
**DATE/TIME:** 8/13/17 / 0915  
**DATE/TIME:** 8/13/17 / 0915  
**RELINQUISHED BY:** [Signature] DATE/TIME: 7-12-17 / 15:34  
**RELINQUISHED BY:** [Signature] DATE/TIME: 7-12-17 / 15:34  
**REMARKS/ADDITIONAL INFORMATION:**

**Sample Condition Upon Receipt**



Client Name: GRA - Power

Project # Plant Mitchell

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 810796997863

Optional:
Prof. Div. Date
Prof. Name

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

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used IR-2    Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 4.2    Biological Tissue Is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: <u>7/13/17 MR</u>
---

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

Client Notification/ Resolution: \_\_\_\_\_      Field Data Required?    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)



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**CHAIN OF CUSTODY RECORD**

PAGE: 1 OF 1

CLIENT NAME: Georgia Power  
 CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239  
 REPORT TO: Joju Abraham  
 CC: Maria Padilla Heath McCorkle  
 REQUESTED COMPLETION DATE: PO #: GPC10684198  
 PROJECT NAME/STATE: Plant Mitchell / GA  
 PROJECT # Phase II CCR / EVENT 4

Collection DATE	Collection TIME	MATRIX CODE	GRA B	COM P	SAMPLE IDENTIFICATION	CONTAINER TYPE	ANALYSIS REQUESTED	RELINQUISHED BY	DATE/TIME	RELINQUISHED DATE/TIME
7/2-17	08:45	GW	✓		PZ-15	4	Metals App. III & IV EPA 8020/7470 IC (C, F, SO4) EPA 800.0 TDS SM 2540C Radium 226 & 228 SW-46 9315/9320	James T. Anderson	7/2-17/08:45	7/2-17/16:03
7/2-17	10:05	GW	✓		PZ-17	6		Donna L. Mann	7/2-17/08:45	7/2-17/16:03
7/2-17	12:25	GW	✓		PZ-18	4		Donna L. Mann	7/2-17/08:45	7/2-17/16:03

RECEIVED BY AND TITLE: SITE MGR  
 RECEIVED BY: DONNA L. MANN  
 DATE/TIME: 7/2-17/08:45  
 DATE/TIME: 7/2-17/16:03

CONTAINER TYPE: P - PLASTIC, A - AMBER GLASS, G - CLEAR GLASS, V - VOA VIAL, S - STERILE, O - OTHER  
 PRESERVATION: 1 - HCl, 56°C, 2 - H2SO4, 56°C, 3 - HNO3, 4 - NaOH, 56°C, 5 - NaOH/ZnAc, 56°C, 6 - Na2S2O3, 56°C, 7 - 56°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: 10 11 2 EXT RABBIT HOLE FOR RABBIT TRAP  
 12

LAB #: AAG0332  
 FOR LAB USE ONLY  
 Entered into LIMS: 8107 9699 7894  
 Tracking #: Cooler #4

ANALYSIS REQUESTED: P 3, P 7, P 7, P 3  
 COURIER: # of Coolers  
 CLIENT: FS  
 OTHER: Cooler ID

SAMPLE SHIPPED VIA: USPS (FED-EX)  
 CUSTODY SEAL: Intact, Broken, Not Present

DATE/TIME: 7/2-17/08:45  
 DATE/TIME: 7/2-17/09:15  
 RECEIVED BY: DONNA L. MANN  
 RECEIVED BY: J. Abraham

Temperature: Min: 4.2, Max: 4.2

Pace COC Revised.xlsx

Face Analytical

Client Name: GIA - Power

Project # Plant Mitchell

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 810796997874

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

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used IR-2 Type of Ice: Wet Blue None

Cooler Temperature 4.2  
Temp should be above freezing to 6°C

Biological Tissue is Frozen: Yes No

Samples on ice, cooling process has begun  
Date and initials of person examining contents: 7/13/17 MR

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

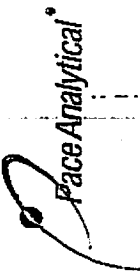
Client Notification/ Resolution: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Field Data Required? Y / N

Person Contacted: \_\_\_\_\_

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, Inc.  
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092  
 (770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

PAGE: 1 OF 1

**CHAIN OF CUSTODY RECORD**

**CLIENT NAME:** Georgia Power  
**CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:** 241 Ralph McGill Blvd SE, Atlanta, GA 30308, 404-506-7239  
**REPORT TO:** Joju Abraham  
**CC:** Maria Padilla, Health McCorkle  
**PO #:** GPC10684198  
**REQUESTED COMPLETION DATE:**

**PROJECT NAME/STATE:** Plant Mitchell / GA  
**PROJECT #:** Phase II CCR / EVENT 4

Collection DATE	Collection TIME	MATRIX CODE	CORRACTION			SAMPLE IDENTIFICATION	ANALYSIS REQUESTED	CONTAINER TYPE	PRESERVATION	# of CONTAINERS	RELINQUISHED BY	RELINQUISHED DATE/TIME	COURIER	CLIENT	OTHER	FS
			C	O	R											
7-12-17	11:48	GW	✓			PZ-33	Metals App. III & IV EPA 5020/7470 IC (C, T, SO4) EPA 800.0 TDS SM 2540C RD 226 & 228 SV-846 9315/9320	3	7	7	3					
7-12-17	—	GW	✓			Dup-01										
7-12-17	14:17	GW	✓			PZ-19										

**SAMPLED BY AND TITLE:** JAVIER HOUARD / CHEMIST  
**DATE/TIME:** 7-12-17 / 11:48  
**RECEIVED BY:** [Signature]  
**DATE/TIME:** 7-12-17 / 16:25

**RECEIVED BY LAB:** [Signature]  
**DATE/TIME:** 8/7/13 / 17:09:15  
**Temperature:** Min: 4.2, Max: [ ]  
**Seal:** Intact, Broken, Net Present  
**USPS:** [ ]  
**FED-EX:** [ ]  
**USPS:** [ ]  
**LAB #:** AA60332  
**Tracking #:** 8107 9699 7896  
**Entered into LIMS:** [ ]  
**COOLER #:** 6

**Sample Condition Upon Receipt**



Client Name: GIA - Power

Project # Plant Mitchell

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 8109 9699 7896

Optional:
Prof. Due Date:
Prof. Name:

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

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used IR-2    Type of Ice: Wet Blue None  Samples on Ice, cooling process has begun

Cooler Temperature 4.2    Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: <u>7/13/17 MR</u>
---

Comments:

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

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

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

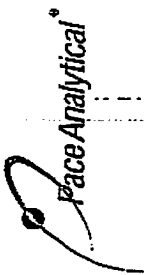
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

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CHAIN OF CUSTODY RECORD

PAGE: 1 OF 1

CLIENT NAME: Georgia Power  
 CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE, Atlanta, GA 30308  
 REPORT TO: Joju Abraham  
 CC: Maria Padilla, Heath McCorkle  
 REQUESTED COMPLETION DATE: PO #: GPC10684198  
 PROJECT NAME/STATE: Plant Mitchell / GA  
 PROJECT # Phase II CCR, EVENT 4

Collection DATE	Collection TIME	MATRIX CODE	C O R M A B	SAMPLE IDENTIFICATION
7/2-17	13:20	W	✓	EB-01
7/2-17	13:40	W	✓	FB-01
7/2-17	9:42	SW	✓	PZ-7D

ANALYSIS REQUESTED: P 3, P 7, P 7, P 3  
 CONTAINER TYPE: P-PLASTIC, A-AMBER GLASS, G-CLEAR GLASS, V-VOA VIAL, S-STERILE, O-OTHER  
 PRESERVATION: 1-HCl, 56°C, 2-H<sub>2</sub>SO<sub>4</sub>, 56°C, 3-HNO<sub>3</sub>, 4-NaOH, 56°C, 5-NaOHZnAc, 56°C, 6-Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, 56°C, 7-56°C not frozen

CONTAINER TYPE: P-PLASTIC, A-AMBER GLASS, G-CLEAR GLASS, V-VOA VIAL, S-STERILE, O-OTHER  
 PRESERVATION: 1-HCl, 56°C, 2-H<sub>2</sub>SO<sub>4</sub>, 56°C, 3-HNO<sub>3</sub>, 4-NaOH, 56°C, 5-NaOHZnAc, 56°C, 6-Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, 56°C, 7-56°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:  
 16 EB on 6ft of 4" PE tubing.  
 17 Ripped sample container, see lot # 2704-BN 888.012018  
 18 2 EXTRA sample bottles for RA (LAB SIG)

DATE/TIME: 7/2/17 13:20, 7/2/17 13:40, 7/2/17 9:42  
 RECEIVED BY: J. Abraham, J. Abraham  
 SAMPLED BY: J. Abraham, J. Abraham  
 RELINQUISHED BY: J. Abraham, J. Abraham

DATE/TIME: 7/2/17 13:20, 7/2/17 13:40, 7/2/17 9:42  
 RECEIVED BY: J. Abraham, J. Abraham  
 SAMPLED BY: J. Abraham, J. Abraham

DATE/TIME: 7/2/17 13:20, 7/2/17 13:40, 7/2/17 9:42  
 RECEIVED BY: J. Abraham, J. Abraham  
 SAMPLED BY: J. Abraham, J. Abraham

LAB #: 1777  
 Entered into LIMS: AAGI 0332  
 Tracking #: 8107-9699-7885  
 Cool/UR#5

**Sample Condition Upon Receipt**



Client Name: GVA - Power

Project # Plant Mitchell

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 8107 9699 7885

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

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used IR-2

Type of Ice: Wet Blue None

Samples on ice, cooling process has begun

Cooler Temperature 4.2  
Temp should be above freezing to 6°C

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 7/13/17 MR

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

Client Notification/ Resolution: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Field Data Required? Y / N

Person Contacted: \_\_\_\_\_

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.**

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

**LOG-IN CHECKLIST**

**Printed: 7/14/2017 10:12:10AM**

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 07/13/17 09:15

**Work Order:** AAG0332

**Logged In By:** Mohammad M. Rahman

**OBSERVATIONS**

**#Samples:** 18

**#Containers:** 76

**Minimum Temp(C):** 4.2

**Maximum Temp(C):** 4.2

**Custody Seal(s) Used:** Yes

**CHECKLIST ITEMS**

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

**Comments:**

August 04, 2017

Maria Padilla  
GA Power  
2480 Maner Rd  
Atlanta, GA 30339

RE: Project: AAG0332 Plant Mitchell  
Pace Project No.: 30224178

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on July 14, 2017. 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,



Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
(724)850-5612  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: AAG0332 Plant Mitchell

Pace Project No.: 30224178

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: AAG0332 Plant Mitchell

Pace Project No.: 30224178

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30224178001	PZ-1D	Water	07/11/17 09:32	07/14/17 10:20
30224178002	PZ-32	Water	07/11/17 11:00	07/14/17 10:20
30224178003	PZ-2S	Water	07/11/17 13:04	07/14/17 10:20
30224178004	PZ-31	Water	07/11/17 11:11	07/14/17 10:20
30224178005	PZ-14	Water	07/11/17 14:16	07/14/17 10:20
30224178006	PZ-23	Water	07/11/17 15:51	07/14/17 10:20
30224178007	PZ-16	Water	07/11/17 14:45	07/14/17 10:20
30224178008	PZ-25	Water	07/11/17 16:40	07/14/17 10:20
30224178009	Dup-02	Water	07/11/17 00:00	07/14/17 10:20
30224178010	PZ-15	Water	07/12/17 08:45	07/14/17 10:20
30224178011	PZ-17	Water	07/12/17 10:05	07/14/17 10:20
30224178012	PZ-18	Water	07/12/17 12:25	07/14/17 10:20
30224178013	PZ-33	Water	07/12/17 11:48	07/14/17 10:20
30224178014	Dup-01	Water	07/12/17 00:00	07/14/17 10:20
30224178015	PZ-19	Water	07/12/17 14:17	07/14/17 10:20
30224178016	EB-01	Water	07/12/17 13:20	07/14/17 10:20
30224178017	FB-01	Water	07/12/17 13:40	07/14/17 10:20
30224178018	PZ-7D	Water	07/12/17 09:42	07/14/17 10:20

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: AAG0332 Plant Mitchell  
Pace Project No.: 30224178

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30224178001	PZ-1D	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224178002	PZ-32	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224178003	PZ-2S	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224178004	PZ-31	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224178005	PZ-14	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224178006	PZ-23	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224178007	PZ-16	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224178008	PZ-25	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224178009	Dup-02	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224178010	PZ-15	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224178011	PZ-17	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224178012	PZ-18	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224178013	PZ-33	EPA 9315	JC2	1

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: AAG0332 Plant Mitchell

Pace Project No.: 30224178

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30224178014	Dup-01	EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
		EPA 9315	JC2	1
		EPA 9320	VAL	1
30224178015	PZ-19	Total Radium Calculation	RMK	1
		EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224178016	EB-01	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
		EPA 9315	JC2	1
30224178017	FB-01	EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
		EPA 9315	JC2	1
		EPA 9320	VAL	1
30224178018	PZ-7D	Total Radium Calculation	RMK	1
		EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0332 Plant Mitchell

Pace Project No.: 30224178

Sample: PZ-1D		Lab ID: 30224178001	Collected: 07/11/17 09:32	Received: 07/14/17 10:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.192 ± 0.119 (0.182)</b>		pCi/L	07/26/17 08:31	13982-63-3	
		<b>C:93% T:NA</b>					
Radium-228	EPA 9320	<b>0.484 ± 0.289 (0.520)</b>		pCi/L	07/28/17 14:29	15262-20-1	
		<b>C:77% T:95%</b>					
Total Radium	Total Radium Calculation	<b>0.676 ± 0.408 (0.702)</b>		pCi/L	08/04/17 11:13	7440-14-4	

Sample: PZ-32		Lab ID: 30224178002	Collected: 07/11/17 11:00	Received: 07/14/17 10:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.396 ± 0.175 (0.214)</b>		pCi/L	07/26/17 08:31	13982-63-3	
		<b>C:83% T:NA</b>					
Radium-228	EPA 9320	<b>0.639 ± 0.320 (0.547)</b>		pCi/L	07/28/17 14:29	15262-20-1	
		<b>C:75% T:103%</b>					
Total Radium	Total Radium Calculation	<b>1.04 ± 0.495 (0.761)</b>		pCi/L	08/04/17 11:13	7440-14-4	

Sample: PZ-2S		Lab ID: 30224178003	Collected: 07/11/17 13:04	Received: 07/14/17 10:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.0743 ± 0.106 (0.227)</b>		pCi/L	07/25/17 08:23	13982-63-3	
		<b>C:78% T:NA</b>					
Radium-228	EPA 9320	<b>0.930 ± 0.450 (0.789)</b>		pCi/L	08/01/17 11:40	15262-20-1	
		<b>C:78% T:81%</b>					
Total Radium	Total Radium Calculation	<b>1.00 ± 0.556 (1.02)</b>		pCi/L	08/04/17 11:13	7440-14-4	

Sample: PZ-31		Lab ID: 30224178004	Collected: 07/11/17 11:11	Received: 07/14/17 10:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.0701 ± 0.0945 (0.199)</b>		pCi/L	07/25/17 08:23	13982-63-3	
		<b>C:89% T:NA</b>					
Radium-228	EPA 9320	<b>-0.181 ± 0.285 (0.695)</b>		pCi/L	08/01/17 11:40	15262-20-1	
		<b>C:83% T:88%</b>					
Total Radium	Total Radium Calculation	<b>0.0701 ± 0.380 (0.894)</b>		pCi/L	08/04/17 11:13	7440-14-4	

Sample: PZ-14		Lab ID: 30224178005	Collected: 07/11/17 14:16	Received: 07/14/17 10:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.102 ± 0.106 (0.205)</b>		pCi/L	07/25/17 08:24	13982-63-3	
		<b>C:91% T:NA</b>					
Radium-228	EPA 9320	<b>0.599 ± 0.421 (0.822)</b>		pCi/L	08/01/17 11:39	15262-20-1	
		<b>C:74% T:82%</b>					

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0332 Plant Mitchell

Pace Project No.: 30224178

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-14</b> <b>Lab ID: 30224178005</b> Collected: 07/11/17 14:16      Received: 07/14/17 10:20      Matrix: Water						
PWS:      Site ID:      Sample Type:						
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	<b>0.701 ± 0.527 (1.03)</b>	pCi/L	08/04/17 11:13	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-23</b> <b>Lab ID: 30224178006</b> Collected: 07/11/17 15:51      Received: 07/14/17 10:20      Matrix: Water						
PWS:      Site ID:      Sample Type:						
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.310 ± 0.157 (0.207)</b> C:85% T:NA	pCi/L	07/25/17 08:24	13982-63-3	
Radium-228	EPA 9320	<b>0.514 ± 0.358 (0.694)</b> C:78% T:86%	pCi/L	08/01/17 11:39	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.824 ± 0.515 (0.901)</b>	pCi/L	08/04/17 11:13	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-16</b> <b>Lab ID: 30224178007</b> Collected: 07/11/17 14:45      Received: 07/14/17 10:20      Matrix: Water						
PWS:      Site ID:      Sample Type:						
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.0206 ± 0.0955 (0.241)</b> C:83% T:NA	pCi/L	07/25/17 08:24	13982-63-3	
Radium-228	EPA 9320	<b>0.739 ± 0.429 (0.799)</b> C:77% T:83%	pCi/L	08/01/17 11:39	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.760 ± 0.525 (1.04)</b>	pCi/L	08/04/17 11:13	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-25</b> <b>Lab ID: 30224178008</b> Collected: 07/11/17 16:40      Received: 07/14/17 10:20      Matrix: Water						
PWS:      Site ID:      Sample Type:						
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.364 ± 0.171 (0.230)</b> C:86% T:NA	pCi/L	07/25/17 08:24	13982-63-3	
Radium-228	EPA 9320	<b>0.671 ± 0.394 (0.737)</b> C:77% T:89%	pCi/L	08/01/17 11:39	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.04 ± 0.565 (0.967)</b>	pCi/L	08/04/17 11:13	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: Dup-02</b> <b>Lab ID: 30224178009</b> Collected: 07/11/17 00:00      Received: 07/14/17 10:20      Matrix: Water						
PWS:      Site ID:      Sample Type:						
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.0818 ± 0.0962 (0.193)</b> C:82% T:NA	pCi/L	07/25/17 08:24	13982-63-3	
Radium-228	EPA 9320	<b>0.406 ± 0.375 (0.770)</b> C:82% T:81%	pCi/L	08/01/17 11:39	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.488 ± 0.471 (0.963)</b>	pCi/L	08/04/17 11:13	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0332 Plant Mitchell

Pace Project No.: 30224178

Sample: PZ-15		Lab ID: 30224178010	Collected: 07/12/17 08:45	Received: 07/14/17 10:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.176 ± 0.146	(0.265)	pCi/L	07/25/17 08:24	13982-63-3	
		C:74% T:NA					
Radium-228	EPA 9320	0.498 ± 0.474	(0.985)	pCi/L	08/01/17 16:16	15262-20-1	
		C:77% T:90%					
Total Radium	Total Radium Calculation	0.674 ± 0.620	(1.25)	pCi/L	08/04/17 11:13	7440-14-4	

Sample: PZ-17		Lab ID: 30224178011	Collected: 07/12/17 10:05	Received: 07/14/17 10:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.155 ± 0.115	(0.182)	pCi/L	07/25/17 08:30	13982-63-3	
		C:82% T:NA					
Radium-228	EPA 9320	0.701 ± 0.469	(0.910)	pCi/L	08/01/17 16:16	15262-20-1	
		C:75% T:81%					
Total Radium	Total Radium Calculation	0.856 ± 0.584	(1.09)	pCi/L	08/04/17 11:13	7440-14-4	

Sample: PZ-18		Lab ID: 30224178012	Collected: 07/12/17 12:25	Received: 07/14/17 10:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.400 ± 0.183	(0.238)	pCi/L	07/25/17 08:24	13982-63-3	
		C:83% T:NA					
Radium-228	EPA 9320	-0.0121 ± 0.430	(0.988)	pCi/L	08/01/17 16:16	15262-20-1	
		C:79% T:82%					
Total Radium	Total Radium Calculation	0.400 ± 0.613	(1.23)	pCi/L	08/04/17 11:13	7440-14-4	

Sample: PZ-33		Lab ID: 30224178013	Collected: 07/12/17 11:48	Received: 07/14/17 10:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.151 ± 0.121	(0.218)	pCi/L	07/25/17 08:24	13982-63-3	
		C:87% T:NA					
Radium-228	EPA 9320	0.663 ± 0.515	(1.03)	pCi/L	08/01/17 16:16	15262-20-1	
		C:76% T:77%					
Total Radium	Total Radium Calculation	0.814 ± 0.636	(1.25)	pCi/L	08/04/17 11:13	7440-14-4	

Sample: Dup-01		Lab ID: 30224178014	Collected: 07/12/17 00:00	Received: 07/14/17 10:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.321 ± 0.191	(0.308)	pCi/L	07/25/17 08:24	13982-63-3	
		C:75% T:NA					
Radium-228	EPA 9320	0.377 ± 0.407	(0.855)	pCi/L	08/01/17 16:16	15262-20-1	
		C:81% T:87%					

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0332 Plant Mitchell  
Pace Project No.: 30224178

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: Dup-01</b> Lab ID: 30224178014 Collected: 07/12/17 00:00 Received: 07/14/17 10:20 Matrix: Water						
PWS: Site ID: Sample Type:						
Total Radium	Total Radium Calculation	<b>0.698 ± 0.598 (1.16)</b>	pCi/L	08/04/17 11:13	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-19</b> Lab ID: 30224178015 Collected: 07/12/17 14:17 Received: 07/14/17 10:20 Matrix: Water						
PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	<b>0.0843 ± 0.123 (0.268)</b> C:86% T:NA	pCi/L	07/25/17 08:24	13982-63-3	
Radium-228	EPA 9320	<b>0.765 ± 0.436 (0.807)</b> C:78% T:82%	pCi/L	08/01/17 16:09	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.849 ± 0.559 (1.08)</b>	pCi/L	08/04/17 11:13	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: EB-01</b> Lab ID: 30224178016 Collected: 07/12/17 13:20 Received: 07/14/17 10:20 Matrix: Water						
PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	<b>-0.0173 ± 0.0531 (0.180)</b> C:83% T:NA	pCi/L	07/25/17 08:44	13982-63-3	
Radium-228	EPA 9320	<b>0.307 ± 0.378 (0.803)</b> C:77% T:85%	pCi/L	08/01/17 16:09	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.307 ± 0.431 (0.983)</b>	pCi/L	08/04/17 11:13	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: FB-01</b> Lab ID: 30224178017 Collected: 07/12/17 13:40 Received: 07/14/17 10:20 Matrix: Water						
PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	<b>-0.0293 ± 0.0466 (0.184)</b> C:77% T:NA	pCi/L	07/25/17 08:44	13982-63-3	
Radium-228	EPA 9320	<b>0.658 ± 0.414 (0.780)</b> C:80% T:74%	pCi/L	08/01/17 16:09	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.658 ± 0.461 (0.964)</b>	pCi/L	08/04/17 11:13	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-7D</b> Lab ID: 30224178018 Collected: 07/12/17 09:42 Received: 07/14/17 10:20 Matrix: Water						
PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	<b>0.125 ± 0.117 (0.216)</b> C:79% T:NA	pCi/L	07/25/17 08:44	13982-63-3	
Radium-228	EPA 9320	<b>-0.172 ± 0.337 (0.807)</b> C:80% T:88%	pCi/L	08/01/17 16:09	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.125 ± 0.454 (1.02)</b>	pCi/L	08/04/17 11:13	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0332 Plant Mitchell

Pace Project No.: 30224178

QC Batch: 265166

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30224178001, 30224178002

METHOD BLANK: 1306529

Matrix: Water

Associated Lab Samples: 30224178001, 30224178002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0444 ± 0.286 (0.656) C:80% T:91%	pCi/L	07/28/17 14:30	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0332 Plant Mitchell

Pace Project No.: 30224178

QC Batch: 265161

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 30224178001, 30224178002

METHOD BLANK: 1306524

Matrix: Water

Associated Lab Samples: 30224178001, 30224178002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.278 ± 0.0986 (0.0983) C:97% T:NA	pCi/L	07/25/17 15:28	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0332 Plant Mitchell

Pace Project No.: 30224178

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QC Batch:	265163	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	30224178003, 30224178004, 30224178005, 30224178006, 30224178007, 30224178008, 30224178009, 30224178010, 30224178011, 30224178012, 30224178013, 30224178014, 30224178015, 30224178016, 30224178017, 30224178018		

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METHOD BLANK:	1306527	Matrix:	Water
Associated Lab Samples:	30224178003, 30224178004, 30224178005, 30224178006, 30224178007, 30224178008, 30224178009, 30224178010, 30224178011, 30224178012, 30224178013, 30224178014, 30224178015, 30224178016, 30224178017, 30224178018		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0397 ± 0.106 (0.255) C:94% T:NA	pCi/L	07/25/17 08:23	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0332 Plant Mitchell

Pace Project No.: 30224178

QC Batch: 265168 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Associated Lab Samples: 30224178003, 30224178004, 30224178005, 30224178006, 30224178007, 30224178008, 30224178009, 30224178010, 30224178011, 30224178012, 30224178013, 30224178014, 30224178015, 30224178016, 30224178017, 30224178018

METHOD BLANK: 1306532 Matrix: Water

Associated Lab Samples: 30224178003, 30224178004, 30224178005, 30224178006, 30224178007, 30224178008, 30224178009, 30224178010, 30224178011, 30224178012, 30224178013, 30224178014, 30224178015, 30224178016, 30224178017, 30224178018

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.591 ± 0.331 (0.601) C:82% T:89%	pCi/L	08/01/17 11:39	

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## QUALIFIERS

Project: AAG0332 Plant Mitchell  
Pace Project No.: 30224178

### 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.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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Chain of Custody



Results Requested By: 8/7/2017

Owner Received Date:

Workorder Name: Plant Mitchell

Workorder: AAG0332

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	NO3	NO2	NO	LAB USE ONLY	Requested Analysis	Comments
1	PZ-1D	G	7/11/2017 9:32	AAG0332-01	GW							
2	PZ-32	G	7/11/2017 11:00	AAG0332-02	GW							
3	PZ-2S	G	7/11/2017 13:04	AAG0332-03	GW							
4	PZ-31	G	7/11/2017 11:11	AAG0332-04	GW							
5	PZ-14	G	7/11/2017 14:16	AAG0332-05	GW							
6	PZ-23	G	7/11/2017 15:51	AAG0332-06	GW							
7	PZ-16	G	7/11/2017 14:45	AAG0332-07	GW							
8	PZ-25	G	7/11/2017 16:40	AAG0332-08	GW							
9	Dup-02	G	7/11/2017 0:00	AAG0332-09	GW							
10	PZ-15	G	7/12/2017 8:45	AAG0332-10	GW							
Transfers Released By										Date/Time		
M. RAHMAN										7/13/17		
Received By										Date/Time		
[Signature]										7/14/17		
Radium 226, 228, Total												

WO#: 30224178



Preserved Containers: 5

Report To: Betsy McDaniel  
 Pace Analytical Atlanta  
 110 Technology Parkway  
 Peachtree Corners, GA 30092  
 Phone (770)-734-4200

Subcontract To: Pace - Pittsburgh  
 1638 Roseytown Road  
 Stes. 2,3,4  
 Greensburg, PA 15601  
 Phone (724) 850-5600

Workorder Name: Plant Mitchell  
 Workorder: AAG0332

Results Requested By: 8/7/2017

Cooler Temperature on Receipt 11.1 °C Custody Seal Y or N Y Received on Ice Y or N Y Sample Intact Y or N Y  
 \*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC  
 This chain of custody is considered complete as is since this information is available in the owner laboratory.



Chain of Custody



Results Requested By: 8/7/2017

Owner Received Date:

Workorder Name: Plant Mitchell

Workorder: AAG0332

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		Date/Time	Comments	
						CON	H			
11	PZ-17	G	7/12/2017 10:05	AAG0332-11	GW	4				
12	PZ-18	G	7/12/2017 12:25	AAG0332-12	GW	2				
13	PZ-33	G	7/12/2017 11:48	AAG0332-13	GW	2				
14	Dup-01	G	7/12/2017 0:00	AAG0332-14	GW	2				
15	PZ-19	G	7/12/2017 14:17	AAG0332-15	GW	2				
16	EB-01	G	7/12/2017 13:20	AAG0332-16	W	2				
17	FB-01	G	7/12/2017 13:40	AAG0332-17	W	2				
18	PZ-7D	G	7/12/2017 9:42	AAG0332-18	GW	4				
19										
20										
Transfers Released By						Received By		Date/Time	Comments	
1	M. RAHMAN						[Signature]		7/14/17	
2										
3										

Report To:  
Betsy McDaniel  
Pace Analytical Atlanta  
110 Technology Parkway  
Peachtree Corners, GA 30092  
Phone (770)-734-4200

Subcontract To:  
Pace - Pittsburgh  
1638 Roseytown Road  
Stes. 2,3,4  
Greensburg, PA 15601  
Phone (724) 850-5600

Requested Analysis  
30224178-

Radium 226, 228, Total

LAB USE ONLY  
011  
012  
013  
014  
015  
016  
017  
018

Cooler Temperature on Receipt 41.4 °C Custody Seal Y of N Received on Ice Y of N Sample Intact Y of N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC  
This chain of custody is considered complete as is since this information is available in the owner laboratory.



Pace Analytical Services, Inc.  
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092  
 (770) 734-4200 • FAX (770) 734-4201 • www.esi-lab.com

PAGE: 1 OF 1

**CHAIN OF CUSTODY RECORD**

CLIENT NAME: Georgia Power  
 CLIENT ADDRESS: PHONE NUMBER/FAX NUMBER:  
 241 Ralph McGill Blvd SE  
 Atlanta, GA 30308  
 404-506-7239  
 REPORT TO: Joju Abraham  
 REQUESTED COMPLETION DATE: PO #:  
 GPC10684198  
 PROJECT NAME/STATE: **Plant Mitchell/GA**  
 PROJECT #: **Phase II CCR EVENT 4**

CONTAINER TYPE	PRESERVATION	ANALYSIS REQUESTED										DATE/TIME	DATE/TIME			
		P	P	P	P	P	P	P	P	P	P			P		
3																
CONTAINERS																
4		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

- CONTAINER TYPE**
- P - PLASTIC
  - A - AMBER GLASS
  - G - CLEAR GLASS
  - V - VOA VIAL
  - S - STERILE
  - O - OTHER
- PRESERVATION**
- 1 - HCl, 56°C
  - 2 - H<sub>2</sub>SO<sub>4</sub>, 56°C
  - 3 - HNO<sub>3</sub>
  - 4 - NaOH, 56°C
  - 5 - NaOH/ZnAc, 56°C
  - 6 - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, 56°C
  - 7 - 56°C ref 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

30224178

LAB #: **AA60332**  
 FOR LAB USE ONLY  
 Entered into LIMS:  
 Tracking #: **869796977841**

Collection DATE	Collection TIME	MATRIX CODE	SAMPLE IDENTIFICATION	RELINQUISHED BY:	DATE/TIME	RELINQUISHED BY:	DATE/TIME	SAMPLE SHIPPED VIA:	COURIER	CLIENT	OTHER	FS
7/17	09:32	GW	PZ-1D	James Smith	7/17/09:32	James Smith	7/17/15:40	UPS	1			
7/17	11:00	GW	PZ-32									
7/17	13:04	GW	PZ-2S									

SAMPLED BY AND TITLE: **Receiv.../Site mgr.**  
 RECEIVED BY: **Abraham**  
 DATE/TIME: **07/17/09 15:40**  
 Temperature: **4.2** Max  
 pH checked: **Yes** No NA  
 Custody Seal: **Intact** Broken Not Present  
 # of Coolers: **1**  
 Pace GOC Revised.xlsx

**Sample Condition Upon Receipt**

30224178



Client Name: GIA - Power

Project # Plant Mitchell

Optional:
Prod. Due Date:
Prod. Name:

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 8107 9699 7841

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

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used IR-2      Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 4.2      Biological Tissue Is Frozen: Yes No  
Temp should be above freezing to 6°C

Date and Initials of person examining contents: <u>7/13/17 MR</u>
---

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

Client Notification/ Resolution:

Field Data Required?      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, 11September2008



Pace Analytical Services, Inc.  
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PAGE: 1 OF 1

CHAIN OF CUSTODY RECORD

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Jotir Abraham <b>CC:</b> Maria Padilla Health McConite <b>PO #:</b> GPC10684198		<b>PROJECT NAME/STATE:</b> Plant Mitchell / GA <b>Phase II CCR, Event 4</b>	
<b>CONTAINER TYPE:</b> # of 3		<b>ANALYSIS REQUESTED</b> P P P P P P P P 3 7 7 7 3 TDS SM 25400 IC (7, SO4) EPA 800.0 Metals App. III & IV EPA 8020/7470 Radium 226 & 228 SW-46 9315/9320			
<b>CONTAINER TYPE:</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		<b>PRESERVATION:</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/NaAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C 7 - 56°C not frozen			
<b>MATRIX CODES:</b> DW - DRINKING WATER WW - WASTEWATER GW - GROUNDWATER SW - SURFACE WATER ST - STORM WATER LW - WATER S - SOIL SL - SLUDGE SD - SOLID A - AIR L - LIQUID P - PRODUCT		<b>REMARKS/ADDITIONAL INFORMATION</b> 30224178			
<b>CONTAINERS</b> 4 4 4		<b>RELINQUISHED BY:</b> RELINQUISHED BY: <i>[Signature]</i> RELINQUISHED BY:			
<b>SAMPLE IDENTIFICATION</b> C G R O M A R P B ✓ PZ-31 ✓ PZ-14 ✓ PZ-23		<b>DATE/TIME:</b> 7-11-17 11:11 7-11-17 14:16 7-11-17 15:51			
<b>SAMPLED BY AND TITLE:</b> Daniel Howard/chemist <b>RECEIVED BY:</b>		<b>DATE/TIME:</b> 7-11-17 11:11 7-11-17 09:15			
<b>RECEIVED BY LAB:</b> [Signature] <b>DATE/TIME:</b> 7-11-17 09:15		<b>USPS</b> <input checked="" type="checkbox"/> <b>UPS</b> <input checked="" type="checkbox"/> <b>FEDEX</b> <input checked="" type="checkbox"/> Broken Not Present Broken Not Present			
<b>FOR LAB USE ONLY</b> LAB #: AA600332 Entered into LIMS:		<b>CLIENT</b> <input type="checkbox"/> <b>OTHER</b> <input type="checkbox"/> <b>FS</b> <input type="checkbox"/> Tracking #: 8107 9699 7852 Cooler # 22			

**Sample Condition Upon Receipt**

30224178

Pace Analytical

Client Name: GIA - Power

Project # Plant Mitchell

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 8107 9699 7852

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

Optional:
Proj. Date:
Proj. Name:

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used 1R-2      Type of Ice: Wet Blue None

Samples on Ice, cooling process has begun

Cooler Temperature 4.2      Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 7/13/17 MB

Temp should be above freezing to 6°C

Comments:

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

Client Notification/ Resolution:

Field Data Required?      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

**CHAIN OF CUSTODY RECORD**

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

PAGE: 1 OF 1

CLIENT NAME: Georgia Power  
 CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-505-7239  
 REPORT TO: Joju Abraham  
 CC: Maria Padilla Health McConkie  
 REQUESTED COMPLETION DATE: PO #: GPC10684198  
 PROJECT NAME/STATE: Plant Mitchell / GA

ANALYSIS REQUESTED

CONTAINER TYPE	P	P	P	P	P	P	P
PRESERVATION: # of	3	7	7	7	3		
META: App. III & IV	1	1	1	1	2		
IC (Cl, F, SO4)	1	1	1	1	2		
BP (800)	1	1	1	1	2		
TOS							
SM 2340C							
Rad Int 226 & 228 SW-46 8315/8320							

CONTAINER TYPE

P - PLASTIC	1 - HCl, 56°C
A - AMBER GLASS	2 - H <sub>2</sub> SO <sub>4</sub> , 56°C
G - CLEAR GLASS	3 - HNO <sub>3</sub>
V - VOA VIAL	4 - NaOH, 56°C
S - STERILE	5 - NaOH/NaAc, 56°C
O - OTHER	6 - Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub> , 56°C
	7 - 56°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

CONTAINERS

Collection DATE	MATRIX CODE	SAMPLE IDENTIFICATION	C O M P	G R A B	RELINQUISHED BY	DATE/TIME	DATE/TIME
7-11-17 14:45	GW	PZ-16	✓			7-11-17 14:45	
7-11-17 16:40	GW	PZ-25	✓				
7-11-17 -	GW	DWP-02	✓				

SAMPLED BY AND TITLE: JERRYL PARKER / MGR.  
 RECEIVED BY: [Signature]  
 DATE/TIME: 7-11-17 / 14:45  
 RELINQUISHED BY: [Signature]  
 DATE/TIME: 7-12-17  
 RECEIVED BY LAB: [Signature]  
 DATE/TIME: 07/13/17 10:45  
 SAMPLE SHIPPED VIA: UPS (FED-EX)  
 CARRIER: [Signature]  
 CLIENT: [Signature]  
 OTHER: FS  
 COOLER ID: 810796997863  
 COOLER #3

Sample Condition Upon Receipt



Client Name: GVA - Power

Project # Plant Mitchell

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 810796997863

Optional: Prof. Data, Eco. Name

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

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used IR-2 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 4.2 Temp should be above freezing to 6°C

Biological Tissue Is Frozen: Yes No

Date and initials of person examining contents: 7/13/17 MR

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

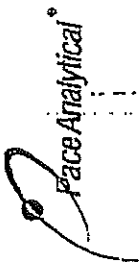
Client Notification/ Resolution: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Field Data Required? Y / N

Person Contacted: \_\_\_\_\_

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)



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**CHAIN OF CUSTODY RECORD**

PAGE: 1 OF 1

<b>CLIENT NAME:</b> Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Jaju Abraham CC: Maria Padilla Heath McCortle PO #: GPC10684198		<b>PROJECT NAME/STATE:</b> Plant Mitchell / GA Phas II CCR / EVENT 4	
Collection DATE	Collection TIME	MATRIX CODE	SAMPLE IDENTIFICATION	CONTAINER TYPE	ANALYSIS REQUESTED
7-12-17	08:45	GW	PZ-15	4	Metals App. III & IV FP 8020/7470 IC (C, F, SO4) MP 300.0 TDS SM 2540C Rad/m 226 & 228 SYV-48 9316/9320
7-12-17	10:05	GW	PZ-17	6	
7-12-17	12:25	GW	PZ-18	4	

SAMPLED BY LAB	RECEIVED BY:	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME
Maxa Vroman	Site Mar	7/17/17 08:45	7/17/17 10:03	7/17/17 10:03	7/17/17 10:03

SAMPLED BY LAB: Maxa Vroman RECEIVED BY: Site Mar DATE/TIME: 7/17/17 08:45 DATE/TIME: 7/17/17 10:03 DATE/TIME: 7/17/17 10:03	RELINQUISHED BY: <i>[Signature]</i> RELINQUISHMENT: <i>[Signature]</i>	SAMPLE SHIPPED VIA: UPS UPS (FEDEX) Intact Broken Not Present	COURIER: <i>[Signature]</i> # of Containers: 1	CLIENT: <i>[Signature]</i> OTHER: FS
--	---	---	---	---

CONTAINER TYPE: P- PLASTIC A- AMBER GLASS G- CLEAR GLASS V- VOA VIAL S- STERILE O- OTHER	PRESERVATION: 1- HCl, 56°C 2- H <sub>2</sub> SO <sub>4</sub> , 56°C 3- HNO <sub>3</sub> 4- NaOH, 56°C 5- NaOH/H <sub>2</sub> O <sub>2</sub> , 56°C 6- Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub> , 56°C 7- 56°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: 2 EXTRA BOTTLES FOR PZ-15/17/18 30224178
---	--

LAB #: AAG0332 FOR LAB USE ONLY Entered into LIMS: 8107 9699 7894 Tracking #: <i>[Signature]</i>	COOLER ID: Cooler #4
---	----------------------



Client Name: GIA - Power

Project # Plant Mitchell

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 81079699 7874

Optional:  
Product Date  
Rep Name

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

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used IR-2      Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 4.2  
Temp should be above freezing to 6°C

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 7/13/17 MR

Comments:

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

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Field Data Required? Y / N

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)



Sample Condition Upon Receipt

30224178  
Project # Plant Mitchell

Client Name: GUA-Power

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 810996997896

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

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used 1R-2 Type of Ice: Wet Blue None  Samples on Ice, cooling process has begun

Cooler Temperature 4.2 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 8°C

Date and initials of person examining contents: 7/13/17 MR

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

Client Notification/ Resolution: Field Data Required? 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)

**Sample Condition Upon Receipt**

30224178 -



Client Name: GVA - Power

Project # Plant Mitchell

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_  
 Tracking #: 8107 9699 7885  
 Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no  
 Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_  
 Thermometer Used 18-2    Type of Ice: Wal Blue None  Samples on Ice, cooling process has begun  
 Cooler Temperature 4.2    Biological Tissue is Frozen: Yes No  
 Temp should be above freezing to 5°C    Comments:

Optional:  
 Proj. ID: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Proj. Name: \_\_\_\_\_

Date and initials of person examining contents: 7/13/17 MR

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

Client Notification/ Resolution: \_\_\_\_\_    Field Data Required?    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, 11September2008

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: PALE-GA

Project # 30224178

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Label ZH  
LIMS Login ANL

Tracking #: 741360571590

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

Thermometer Used \_\_\_\_\_    Type of Ice: Wet Blue None

Cooler Temperature \_\_\_\_\_    Observed Temp \_\_\_\_\_ °C    Correction Factor: \_\_\_\_\_ °C    Final Temp: \_\_\_\_\_ °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: ZH 7/14/17

Comments:

	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. <u>ANL 7-14-17</u>
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
-Includes date/time/ID    Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
-Pace Containers Used:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Orthophosphate field filtered	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
Organic Samples checked for dechlorination:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.
Filled volume received for Dissolved tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
All containers have been checked for preservation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15. <u>PHLZ</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
exceptions: VOA, coliform, TOC, O&G, Phenolics				
				Initial when completed: <u>ZH</u> Date/Time of preservation: _____
				Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	16.
Trip Blank Present:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rad Aqueous Samples Screened > 0.5 mrem/hr	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>ZH</u> Date: <u>7/14/17</u>

Client Notification/ Resolution:

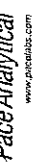
Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

A check in this box indicates that additional information has been stored in ereports.

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)  
\*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS, The review is in the Status section of the Workorder Edit Screen.

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: VAL  
Date: 7/24/2017  
Worklist: 36695  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1306529
MB concentration:	0.044
MB Counting Uncertainty:	0.286
MB MDC:	0.656
MB Numerical Performance Indicator:	0.30
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		Y
LCS/36695		LCS/36695
Count Date:	7/28/2017	7/28/2017
Spike I.D.:	17-005	17-005
Spike Concentration (pCi/mL):	23.942	23.942
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.803	0.810
Target Conc. (pCi/L, g, F):	5.964	5.915
Uncertainty (Calculated):	0.429	0.426
Result (pCi/L, g, F):	6.410	4.817
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.669	0.558
Numerical Performance Indicator:	1.10	-3.07
Percent Recovery:	107.48%	81.44%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

Duplicate Sample Assessment		Y
LCS/36695		LCS/36695
Sample I.D.:	LCS/36695	LCS/36695
Duplicate Sample I.D.:	6.410	6.410
Sample Result Counting Uncertainty (pCi/L, g, F):	0.669	0.669
Sample Duplicate Result (pCi/L, g, F):	4.817	0.558
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.558	0.558
Are sample and/or duplicate results below MDC?	NO	NO
Duplicate Numerical Performance Indicator:	3.586	3.586
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	27.57%	27.57%
Duplicate Status vs Numerical Indicator:	N/A	N/A
Duplicate Status vs RPD:	Pass	Pass

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

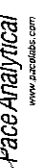
Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

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

Comments:

*08/14/17*

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: VAL  
Date: 7/25/2017  
Worklist: 36696  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1306532
MB concentration:	0.591
M/B Counting Uncertainty:	0.314
MB MDC:	0.601
MB Numerical Performance Indicator:	3.70
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
	Y
LCS36696	8/1/2017
Count Date:	17-005
Spike I.D.:	23.911
Spike Concentration (pCi/mL):	0.20
Volume Used (mL):	0.819
Aliquot Volume (L, g, F):	5.841
Target Conc. (pCi/L, g, F):	0.421
Uncertainty (Calculated):	6.574
Result (pCi/L, g, F):	0.691
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.78
Numerical Performance Indicator:	112.55%
Percent Recovery:	N/A
Status vs Numerical Indicator:	Pass
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS36696
Duplicate Sample I.D.:	LCS36696
Sample Result (pCi/L, g, F):	6.753
Sample Duplicate Result (pCi/L, g, F):	0.741
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	6.574
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.691
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	0.345
Duplicate Percent Recoveries:	2.48%
Duplicate RPD:	N/A
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass

Sample Matrix Spike Control Assessment	
Sample Collection Date:	Sample I.D.:
Sample MS I.D.:	Sample MS I.D.:
Sample MSD I.D.:	Sample MSD I.D.:
Spike I.D.:	Spike I.D.:
M/S/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike Volume Used in MS (mL):
Spike Volume Used in MSD (mL):	MS Aliquot (L, g, F):
MS Target Conc. (pCi/L, g, F):	MSD Aliquot (L, g, F):
MSD Target Conc. (pCi/L, g, F):	Spike uncertainty (calculated):
Sample Result:	Sample Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Result:	Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:	MS Numerical Performance Indicator:
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	MS Percent Recovery:
MS Numerical Performance Indicator:	MSD Percent Recovery:
MS Status vs Numerical Indicator:	MSD Status vs Numerical Indicator:
MS Status vs Recovery:	MS Status vs Recovery:
MSD Status vs Recovery:	MSD Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample MS I.D.:
Sample MS I.D.:	Sample MSD I.D.:
Sample Matrix Spike Result:	Sample Matrix Spike Result:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	Duplicate Numerical Performance Indicator:
Duplicate Numerical Performance Indicator:	Duplicate Percent Recoveries:
Duplicate RPD:	Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs RPD:

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

Comments:

*07/28/17*

# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: JC2  
Date: 7/20/2017  
Worklist: 36692  
Matrix: DW

**Method Blank Assessment**

MB Sample ID: 1306524  
MB concentration: 0.278  
MB Counting Uncertainty: 0.090  
MB MDC: 0.098  
MB Numerical Performance Indicator: 6.06  
MB Status vs Numerical Indicator: N/A  
MB Status vs. MDC: See Comment\*

**Laboratory Control Sample Assessment**

Count Date:	LCS (Y or N)?	Y
7/26/2017	LCS36692	7/26/2017
Spike I.D.:	17-030	17-030
Spike Concentration (pCi/mL):	80.197	80.197
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.501	0.505
Target Conc. (pCi/L, g, F):	15.999	15.872
Uncertainty (Calculated):	1.474	1.462
Result (pCi/L, g, F):	12.204	12.053
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.770	0.778
Numerical Performance Indicator:	-4.47	-4.52
Percent Recovery:	76.28%	75.94%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

**Duplicate Sample Assessment**

Sample I.D.: LCS36692  
Duplicate Sample I.D.: LCS36692  
Sample Result (pCi/L, g, F): 12.204  
Sample Duplicate Result (pCi/L, g, F): 0.770  
Sample Duplicate Counting Uncertainty (pCi/L, g, F): 12.053  
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.778  
Are sample and/or duplicate results below MDC? NO  
Duplicate Numerical Performance Indicator: 0.271  
Duplicate RPD: 1.25%  
Duplicate Status vs Numerical Indicator: N/A  
Duplicate Status vs RPD: Pass

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

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

*Analyst*

Comments:  
\*The method blank result is below the reporting limit for this analysis and is acceptable.

**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Spike I.D.:  
MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
Spike Volume Used in MS (mL):  
MS Aliquot (L, g, F):  
MS Target Conc. (pCi/L, g, F):  
MSD Aliquot (L, g, F):  
MSD Target Conc. (pCi/L, g, F):  
Spike uncertainty (calculated):  
Sample Result:  
Sample Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
MS Numerical Performance Indicator:  
MSD Numerical Performance Indicator:  
MS Percent Recovery:  
MSD Percent Recovery:  
MS Status vs Numerical Indicator:  
MSD Status vs Numerical Indicator:  
MS Status vs Recovery:  
MSD Status vs Recovery:

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
Duplicate Numerical Performance Indicator:  
MS/MSD Duplicate RPD:  
MS/MSD Duplicate Status vs Numerical Indicator:  
MS/MSD Duplicate Status vs RPD:

# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: JC2  
Date: 7/20/2017  
Worklist: 36693  
Matrix: DW

**Method Blank Assessment**

MB Sample ID: 1306527  
MB concentration: 0.040  
MB Counting Uncertainty: 0.106  
MB MDC: 0.255  
MB Numerical Performance Indicator: 0.73  
MB Status vs Numerical Indicator: N/A  
MB Status vs. MDC: Pass

**Laboratory Control Sample Assessment**

LCS#	Y or N?	N
LCS36693	7/25/2017	LCS036693
Count Date:	17-030	
Spike I.D.:	80.197	
Spike Concentration (pCi/mL):	0.10	
Volume Used (mL):	0.503	
Aliquot Volume (L, g, F):	15.943	
Target Conc. (pCi/L, g, F):	1.469	
Uncertainty (Calculated):	13.192	
Result (pCi/L, g, F):	0.829	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	-3.20	
Numerical Performance Indicator:	82.75%	
Percent Recovery:	N/A	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

**Duplicate Sample Assessment**

Sample I.D.: 30224181002  
Duplicate Sample I.D.: 30224181002DUP  
Sample Result (pCi/L, g, F): 0.253  
Sample Result Counting Uncertainty (pCi/L, g, F): 0.131  
Sample Duplicate Result (pCi/L, g, F): 0.208  
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.121  
Are sample and/or duplicate results below MDC? See Below ##  
Duplicate Numerical Performance Indicator: 0.493  
Duplicate RPD: 19.39%  
Duplicate Status vs Numerical Indicator: N/A  
Duplicate Status vs RPD: Pass

Enter Duplicate sample IDs if other than LCS/LCSD in the space below:  
30224181002  
30224181002DUP

**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Spike I.D.:

MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
Spike Volume Used in MS (mL):  
Spike Volume Used in MSD (mL):  
MS Aliquot (L, g, F):  
MS Target Conc. (pCi/L, g, F):  
MSD Aliquot (L, g, F):  
MSD Target Conc. (pCi/L, g, F):  
Spike uncertainty (calculated):  
Sample Result:  
Sample Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
MS Numerical Performance Indicator:  
MS Numerical Performance Indicator:  
MS Percent Recovery:  
MSD Status vs Numerical Indicator:  
MSD Status vs Numerical Indicator:  
MS Status vs Recovery:  
MSD Status vs Recovery:

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
Duplicate Numerical Performance Indicator:  
MS/MSD Duplicate RPD:  
MS/MSD Duplicate Status vs Numerical Indicator:  
MS/MSD Duplicate Status vs RPD:

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

Comments:

*MS/4/17*





**PACE ANALYTICAL SERVICES, LLC.**

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

**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AAJ0677**

**November 03, 2017**

**Project: CCR Event**

**Project #: Plant Mitchell**

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

Approved:

A handwritten signature in black ink, appearing to read "Betty McDaniel", written over a horizontal line.

Project Manager

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All test results relate only to the samples analyzed.



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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
PZ-32	AAJ0677-01	Ground Water	10/17/17 12:17	10/19/17 09:20
PZ-1D	AAJ0677-02	Ground Water	10/17/17 12:50	10/19/17 09:20
PZ-31	AAJ0677-03	Ground Water	10/17/17 14:45	10/19/17 09:20
PZ-2S	AAJ0677-04	Ground Water	10/17/17 16:08	10/19/17 09:20
FB-01	AAJ0677-05	Water	10/18/17 09:50	10/19/17 09:20
EB-01	AAJ0677-06	Water	10/18/17 10:00	10/19/17 09:20
PZ-15	AAJ0677-07	Ground Water	10/18/17 16:00	10/19/17 09:20
PZ-14	AAJ0677-08	Ground Water	10/18/17 11:00	10/19/17 09:20
Dup-01	AAJ0677-09	Ground Water	10/18/17 00:00	10/19/17 09:20
PZ-16	AAJ0677-10	Ground Water	10/18/17 13:07	10/19/17 09:20
PZ-18	AAJ0677-11	Ground Water	10/18/17 14:35	10/19/17 09:20
PZ-23	AAJ0677-12	Ground Water	10/18/17 11:39	10/19/17 09:20
PZ-25	AAJ0677-13	Ground Water	10/18/17 13:42	10/19/17 09:20
PZ-17	AAJ0677-14	Ground Water	10/18/17 15:20	10/19/17 09:20



**PACE ANALYTICAL SERVICES, LLC.**

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

**Case Narrative**

The Radium analysis by methods EPA 9315/9320 was performed by Pace-Pittsburgh, 1638 Roseytown Road - Suites 2, 3, 4, Greensburg PA 15601. The Pace-Pittsburgh lab contact is Jacquelyn Collins at 724-850-5612.



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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0677

Project: CCR Event

Client ID: PZ-32

Lab Number ID: AAJ0677-01

Date/Time Sampled: 10/17/2017 12:17:00PM

Date/Time Received: 10/19/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	140	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	3.0	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 15:21	7100769	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 15:21	7100769	RLC
Sulfate	1.9	1.0	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 15:21	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 18:42	7100610	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 18:42	7100610	CSW
Barium	0.0158	0.0100	0.0004	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 18:42	7100610	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 18:42	7100610	CSW
Boron	0.0142	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 18:42	7100610	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 18:42	7100610	CSW
Calcium	64.9	25.0	2.02	mg/L	EPA 6020B		50	10/20/17 13:15	10/25/17 18:48	7100610	CSW
Chromium	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 18:42	7100610	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 18:42	7100610	CSW
Lead	0.00007	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 18:42	7100610	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 18:42	7100610	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 18:42	7100610	CSW
Thallium	0.00008	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 18:42	7100610	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 18:42	7100610	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/25/17 13:00	10/26/17 10:38	7100723	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0677

Project: CCR Event

Client ID: PZ-1D

Lab Number ID: AAJ0677-02

Date/Time Sampled: 10/17/2017 12:50:00PM

Date/Time Received: 10/19/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	101	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	3.3	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 16:44	7100769	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 16:44	7100769	RLC
Sulfate	2.5	1.0	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 16:44	7100769	RLC
<b>Metals, Total</b>											
Antimony	0.0025	0.0030	0.0006	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 19:05	7100610	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:05	7100610	CSW
Barium	0.0255	0.0100	0.0004	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:05	7100610	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 19:02	7100610	CSW
Boron	0.0083	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 19:05	7100610	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:05	7100610	CSW
Calcium	48.7	25.0	2.02	mg/L	EPA 6020B		50	10/20/17 13:15	10/25/17 19:11	7100610	CSW
Chromium	0.0053	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 19:05	7100610	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:05	7100610	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 19:05	7100610	CSW
Molybdenum	0.0016	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 19:05	7100610	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:05	7100610	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:05	7100610	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:05	7100610	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/25/17 13:00	10/26/17 10:40	7100723	MTC



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 2480 Maner Road  
 Atlanta GA, 30339

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0677

Project: CCR Event

Client ID: PZ-31

Lab Number ID: AAJ0677-03

Date/Time Sampled: 10/17/2017 2:45:00PM

Date/Time Received: 10/19/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	218	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	4.6	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 17:05	7100769	RLC
Fluoride	0.05	0.30	0.03	mg/L	EPA 300.0	J	1	10/25/17 19:28	10/26/17 17:05	7100769	RLC
Sulfate	6.4	1.0	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 17:05	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:16	7100610	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:16	7100610	CSW
Barium	0.0103	0.0100	0.0004	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:16	7100610	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 19:08	7100610	CSW
Boron	0.0116	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 19:16	7100610	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:16	7100610	CSW
Calcium	91.6	25.0	2.02	mg/L	EPA 6020B		50	10/20/17 13:15	10/25/17 19:22	7100610	CSW
Chromium	0.0008	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 19:16	7100610	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:16	7100610	CSW
Lead	0.0005	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 19:16	7100610	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:16	7100610	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:16	7100610	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:16	7100610	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:16	7100610	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/25/17 13:00	10/26/17 10:43	7100723	MTC



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 Atlanta GA, 30339

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0677

Project: CCR Event

Client ID: PZ-2S

Lab Number ID: AAJ0677-04

Date/Time Sampled: 10/17/2017 4:08:00PM

Date/Time Received: 10/19/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	119	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	3.0	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 18:07	7100769	RLC
Fluoride	0.06	0.30	0.03	mg/L	EPA 300.0	J	1	10/25/17 19:28	10/26/17 18:07	7100769	RLC
Sulfate	1.2	1.0	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 18:07	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:28	7100610	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:28	7100610	CSW
Barium	0.0084	0.0100	0.0004	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 19:28	7100610	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 19:13	7100610	CSW
Boron	0.0086	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 19:28	7100610	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:28	7100610	CSW
Calcium	49.8	25.0	2.02	mg/L	EPA 6020B		50	10/20/17 13:15	10/25/17 19:34	7100610	CSW
Chromium	0.0040	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 19:28	7100610	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:28	7100610	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:28	7100610	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:28	7100610	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:28	7100610	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:28	7100610	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:28	7100610	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/25/17 13:00	10/26/17 10:45	7100723	MTC



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 Atlanta GA, 30339

November 03, 2017

Attention: Mr. Joju Abraham

**Report No.: AAJ0677**

**Project: CCR Event**

**Client ID: FB-01**

**Lab Number ID: AAJ0677-05**

**Date/Time Sampled: 10/18/2017 9:50:00AM**

**Date/Time Received: 10/19/2017 9:20:00AM**

**Matrix: Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	ND	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 18:27	7100769	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 18:27	7100769	RLC
Sulfate	ND	1.0	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 18:27	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:39	7100610	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:39	7100610	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:39	7100610	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 19:19	7100610	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:39	7100610	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:39	7100610	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:39	7100610	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:39	7100610	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:39	7100610	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:39	7100610	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:39	7100610	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:39	7100610	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:39	7100610	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:39	7100610	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/25/17 13:00	10/26/17 10:48	7100723	MTC





**PACE ANALYTICAL SERVICES, LLC.**

Environmental Monitoring & Laboratory Analysis  
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 (770) 734-4200 FAX (770) 734-4201

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0677

Project: CCR Event

Client ID: EB-01

Lab Number ID: AAJ0677-06

Date/Time Sampled: 10/18/2017 10:00:00AM

Date/Time Received: 10/19/2017 9:20:00AM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	ND	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 18:48	7100769	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 18:48	7100769	RLC
Sulfate	ND	1.0	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 18:48	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:45	7100610	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:45	7100610	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:45	7100610	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 19:25	7100610	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:45	7100610	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:45	7100610	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:45	7100610	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:45	7100610	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:45	7100610	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:45	7100610	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:45	7100610	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:45	7100610	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:45	7100610	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:45	7100610	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/25/17 13:00	10/26/17 10:55	7100723	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0677

Project: CCR Event

Client ID: PZ-15

Lab Number ID: AAJ0677-07

Date/Time Sampled: 10/18/2017 4:00:00PM

Date/Time Received: 10/19/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	275	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	7.8	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 19:09	7100769	RLC
Fluoride	0.19	0.30	0.03	mg/L	EPA 300.0	J	1	10/25/17 19:28	10/26/17 19:09	7100769	RLC
Sulfate	82	5.0	0.08	mg/L	EPA 300.0		5	10/25/17 19:28	10/27/17 12:14	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:51	7100610	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:51	7100610	CSW
Barium	0.0617	0.0100	0.0004	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:51	7100610	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 19:31	7100610	CSW
Boron	0.197	0.0400	0.0060	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:51	7100610	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:51	7100610	CSW
Calcium	92.0	25.0	2.02	mg/L	EPA 6020B		50	10/20/17 13:15	10/25/17 19:56	7100610	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:51	7100610	CSW
Cobalt	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 19:51	7100610	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:51	7100610	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:51	7100610	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:51	7100610	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:51	7100610	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 19:51	7100610	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/25/17 13:00	10/26/17 10:57	7100723	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0677

Project: CCR Event

Client ID: PZ-14

Lab Number ID: AAJ0677-08

Date/Time Sampled: 10/18/2017 11:00:00AM

Date/Time Received: 10/19/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	261	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	5.1	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 19:29	7100769	RLC
Fluoride	0.11	0.30	0.03	mg/L	EPA 300.0	J	1	10/25/17 19:28	10/26/17 19:29	7100769	RLC
Sulfate	4.2	1.0	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 19:29	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:14	7100610	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:14	7100610	CSW
Barium	0.0247	0.0100	0.0004	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:14	7100610	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 19:42	7100610	CSW
Boron	0.0212	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 20:14	7100610	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:14	7100610	CSW
Calcium	100	25.0	2.02	mg/L	EPA 6020B		50	10/20/17 13:15	11/01/17 19:36	7100610	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:14	7100610	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:14	7100610	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:14	7100610	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:14	7100610	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:14	7100610	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:14	7100610	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:14	7100610	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/25/17 13:00	10/26/17 10:59	7100723	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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 Atlanta GA, 30339

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0677

Project: CCR Event

Client ID: Dup-01

Lab Number ID: AAJ0677-09

Date/Time Sampled: 10/18/2017 12:00:00AM

Date/Time Received: 10/19/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	261	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	5.1	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 19:50	7100769	RLC
Fluoride	0.06	0.30	0.03	mg/L	EPA 300.0	J	1	10/25/17 19:28	10/26/17 19:50	7100769	RLC
Sulfate	4.3	1.0	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 19:50	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:25	7100610	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:25	7100610	CSW
Barium	0.0250	0.0100	0.0004	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:25	7100610	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 19:48	7100610	CSW
Boron	0.0208	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 20:25	7100610	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:25	7100610	CSW
Calcium	98.3	25.0	2.02	mg/L	EPA 6020B		50	10/20/17 13:15	10/25/17 20:31	7100610	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:25	7100610	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:25	7100610	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:25	7100610	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:25	7100610	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:25	7100610	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:25	7100610	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:25	7100610	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/25/17 13:00	10/26/17 11:02	7100723	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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 Atlanta GA, 30339

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0677

Project: CCR Event

Client ID: PZ-16

Lab Number ID: AAJ0677-10

Date/Time Sampled: 10/18/2017 1:07:00PM

Date/Time Received: 10/19/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	240	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	8.2	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 21:12	7100769	RLC
Fluoride	0.04	0.30	0.03	mg/L	EPA 300.0	J	1	10/25/17 19:28	10/26/17 21:12	7100769	RLC
Sulfate	58	2.0	0.03	mg/L	EPA 300.0		2	10/25/17 19:28	10/27/17 12:36	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:36	7100610	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:36	7100610	CSW
Barium	0.0446	0.0100	0.0004	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:36	7100610	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 19:53	7100610	CSW
Boron	0.195	0.0400	0.0060	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:36	7100610	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:36	7100610	CSW
Calcium	84.7	25.0	2.02	mg/L	EPA 6020B		50	10/20/17 13:15	10/25/17 20:42	7100610	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:36	7100610	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:36	7100610	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:36	7100610	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:36	7100610	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:36	7100610	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 20:36	7100610	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:36	7100610	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/25/17 13:00	10/26/17 11:04	7100723	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0677

Project: CCR Event

Client ID: PZ-18

Lab Number ID: AAJ0677-11

Date/Time Sampled: 10/18/2017 2:35:00PM

Date/Time Received: 10/19/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	368	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	6.8	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 21:33	7100769	RLC
Fluoride	0.06	0.30	0.03	mg/L	EPA 300.0	J	1	10/25/17 19:28	10/26/17 21:33	7100769	RLC
Sulfate	99	5.0	0.08	mg/L	EPA 300.0		5	10/25/17 19:28	10/27/17 12:57	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:48	7100610	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:48	7100610	CSW
Barium	0.0258	0.0100	0.0004	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 20:16	7100610	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:48	7100610	CSW
Boron	0.370	0.0400	0.0060	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:48	7100610	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:48	7100610	CSW
Calcium	125	25.0	2.02	mg/L	EPA 6020B		50	10/20/17 13:15	11/01/17 20:11	7100610	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:48	7100610	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:48	7100610	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:48	7100610	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:48	7100610	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:48	7100610	CSW
Thallium	0.00005	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 20:48	7100610	CSW
Lithium	0.0027	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 20:48	7100610	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/25/17 13:00	10/26/17 11:07	7100723	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0677

Project: CCR Event

Client ID: PZ-23

Lab Number ID: AAJ0677-12

Date/Time Sampled: 10/18/2017 11:39:00AM

Date/Time Received: 10/19/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	366	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	5.1	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 21:54	7100769	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 21:54	7100769	RLC
Sulfate	34	1.0	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 21:54	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:59	7100610	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:59	7100610	CSW
Barium	0.0351	0.0100	0.0004	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:59	7100610	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 20:28	7100610	CSW
Boron	0.158	0.0400	0.0060	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:59	7100610	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:59	7100610	CSW
Calcium	144	25.0	2.02	mg/L	EPA 6020B		50	10/20/17 13:15	11/01/17 20:22	7100610	CSW
Chromium	0.0019	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 20:59	7100610	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:59	7100610	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:59	7100610	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:59	7100610	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:59	7100610	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/25/17 20:59	7100610	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/20/17 13:15	10/25/17 20:59	7100610	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/25/17 13:00	10/26/17 11:09	7100723	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0677

Project: CCR Event

Client ID: PZ-25

Lab Number ID: AAJ0677-13

Date/Time Sampled: 10/18/2017 1:42:00PM

Date/Time Received: 10/19/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	256	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	2.9	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 22:14	7100769	RLC
Fluoride	0.28	0.30	0.03	mg/L	EPA 300.0	J	1	10/25/17 19:28	10/26/17 22:14	7100769	RLC
Sulfate	50	2.0	0.03	mg/L	EPA 300.0		2	10/25/17 19:28	10/27/17 13:18	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 20:33	7100610	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 20:33	7100610	CSW
Barium	0.0997	0.0100	0.0004	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 20:33	7100610	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/20/17 13:15	10/26/17 09:04	7100610	CSW
Boron	0.186	0.0400	0.0060	mg/L	EPA 6020B		1	10/20/17 13:15	10/26/17 09:04	7100610	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/20/17 13:15	10/26/17 09:04	7100610	CSW
Calcium	87.6	25.0	2.02	mg/L	EPA 6020B		50	10/20/17 13:15	10/26/17 09:09	7100610	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 20:33	7100610	CSW
Cobalt	0.0011	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/20/17 13:15	11/01/17 20:33	7100610	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 20:33	7100610	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 20:33	7100610	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 20:33	7100610	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 20:33	7100610	CSW
Lithium	0.0057	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/26/17 09:04	7100610	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/25/17 13:00	10/26/17 11:11	7100723	MTC





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 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0677

Project: CCR Event

Client ID: PZ-17

Lab Number ID: AAJ0677-14

Date/Time Sampled: 10/18/2017 3:20:00PM

Date/Time Received: 10/19/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	349	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	7.6	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 22:35	7100769	RLC
Fluoride	0.24	0.30	0.03	mg/L	EPA 300.0	J	1	10/25/17 19:28	10/26/17 22:35	7100769	RLC
Sulfate	100	5.0	0.08	mg/L	EPA 300.0		5	10/25/17 19:28	10/27/17 13:39	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 20:45	7100610	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 20:45	7100610	CSW
Barium	0.0776	0.0100	0.0004	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 20:45	7100610	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/20/17 13:15	10/26/17 09:15	7100610	CSW
Boron	0.277	0.0400	0.0060	mg/L	EPA 6020B		1	10/20/17 13:15	10/26/17 09:15	7100610	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/20/17 13:15	10/26/17 09:15	7100610	CSW
Calcium	122	25.0	2.02	mg/L	EPA 6020B		50	10/20/17 13:15	11/01/17 20:39	7100610	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 20:45	7100610	CSW
Cobalt	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/20/17 13:15	11/01/17 20:45	7100610	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 20:45	7100610	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 20:45	7100610	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/20/17 13:15	11/01/17 20:45	7100610	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/20/17 13:15	10/26/17 09:15	7100610	CSW
Lithium	0.0020	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/20/17 13:15	10/26/17 09:15	7100610	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/25/17 13:00	10/26/17 11:14	7100723	MTC



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Attention: Mr. Joju Abraham

November 03, 2017

**Report No.: AAJ0677**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7100670 - SM 2540 C</b>											
<b>Blank (7100670-BLK1)</b>						Prepared & Analyzed: 10/23/17					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (7100670-BS1)</b>						Prepared & Analyzed: 10/23/17					
Total Dissolved Solids	354	25	10	mg/L	400.00		88	84-108			
<b>Duplicate (7100670-DUP1)</b>						Source: AAJ0677-05 Prepared & Analyzed: 10/23/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
<b>Duplicate (7100670-DUP2)</b>						Source: AAJ0677-13 Prepared & Analyzed: 10/23/17					
Total Dissolved Solids	254	25	10	mg/L		256			0.8	10	



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Attention: Mr. Joju Abraham

November 03, 2017

**Report No.: AAJ0677**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7100769 - EPA 300.0</b>											
<b>Blank (7100769-BLK1)</b>						Prepared: 10/25/17 Analyzed: 10/26/17					
Chloride	ND	0.25	0.02	mg/L							
Fluoride	ND	0.30	0.03	mg/L							
Sulfate	ND	1.0	0.02	mg/L							
<b>LCS (7100769-BS1)</b>						Prepared: 10/25/17 Analyzed: 10/26/17					
Chloride	10.2	0.25	0.02	mg/L	10.020		102	90-110			
Fluoride	10.0	0.30	0.03	mg/L	10.020		100	90-110			
Sulfate	10.2	1.0	0.02	mg/L	10.050		102	90-110			
<b>Matrix Spike (7100769-MS1)</b>						Source: AAJ0677-03 Prepared: 10/25/17 Analyzed: 10/26/17					
Chloride	14.9	0.25	0.02	mg/L	10.020	4.60	103	90-110			
Fluoride	10.6	0.30	0.03	mg/L	10.020	0.05	105	90-110			
Sulfate	16.3	1.0	0.02	mg/L	10.050	6.39	99	90-110			
<b>Matrix Spike (7100769-MS2)</b>						Source: AAJ0714-03 Prepared: 10/25/17 Analyzed: 10/26/17					
Chloride	16.9	0.25	0.02	mg/L	10.020	6.38	105	90-110			
Fluoride	11.0	0.30	0.03	mg/L	10.020	ND	109	90-110			
Sulfate	92.0	1.0	0.02	mg/L	10.050	91.3	7	90-110			QM-02
<b>Matrix Spike Dup (7100769-MSD1)</b>						Source: AAJ0677-03 Prepared: 10/25/17 Analyzed: 10/26/17					
Chloride	14.9	0.25	0.02	mg/L	10.020	4.60	103	90-110	0.3	15	
Fluoride	10.6	0.30	0.03	mg/L	10.020	0.05	105	90-110	0.4	15	
Sulfate	16.4	1.0	0.02	mg/L	10.050	6.39	100	90-110	0.5	15	



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November 03, 2017

**Report No.: AAJ0677**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 7100610 - EPA 3005A**

**Blank (7100610-BLK1)**

Prepared: 10/20/17 Analyzed: 10/25/17

Antimony	ND	0.0030	0.0006	mg/L							
Arsenic	ND	0.0050	0.0005	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00009	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.0001	mg/L							
Calcium	ND	0.500	0.0404	mg/L							
Chromium	ND	0.0100	0.0005	mg/L							
Cobalt	ND	0.0100	0.0003	mg/L							
Copper	ND	0.0250	0.0003	mg/L							
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0012	mg/L							
Zinc	ND	0.0100	0.0012	mg/L							
Lithium	ND	0.0500	0.0015	mg/L							

**LCS (7100610-BS1)**

Prepared: 10/20/17 Analyzed: 10/25/17

Antimony	0.103	0.0030	0.0006	mg/L	0.10000		103	80-120			
Arsenic	0.0989	0.0050	0.0005	mg/L	0.10000		99	80-120			
Barium	0.102	0.0100	0.0004	mg/L	0.10000		102	80-120			
Beryllium	0.0913	0.0030	0.00009	mg/L	0.10000		91	80-120			
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000		101	80-120			
Chromium	0.100	0.0100	0.0005	mg/L	0.10000		100	80-120			
Cobalt	0.0991	0.0100	0.0003	mg/L	0.10000		99	80-120			
Copper	0.0979	0.0250	0.0003	mg/L	0.10000		98	80-120			
Lead	0.102	0.0050	0.00007	mg/L	0.10000		102	80-120			
Nickel	0.100	0.0100	0.0005	mg/L	0.10000		100	80-120			
Selenium	0.103	0.0100	0.0018	mg/L	0.10000		103	80-120			
Silver	0.104	0.0100	0.0002	mg/L	0.10000		104	80-120			
Thallium	0.103	0.0010	0.00005	mg/L	0.10000		103	80-120			
Vanadium	0.0990	0.0100	0.0012	mg/L	0.10000		99	80-120			
Zinc	0.106	0.0100	0.0012	mg/L	0.10000		106	80-120			
Lithium	0.0966	0.0500	0.0015	mg/L	0.10000		97	80-120			



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**Report No.: AAJ0677**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7100610 - EPA 3005A</b>											
<b>Matrix Spike (7100610-MS1)</b>			<b>Source: AAJ0677-01</b>				Prepared: 10/20/17 Analyzed: 10/25/17				
Antimony	0.103	0.0030	0.0006	mg/L	0.10000	ND	103	75-125			
Arsenic	0.102	0.0050	0.0005	mg/L	0.10000	ND	102	75-125			
Barium	0.114	0.0100	0.0004	mg/L	0.10000	0.0158	98	75-125			
Beryllium	0.0912	0.0030	0.00009	mg/L	0.10000	ND	91	75-125			
Cadmium	0.102	0.0010	0.0001	mg/L	0.10000	ND	102	75-125			
Chromium	0.0996	0.0100	0.0005	mg/L	0.10000	0.0005	99	75-125			
Cobalt	0.0969	0.0100	0.0003	mg/L	0.10000	ND	97	75-125			
Copper	0.0955	0.0250	0.0003	mg/L	0.10000	0.0003	95	75-125			
Lead	0.101	0.0050	0.00007	mg/L	0.10000	0.00007	101	75-125			
Nickel	0.0981	0.0100	0.0005	mg/L	0.10000	ND	98	75-125			
Selenium	0.103	0.0100	0.0018	mg/L	0.10000	ND	103	75-125			
Silver	0.101	0.0100	0.0002	mg/L	0.10000	ND	101	75-125			
Thallium	0.102	0.0010	0.00005	mg/L	0.10000	0.00008	102	75-125			
Vanadium	0.0997	0.0100	0.0012	mg/L	0.10000	ND	100	75-125			
Zinc	0.105	0.0100	0.0012	mg/L	0.10000	ND	105	75-125			
Lithium	0.0947	0.0500	0.0015	mg/L	0.10000	ND	95	75-125			
<b>Matrix Spike Dup (7100610-MSD1)</b>			<b>Source: AAJ0677-01</b>				Prepared: 10/20/17 Analyzed: 10/25/17				
Antimony	0.106	0.0030	0.0006	mg/L	0.10000	ND	106	75-125	3	20	
Arsenic	0.104	0.0050	0.0005	mg/L	0.10000	ND	104	75-125	2	20	
Barium	0.118	0.0100	0.0004	mg/L	0.10000	0.0158	102	75-125	4	20	
Beryllium	0.0920	0.0030	0.00009	mg/L	0.10000	ND	92	75-125	0.8	20	
Cadmium	0.104	0.0010	0.0001	mg/L	0.10000	ND	104	75-125	1	20	
Chromium	0.0983	0.0100	0.0005	mg/L	0.10000	0.0005	98	75-125	1	20	
Cobalt	0.0964	0.0100	0.0003	mg/L	0.10000	ND	96	75-125	0.6	20	
Copper	0.0961	0.0250	0.0003	mg/L	0.10000	0.0003	96	75-125	0.7	20	
Lead	0.105	0.0050	0.00007	mg/L	0.10000	0.00007	105	75-125	4	20	
Nickel	0.0971	0.0100	0.0005	mg/L	0.10000	ND	97	75-125	1	20	
Selenium	0.107	0.0100	0.0018	mg/L	0.10000	ND	107	75-125	4	20	
Silver	0.101	0.0100	0.0002	mg/L	0.10000	ND	101	75-125	0.6	20	
Thallium	0.105	0.0010	0.00005	mg/L	0.10000	0.00008	105	75-125	3	20	
Vanadium	0.101	0.0100	0.0012	mg/L	0.10000	ND	101	75-125	1	20	
Zinc	0.103	0.0100	0.0012	mg/L	0.10000	ND	103	75-125	2	20	
Lithium	0.0969	0.0500	0.0015	mg/L	0.10000	ND	97	75-125	2	20	



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Attention: Mr. Joju Abraham

November 03, 2017

**Report No.: AAJ0677**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7100610 - EPA 3005A</b>											
<b>Post Spike (7100610-PS1)</b>			<b>Source: AAJ0677-01</b>			<b>Prepared: 10/20/17 Analyzed: 10/25/17</b>					
Antimony	97.9			ug/L	100.00	0.0819	98	80-120			
Arsenic	102			ug/L	100.00	-0.665	102	80-120			
Barium	113			ug/L	100.00	15.8	97	80-120			
Beryllium	89.9			ug/L	100.00	0.0046	90	80-120			
Cadmium	101			ug/L	100.00	0.0113	101	80-120			
Chromium	99.1			ug/L	100.00	0.530	99	80-120			
Cobalt	97.2			ug/L	100.00	0.0707	97	80-120			
Copper	93.8			ug/L	100.00	0.344	94	80-120			
Lead	100			ug/L	100.00	0.0731	100	80-120			
Nickel	95.9			ug/L	100.00	0.126	96	80-120			
Selenium	102			ug/L	100.00	-0.0977	102	80-120			
Silver	99.1			ug/L	100.00	0.0045	99	80-120			
Thallium	101			ug/L	100.00	0.0804	101	80-120			
Vanadium	98.2			ug/L	100.00	-0.164	98	80-120			
Zinc	103			ug/L	100.00	0.918	102	80-120			
Lithium	95.8			ug/L	100.00	0.140	96	80-120			

**Batch 7100723 - EPA 7470A**

<b>Blank (7100723-BLK1)</b>					<b>Prepared: 10/25/17 Analyzed: 10/26/17</b>						
Mercury	ND	0.00050	0.000036	mg/L							
<b>LCS (7100723-BS1)</b>					<b>Prepared: 10/25/17 Analyzed: 10/26/17</b>						
Mercury	0.00250	0.00050	0.000036	mg/L	2.5000E-3		100	80-120			
<b>Matrix Spike (7100723-MS1)</b>					<b>Prepared: 10/25/17 Analyzed: 10/26/17</b>						
Mercury	0.00247	0.00050	0.000036	mg/L	2.5000E-3	ND	99	75-125			



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

**Report No.: AAJ0677**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7100723 - EPA 7470A</b>											
<b>Matrix Spike Dup (7100723-MSD1)</b>			<b>Source: AAJ0677-02</b>			Prepared: 10/25/17 Analyzed: 10/26/17					
Mercury	0.00241	0.00050	0.000036	mg/L	2.5000E-3	ND	96	75-125	3	20	
<b>Post Spike (7100723-PS1)</b>			<b>Source: AAJ0677-02</b>			Prepared: 10/25/17 Analyzed: 10/26/17					
Mercury	1.68			ug/L	1.6667	-0.0170	101	80-120			



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Attention: Mr. Joju Abraham

November 03, 2017

## Legend

### Definition of Laboratory Terms

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

### Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

### Definition of Qualifiers

**QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

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

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





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**CHAIN OF CUSTODY RECORD**

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239 <b>REPORT TO:</b> Joju Abraham <b>CC:</b> Maria Padilla Health McCorkle <b>REQUESTED COMPLETION DATE:</b> PO #: GPC10684198 <b>PROJECT NAME/STATE:</b> Plant Mitchell Phase II CCR, GA <b>PROJECT #:</b> 6122160170.04		<b>ANALYSIS REQUESTED</b> CONTAINER TYPE: P 3 PRESERVATION: # of METALS APP. III & IV EPA 60207470 IC (CL F. 504) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320		<b>CONTAINER TYPE</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER <b>PRESERVATION</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C 7 - 56°C not frozen	
<b>CONTAINER TYPE</b> DW - DRINKING WATER WW - WASTEWATER GW - GROUNDWATER SW - SURFACE WATER ST - STORM WATER W - WATER <b>REMARKS/ADDITIONAL INFORMATION</b>		<b>MATRIX CODES</b> S - SOIL SL - SLUDGE SD - SOLID A - AIR L - LIQUID P - PRODUCT		<b>LAB #:</b> AAJ0677 <b>Entered into LIMS:</b> Tracking #: 810294724616	
<b>CONTAINER TYPE</b> P 3 <b>PRESERVATION</b> # of <b>CONTAINERS</b>		<b>ANALYSIS REQUESTED</b> P 3 P 7 P 7 P 3		<b>DATE/TIME:</b> RELINQUISHED BY: RELINQUISHED BY:	
<b>Collection DATE</b> 10/17/17 ↓ ↓ ↓		<b>Collection TIME</b> 1217 GW 1250 GW 1445 GW 1608 GW		<b>DATE/TIME</b> 10/18/17 / 1300 10/19/17 / 0920 Temperature: Min: 0.2 Max:	
<b>MATRIX CODE*</b> GW GW GW GW		<b>SAMPLE IDENTIFICATION</b> PZ-32 PZ-ID PZ-31 PZ-25 Temp Blank		<b>DATE/TIME</b> 10/19/17 / 0920 Temperature: Min: 0.2 Max:	
<b>Collection DATE</b> 10/17/17 ↓ ↓ ↓		<b>Collection TIME</b> 1217 GW 1250 GW 1445 GW 1608 GW		<b>DATE/TIME</b> 10/18/17 / 1300 10/19/17 / 0920 Temperature: Min: 0.2 Max:	
<b>MATRIX CODE*</b> GW GW GW GW		<b>SAMPLE IDENTIFICATION</b> PZ-32 PZ-ID PZ-31 PZ-25 Temp Blank		<b>DATE/TIME</b> 10/18/17 / 1300 10/19/17 / 0920 Temperature: Min: 0.2 Max:	
<b>Collection DATE</b> 10/17/17 ↓ ↓ ↓		<b>Collection TIME</b> 1217 GW 1250 GW 1445 GW 1608 GW		<b>DATE/TIME</b> 10/18/17 / 1300 10/19/17 / 0920 Temperature: Min: 0.2 Max:	

Pace COC Revised.xlsx

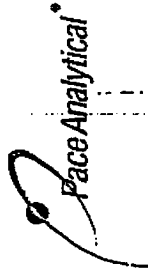


CHAIN OF CUSTODY RECORD

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<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239 <b>REPORT TO:</b> Joju Abraham <b>REQUESTED COMPLETION DATE:</b> <b>PROJECT NAME/STATE:</b> Plant Mitchell Phase II CCR, GA <b>PROJECT #:</b> 6122160170.04 <b>CC:</b> Maria Padilla Heath McCorkle <b>PO #:</b> GPC10684198		<b>CONTAINER TYPE:</b> P <b>PRESERVATION:</b> 3 <b># of CONTAINERS</b> →		<b>ANALYSIS REQUESTED</b> P P P P P P P P P P P P 3 7 7 7 7 7 7 7 7 7 7 7 IC (Cl. 1604) EPA 3000 TDS SM P540C Radum 226 & 228 SW 846 9315/9320		<b>CONTAINER TYPE:</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER <b>PRESERVATION:</b> 1 - HCl, ≤6°C 2 - H <sub>2</sub> SO <sub>4</sub> , ≤6°C 3 - HNO <sub>3</sub> 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , ≤6°C 7 - ≤6°C not frozen		<b>*MATRIX CODES:</b> 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		<b>REMARKS/ADDITIONAL INFORMATION</b>	
<b>Collection DATE</b> 10/18/17 ↓ <b>Collection TIME</b> 0950 1000 1600 <b>MATRIX CODE</b> W W GW <b>GRAB</b> X X X <b>SAMPLE IDENTIFICATION</b> FB-01 EB-01 PZ-15 Temp Blank	<b>LAB #:</b> <b>ENTERED INTO LIMS:</b> <b>TRACKING #:</b>	<b>RELINQUISHED BY:</b> <b>RELINQUISHED BY:</b> <b>SAMPLE SHIPPED VIA:</b> UPS <b>FEDEX</b> <b>USPS</b> <b>CLIENT</b> <b>COURIER</b> <b>OTHER</b> <b>FS</b>	<b>DATE/TIME:</b> <b>DATE/TIME:</b> <b>DATE/TIME:</b> 10/18/17 / 1800 <b>DATE/TIME:</b> 10/19/17 / 0920 <b>Temperature:</b> Min: 0.2 Max:	<b>RECEIVED BY AND TITLE:</b> <b>RECEIVED BY:</b>	<b>RECEIVED BY LAB:</b> <b>Yes</b> No NA <b>Yes</b> No NA <b>Yes</b> No NA	<b>FOR LAB USE ONLY</b> <b>LAB #:</b> AAJ0677 <b>ENTERED INTO LIMS:</b> <b>TRACKING #:</b>					

Pace COC Revised.xlsx



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CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power  
 CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-508-7239  
 REPORT TO: Joju Abraham  
 CC: Maria Padilla Health McConkie  
 REQUESTED COMPLETION DATE: PO #: GPC-10684198

PROJECT NAME/STATE: Plant Mitchell Phase II CCR, GA  
 PROJECT #:

Collection DATE	Collection TIME	MATRIX CODE*	SAMPLE IDENTIFICATION		
			C	G	R
10/18/17	1100	GW	X	PZ-14	
	-	GW	X	DUP-01	
	1307	GW	X	PZ-16	
	1435	GW	X	PZ-18	
				Temp Black	

SAMPLER AND CONTAINER RECEIVED BY: Daniel Howard / Project Chemist  
 DATE/TIME: 10/18/17 / 1800

RECEIVED BY LAB: [Signature]  
 DATE/TIME: 10/19/17 / 0920  
 Temperature: Min: 0.2 Max: [Signature]  
 Checked: Yes No NA  
 Seal: Intact Broken Not Present  
 SAMPLE SHIPPED VIA: UPS (Fed-Ex)  
 RELINQUISHED BY: [Signature] DATE/TIME: 10/19/17 / 1800

CONTAINER TYPE	PRESERVATION	ANALYSIS REQUESTED							DATE/TIME
		P	F	P	P	P	P	P	
3									
4		X	X	X	X	X	X		
4		X	X	X	X	X	X		
4		X	X	X	X	X	X		
4		X	X	X	X	X	X		

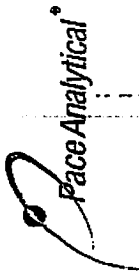
- CONTAINER TYPE: P - PLASTIC, A - AMBER GLASS, G - CLEAR GLASS, V - VOA VIAL, S - STERILE, O - OTHER
- PRESERVATION: 1 - HCl, 56°C, 2 - H2SO4, 56°C, 3 - HNO3, 4 - NaOH, 56°C, 5 - NaOH/ZnAc, 56°C, 6 - Na2S2O3, 56°C, 7 - 56°C not frozen

- \*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

LAB #: AAJ0677  
 Entered into LIMS: [Signature]  
 Tracking #: [Signature]

RELINQUISHED BY: [Signature] DATE/TIME: [Signature]  
 RELINQUISHED BY: [Signature] DATE/TIME: [Signature]  
 CLIENT: COURIER: # of Coolers: CLIENT: OTHER: FS: Cooler ID:  
 Pace CCG Revised.xlsx



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CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power  
 CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239  
 REPORT TO: Joju Abraham Heath McCorkle  
 CC: Maria Padilla  
 REQUESTED COMPLETION DATE: PO #: GPC10684198  
 PROJECT NAME/STATE: Plant Mitchell Phase II CCR, GA

CONTAINER TYPE: P - PLASTIC, A - AMBER GLASS, G - CLEAR GLASS, V - VOA VIAL, S - STERILE, O - OTHER  
 PRESERVATION: 1 - HCl, ≤6°C, 2 - H<sub>2</sub>SO<sub>4</sub>, ≤6°C, 3 - HNO<sub>3</sub>, 4 - NaOH, ≤6°C, 5 - NaOH/ZnAc, ≤6°C, 6 - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, ≤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

Collection DATE	Collection TIME	MATRIX CODE	SAMPLE IDENTIFICATION	C O M P	G R A B	ANALYSIS REQUESTED	CONTAINER TYPE	PRESERVATION	L A B I D N U M B E R	REMARKS/ADDITIONAL INFORMATION
10/18/17	1139	GW	PZ-23	X	X	IC (C, P, 504) BPA 300.0 Meigs App. III & IV EPA 6020/7470	3	3	12	2 extra bottles for Radium Lab
↓	1342	GW	PZ-25	X	X	TOG SM P5400 Rad m 226 & 228 SW 846 9315/9320	7	7	13	
↓	1520	GW	PZ-17 Temp Blank	X	X				14	

SAMPLED BY AND TITLE: David Howard / Project Chemist  
 RECEIVED BY: [Signature]  
 DATE/TIME: 10/18/17 / 1800  
 RELINQUISHED BY: [Signature]  
 DATE/TIME: 10/19/17 / 0920  
 RECEIVED BY LAB: [Signature]  
 Temperature: Min: 0.2 Max: [Signature]  
 Custody Seal: Intact (circled)  
 Broken Not Present  
 USPS (FEDEX)  
 COURIER # of Coolers  
 CLIENT Cooler ID:  
 OTHER FS  
 LAB #: AAJ0677  
 FOR LAB USE ONLY  
 Entered into LIMS: Tracking #:

**Sample Condition Upon Receipt**

Face Analytical

Client Name: GLA power

Project # AAJ0677

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 810294724616

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

Optional  
Proj. ID# Date  
Proj. Name

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used IR-4 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: 10/19/17 MR

Temp should be above freezing to 6°C

Comments:

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

Client Notification/ Resolution:

Field Data Required? 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)



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**LOG-IN CHECKLIST**

**Printed: 10/20/2017 2:24:28PM**

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 10/19/17 09:20

**Work Order:** AAJ0677

**Logged In By:** Mohammad M. Rahman

**OBSERVATIONS**

**#Samples:** 14

**#Containers:** 58

**Minimum Temp(C):** 0.2

**Maximum Temp(C):** 0.2

**Custody Seal(s) Used:** Yes

**CHECKLIST ITEMS**

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

**Comments:**

November 06, 2017

Mr. Joju Abraham  
Georgia Power  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: AAJ0677 Plant Mitchell  
Pace Project No.: 30233661

Dear Mr. Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 20, 2017. 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,



Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
(724)850-5612  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: AAJ0677 Plant Mitchell  
Pace Project No.: 30233661

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH-0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana DHH/TNI Certification #: LA140008  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: PA00091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification  
Missouri Certification #: 235

Montana Certification #: Cert 0082  
Nebraska Certification #: NE-05-29-14  
Nevada Certification #: PA014572015-1  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188-14-8  
Utah/TNI Certification #: PA014572015-5  
USDA Soil Permit #: P330-14-00213  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 460198  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Certification  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: AAJ0677 Plant Mitchell

Pace Project No.: 30233661

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30233661001	PZ-32	Water	10/17/17 12:17	10/20/17 10:00
30233661002	PZ-1D	Water	10/17/17 12:50	10/20/17 10:00
30233661003	PZ-31	Water	10/17/17 14:45	10/20/17 10:00
30233661004	PZ-2S	Water	10/17/17 16:08	10/20/17 10:00
30233661005	FB-01	Water	10/18/17 09:50	10/20/17 10:00
30233661006	EB-01	Water	10/18/17 10:00	10/20/17 10:00
30233661007	PZ-15	Water	10/18/17 16:00	10/20/17 10:00
30233661008	PZ-14	Water	10/18/17 11:00	10/20/17 10:00
30233661009	Dup-01	Water	10/18/17 00:00	10/20/17 10:00
30233661010	PZ-16	Water	10/18/17 13:07	10/20/17 10:00
30233661011	PZ-18	Water	10/18/17 14:35	10/20/17 10:00
30233661012	PZ-23	Water	10/18/17 11:39	10/20/17 10:00
30233661013	PZ-25	Water	10/18/17 13:42	10/20/17 10:00
30233661014	PZ-17	Water	10/18/17 15:20	10/20/17 10:00

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: AAJ0677 Plant Mitchell  
Pace Project No.: 30233661

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30233661001	PZ-32	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30233661002	PZ-1D	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30233661003	PZ-31	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30233661004	PZ-2S	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30233661005	FB-01	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30233661006	EB-01	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30233661007	PZ-15	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30233661008	PZ-14	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30233661009	Dup-01	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30233661010	PZ-16	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30233661011	PZ-18	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30233661012	PZ-23	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30233661013	PZ-25	EPA 9315	LAL	1

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: AAJ0677 Plant Mitchell

Pace Project No.: 30233661

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
<b>30233661014</b>	<b>PZ-17</b>	EPA 9315	LAL	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0677 Plant Mitchell

Pace Project No.: 30233661

Sample: PZ-32		Lab ID: 30233661001	Collected: 10/17/17 12:17	Received: 10/20/17 10:00	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.474 ± 0.151 (0.189)</b> C:86% T:NA	pCi/L	10/25/17 13:01	13982-63-3	
Radium-228	EPA 9320	<b>0.305 ± 0.322 (0.671)</b> C:76% T:95%	pCi/L	10/30/17 14:39	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.779 ± 0.473 (0.860)</b>	pCi/L	11/06/17 09:34	7440-14-4	

Sample: PZ-1D		Lab ID: 30233661002	Collected: 10/17/17 12:50	Received: 10/20/17 10:00	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.201 ± 0.106 (0.164)</b> C:88% T:NA	pCi/L	10/25/17 13:01	13982-63-3	
Radium-228	EPA 9320	<b>-0.0235 ± 0.312 (0.733)</b> C:76% T:96%	pCi/L	10/30/17 14:39	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.201 ± 0.418 (0.897)</b>	pCi/L	11/06/17 09:34	7440-14-4	

Sample: PZ-31		Lab ID: 30233661003	Collected: 10/17/17 14:45	Received: 10/20/17 10:00	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.254 ± 0.105 (0.145)</b> C:95% T:NA	pCi/L	10/25/17 13:01	13982-63-3	
Radium-228	EPA 9320	<b>0.158 ± 0.363 (0.806)</b> C:75% T:81%	pCi/L	10/30/17 14:39	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.412 ± 0.468 (0.951)</b>	pCi/L	11/06/17 09:34	7440-14-4	

Sample: PZ-2S		Lab ID: 30233661004	Collected: 10/17/17 16:08	Received: 10/20/17 10:00	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.282 ± 0.112 (0.148)</b> C:81% T:NA	pCi/L	10/25/17 13:01	13982-63-3	
Radium-228	EPA 9320	<b>-0.0866 ± 0.437 (1.02)</b> C:74% T:89%	pCi/L	10/30/17 14:39	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.282 ± 0.549 (1.17)</b>	pCi/L	11/06/17 09:34	7440-14-4	

Sample: FB-01		Lab ID: 30233661005	Collected: 10/18/17 09:50	Received: 10/20/17 10:00	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.211 ± 0.0913 (0.124)</b> C:88% T:NA	pCi/L	10/25/17 13:00	13982-63-3	
Radium-228	EPA 9320	<b>-0.0717 ± 0.322 (0.769)</b> C:75% T:89%	pCi/L	10/30/17 14:39	15262-20-1	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0677 Plant Mitchell  
Pace Project No.: 30233661

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: FB-01</b> <b>Lab ID: 30233661005</b> Collected: 10/18/17 09:50      Received: 10/20/17 10:00      Matrix: Water PWS:      Site ID:      Sample Type:						
Total Radium	Total Radium Calculation	<b>0.211 ± 0.413 (0.893)</b>	pCi/L	11/06/17 09:34	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: EB-01</b> <b>Lab ID: 30233661006</b> Collected: 10/18/17 10:00      Received: 10/20/17 10:00      Matrix: Water PWS:      Site ID:      Sample Type:						
Radium-226	EPA 9315	<b>0.0679 ± 0.136 (0.254)</b> C:81% T:NA	pCi/L	10/25/17 12:59	13982-63-3	
Radium-228	EPA 9320	<b>-0.155 ± 0.308 (0.756)</b> C:73% T:86%	pCi/L	10/30/17 14:39	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.0679 ± 0.444 (1.01)</b>	pCi/L	11/06/17 09:34	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-15</b> <b>Lab ID: 30233661007</b> Collected: 10/18/17 16:00      Received: 10/20/17 10:00      Matrix: Water PWS:      Site ID:      Sample Type:						
Radium-226	EPA 9315	<b>0.440 ± 0.141 (0.166)</b> C:80% T:NA	pCi/L	10/25/17 12:59	13982-63-3	
Radium-228	EPA 9320	<b>0.404 ± 0.421 (0.876)</b> C:73% T:83%	pCi/L	10/30/17 14:39	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.844 ± 0.562 (1.04)</b>	pCi/L	11/06/17 09:34	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-14</b> <b>Lab ID: 30233661008</b> Collected: 10/18/17 11:00      Received: 10/20/17 10:00      Matrix: Water PWS:      Site ID:      Sample Type:						
Radium-226	EPA 9315	<b>0.367 ± 0.143 (0.204)</b> C:82% T:NA	pCi/L	10/25/17 12:59	13982-63-3	
Radium-228	EPA 9320	<b>0.441 ± 0.358 (0.714)</b> C:75% T:88%	pCi/L	10/30/17 14:39	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.808 ± 0.501 (0.918)</b>	pCi/L	11/06/17 09:34	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: Dup-01</b> <b>Lab ID: 30233661009</b> Collected: 10/18/17 00:00      Received: 10/20/17 10:00      Matrix: Water PWS:      Site ID:      Sample Type:						
Radium-226	EPA 9315	<b>0.460 ± 0.153 (0.196)</b> C:79% T:NA	pCi/L	10/25/17 12:59	13982-63-3	
Radium-228	EPA 9320	<b>0.187 ± 0.287 (0.622)</b> C:81% T:91%	pCi/L	10/30/17 14:40	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.647 ± 0.440 (0.818)</b>	pCi/L	11/06/17 09:34	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0677 Plant Mitchell  
Pace Project No.: 30233661

Sample: PZ-16		Lab ID: 30233661010	Collected: 10/18/17 13:07	Received: 10/20/17 10:00	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.639 ± 0.164 (0.153)		pCi/L	10/25/17 13:00	13982-63-3	
		C:79% T:NA					
Radium-228	EPA 9320	0.208 ± 0.424 (0.934)		pCi/L	10/30/17 14:40	15262-20-1	
		C:74% T:84%					
Total Radium	Total Radium Calculation	0.847 ± 0.588 (1.09)		pCi/L	11/06/17 09:34	7440-14-4	

Sample: PZ-18		Lab ID: 30233661011	Collected: 10/18/17 14:35	Received: 10/20/17 10:00	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.613 ± 0.172 (0.200)		pCi/L	10/25/17 13:00	13982-63-3	
		C:86% T:NA					
Radium-228	EPA 9320	-0.244 ± 0.377 (0.932)		pCi/L	10/30/17 14:40	15262-20-1	
		C:73% T:73%					
Total Radium	Total Radium Calculation	0.613 ± 0.549 (1.13)		pCi/L	11/06/17 09:34	7440-14-4	

Sample: PZ-23		Lab ID: 30233661012	Collected: 10/18/17 11:39	Received: 10/20/17 10:00	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.523 ± 0.156 (0.184)		pCi/L	10/25/17 13:00	13982-63-3	
		C:82% T:NA					
Radium-228	EPA 9320	0.669 ± 0.445 (0.857)		pCi/L	10/30/17 14:40	15262-20-1	
		C:72% T:84%					
Total Radium	Total Radium Calculation	1.19 ± 0.601 (1.04)		pCi/L	11/06/17 09:34	7440-14-4	

Sample: PZ-25		Lab ID: 30233661013	Collected: 10/18/17 13:42	Received: 10/20/17 10:00	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.665 ± 0.170 (0.168)		pCi/L	10/25/17 13:00	13982-63-3	
		C:89% T:NA					
Radium-228	EPA 9320	0.0131 ± 0.297 (0.691)		pCi/L	10/30/17 14:40	15262-20-1	
		C:75% T:88%					
Total Radium	Total Radium Calculation	0.678 ± 0.467 (0.859)		pCi/L	11/06/17 09:34	7440-14-4	

Sample: PZ-17		Lab ID: 30233661014	Collected: 10/18/17 15:20	Received: 10/20/17 10:00	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.708 ± 0.178 (0.162)		pCi/L	10/25/17 13:00	13982-63-3	
		C:81% T:NA					
Radium-228	EPA 9320	0.249 ± 0.366 (0.789)		pCi/L	10/30/17 14:40	15262-20-1	
		C:73% T:83%					

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0677 Plant Mitchell

Pace Project No.: 30233661

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**Sample: PZ-17**                      **Lab ID: 30233661014**    Collected: 10/18/17 15:20    Received: 10/20/17 10:00    Matrix: Water  
PWS:                                      Site ID:                                      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	<b>0.957 ± 0.544 (0.951)</b>	pCi/L	11/06/17 09:34	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: AAJ0677 Plant Mitchell

Pace Project No.: 30233661

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QC Batch:	276533	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	30233661001, 30233661002, 30233661003, 30233661004, 30233661005, 30233661006, 30233661007, 30233661008, 30233661009, 30233661010, 30233661011, 30233661012, 30233661013, 30233661014		

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METHOD BLANK:	1359226	Matrix:	Water
Associated Lab Samples:	30233661001, 30233661002, 30233661003, 30233661004, 30233661005, 30233661006, 30233661007, 30233661008, 30233661009, 30233661010, 30233661011, 30233661012, 30233661013, 30233661014		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.283 ± 0.360 (0.764) C:79% T:79%	pCi/L	10/30/17 14:39	

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: AAJ0677 Plant Mitchell

Pace Project No.: 30233661

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QC Batch:	276531	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	30233661001, 30233661002, 30233661003, 30233661004, 30233661005, 30233661006, 30233661007, 30233661008, 30233661009, 30233661010, 30233661011, 30233661012, 30233661013, 30233661014		

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METHOD BLANK:	1359224	Matrix:	Water
Associated Lab Samples:	30233661001, 30233661002, 30233661003, 30233661004, 30233661005, 30233661006, 30233661007, 30233661008, 30233661009, 30233661010, 30233661011, 30233661012, 30233661013, 30233661014		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.134 ± 0.0840 (0.134) C:91% T:NA	pCi/L	10/25/17 13:01	

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: AAJ0677 Plant Mitchell  
Pace Project No.: 30233661

### 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.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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Chain of Custody



Workorder: AAJ0677      Workorder Name: Plant Mitchell      Owner Received Date: 10/3/2017      Results Requested By: 11/13/2017

Report To: Betsy McDaniel  
 Pace Analytical Atlanta  
 110 Technology Parkway  
 Peachtree Corners, GA 30092  
 Phone (770)-734-4200

Subcontract To: Pace - Pittsburgh  
 1638 Roseytown Road  
 Stes. 2,3,4  
 Greensburg, PA 15601  
 Phone (724) 850-5600

Requested Analysis  
**WO#: 30233661**  
  
 30233661

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		Date/Time	Received By	Date/Time	Comments
						CON	H				
1	PZ-32	G	10/17/2017 12:17	AAJ0677-01	GW	2					
2	PZ-1D	G	10/17/2017 12:50	AAJ0677-02	GW	2					
3	PZ-31	G	10/17/2017 14:45	AAJ0677-03	GW	2					
4	PZ-25	G	10/17/2017 16:08	AAJ0677-04	GW	2					
5	FB-01	G	10/18/2017 9:50	AAJ0677-05	W	2					
6	EB-01	G	10/18/2017 10:00	AAJ0677-06	W	2					
7	PZ-15	G	10/18/2017 16:00	AAJ0677-07	GW	2					
8	PZ-14	G	10/18/2017 11:00	AAJ0677-08	GW	2					
9	Dup-01	G	10/18/2017 0:00	AAJ0677-09	GW	2					
10	PZ-16	G	10/18/2017 13:07	AAJ0677-10	GW	2					
Radium 226, 228, Total											
Transfers	Released By		Date/Time	Received By	Date/Time						
1	M. RAHMAN		10/19/17	C. Ahney	10/20/17						
2											
3											

Cooler Temperature on Receipt DA °C      Custody Seal Y of N      Received on Ice Y of N      Sample Intact Y of N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC  
 This chain of custody is considered complete as is since this information is available in the owner laboratory.

Chain of Custody



Workorder: AAJ0677      Workorder Name: Plant Mitchell      Owner Received Date: 10/3/2017      Results Requested By: 11/13/2017

Report To:		Subcontract To:				Requested Analysis	
Betsy McDaniel Pace Analytical Atlanta 110 Technology Parkway Peachtree Corners, GA 30092 Phone (770)-734-4200		Pace - Pittsburgh 1638 Roseytown Road Stes. 2,3,4 Greensburg, PA 15601 Phone (724) 850-5600				30 2 3 3 6 1 -	
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	LAB USE ONLY
11	PZ-18	G	10/18/2017 14:35	AAJ0677-11	GW	2	011
12	PZ-23	G	10/18/2017 11:39	AAJ0677-12	GW	4	012
13	PZ-25	G	10/18/2017 13:42	AAJ0677-13	GW	2	013
14	PZ-17	G	10/18/2017 15:20	AAJ0677-14	GW	2	014
15							
16							
17							
18							
19							
20							
Transfers	Released By	Date/Time	Received By	Date/Time	Comments		
1	M. RAHMAN	10/19/17	Deborah Tran, Rad	10-20-17	1000		
2							
3							

Cooler Temperature on Receipt \_\_\_\_\_ °C      Custody Seal Y or N      Received on Ice Y or N      Sample Intact Y or N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC

This chain of custody is considered complete as is since this information is available in the owner laboratory.

30233661

Sample Condition Upon Receipt



Client Name: GIA Power Project # AAJ0677

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 810294724616



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

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used IR-4 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 8°C

Date and Initials of person examining contents: 10/19/17 MR

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody Relinquished:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.	
-Includes date/time/ID/Analysis Matrix:	<u>G70</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.	
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.	
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? 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)

Pittsburgh Lab Sample Condition Upon Receipt



Client Name: Pace GA

Project # 30233661

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Label <u>CAL</u>
LIMS Login

Tracking #: 74360593572

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

Thermometer Used NA      Type of Ice: Wet Blue None

Cooler Temperature Observed Temp NA °C      Correction Factor: \_\_\_\_\_ °C      Final Temp: \_\_\_\_\_ °C  
 Temp should be above freezing to 6°C

Date and Initials of person examining contents: 10/20/17 CAL

Comments:	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
-Includes date/time/ID      Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
-Pace Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Orthophosphate field filtered	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
Hex Cr Aqueous Compliance/NPDES sample field filtered	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.
Organic Samples checked for dechlorination:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
Filtered volume received for Dissolved tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.
All containers have been checked for preservation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>PKR</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>CAL</u> Date/time of preservation: _____
				Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.
Trip Blank Present:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	18.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rad Aqueous Samples Screened > 0.5 mrem/hr	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>OC</u> Date: <u>10/20/17</u>

Client Notification/ Resolution:  
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

A check in this box indicates that additional information has been stored in ereports.

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)  
 \*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: VAL  
Date: 10/26/2017  
Worklist: 38366  
Matrix: DW

Method Blank Assessment	
MB Sample ID	13592226
MB concentration:	0.283
M/B Counting Uncertainty:	0.356
MB MDC:	0.764
MB Numerical Performance Indicator:	1.56
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	10/30/2017
Spike I.D.:	17-033
Spike Concentration (pCi/mL):	23.151
Volume Used (mL):	0.40
Aliquot Volume (L, g, F):	0.802
Target Conc. (pCi/L, g, F):	11.549
Uncertainty (Calculated):	0.831
Result (pCi/L, g, F):	10.338
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.914
Numerical Performance Indicator:	0.992
Percent Recovery:	1.29
Status vs Numerical Indicator:	107.41%
Status vs Recovery:	N/A
	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS38366
Duplicate Sample I.D.:	LCS38366
Sample Result (pCi/L, g, F):	10.338
Sample Result Counting Uncertainty (pCi/L, g, F):	0.914
Sample Duplicate Result (pCi/L, g, F):	12.379
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.992
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	-2.965
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	18.17%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

*Donna*



# Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: LAL  
Date: 10/25/2017  
Worklist: 38364  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1359224
MB Concentration:	0.134
M/B Counting Uncertainty:	0.082
MB MDC:	0.134
MB Numerical Performance Indicator:	3.21
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS (Y or N)?	N
LCS38364	LCS38364
Count Date:	10/26/2017
Spike I.D.:	17-030
Spike Concentration (pCi/mL):	80.189
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.512
Target Conc. (pCi/L, g, F):	15.677
Uncertainty (Calculated):	1.444
Result (pCi/L, g, F):	11.987
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.170
Numerical Performance Indicator:	-3.89
Percent Recovery:	76.46%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30233661012
Duplicate Sample I.D.:	30233661012DUP
Sample Result Counting Uncertainty (pCi/L, g, F):	0.523
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.136
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.676
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.137
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-1.555
Duplicate RPD:	25.50%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

\*\*\*Batch must be re-prepped due to unacceptable precision.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

*Completed*





**PACE ANALYTICAL SERVICES, LLC.**

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

**Laboratory Report**

**Prepared For:**

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

**Attention: Mr. Joju Abraham**

**Report Number: AAJ0714**

**October 31, 2017**

**Project: CCR Event**

**Project #: Plant Mitchell**

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

Approved:

A handwritten signature in black ink that reads "Betsy McDaniel" written over a horizontal line.

Project Manager

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



**PACE ANALYTICAL SERVICES, LLC.**

Environmental Monitoring & Laboratory Analysis  
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Georgia Power  
2480 Maner Road  
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 31, 2017

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
FB-02	AAJ0714-01	Water	10/19/17 09:45	10/20/17 09:15
EB-02	AAJ0714-02	Water	10/19/17 10:05	10/20/17 09:15
PZ-33	AAJ0714-03	Ground Water	10/19/17 11:52	10/20/17 09:15
PZ-7D	AAJ0714-04	Ground Water	10/19/17 11:15	10/20/17 09:15
PZ-19	AAJ0714-05	Ground Water	10/19/17 12:50	10/20/17 09:15
Dup-02	AAJ0714-06	Ground Water	10/19/17 00:00	10/20/17 09:15



**PACE ANALYTICAL SERVICES, LLC.**

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October 31, 2017

**Case Narrative**

The Radium analysis by methods EPA 9315/9320 was performed by Pace-Pittsburgh, 1638 Roseytown Road - Suites 2, 3, 4, Greensburg PA 15601. The Pace-Pittsburgh lab contact is Jacquelyn Collins at 724-850-5612.



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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

October 31, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0714

Project: CCR Event

Client ID: FB-02

Lab Number ID: AAJ0714-01

Date/Time Sampled: 10/19/2017 9:45:00AM

Date/Time Received: 10/20/2017 9:15:00AM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	ND	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 22:56	7100769	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 22:56	7100769	RLC
Sulfate	ND	1.0	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 22:56	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:09	7100738	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:09	7100738	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:09	7100738	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:09	7100738	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:09	7100738	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:09	7100738	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:09	7100738	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:09	7100738	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:09	7100738	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:09	7100738	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:09	7100738	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:09	7100738	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:09	7100738	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:09	7100738	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/30/17 09:15	10/30/17 16:12	7100767	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

October 31, 2017

Attention: Mr. Joju Abraham

**Report No.: AAJ0714**

**Project: CCR Event**

**Client ID: EB-02**

**Lab Number ID: AAJ0714-02**

**Date/Time Sampled: 10/19/2017 10:05:00AM**

**Date/Time Received: 10/20/2017 9:15:00AM**

**Matrix: Water**

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	ND	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 23:16	7100769	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 23:16	7100769	RLC
Sulfate	ND	1.0	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 23:16	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:15	7100738	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:15	7100738	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:15	7100738	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:15	7100738	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:15	7100738	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:15	7100738	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:15	7100738	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:15	7100738	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:15	7100738	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:15	7100738	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:15	7100738	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:15	7100738	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:15	7100738	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:15	7100738	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/30/17 09:15	10/30/17 16:14	7100767	MTC



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Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

October 31, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0714

Project: CCR Event

Client ID: PZ-33

Lab Number ID: AAJ0714-03

Date/Time Sampled: 10/19/2017 11:52:00AM

Date/Time Received: 10/20/2017 9:15:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	393	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	6.4	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 23:37	7100769	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/25/17 19:28	10/26/17 23:37	7100769	RLC
Sulfate	97	5.0	0.08	mg/L	EPA 300.0		5	10/25/17 19:28	10/27/17 14:00	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:20	7100738	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:20	7100738	CSW
Barium	0.0681	0.0100	0.0004	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:20	7100738	CSW
Beryllium	ND	0.0030	0.0005	mg/L	EPA 6020B		5	10/25/17 12:45	10/30/17 17:33	7100738	CSW
Boron	0.413	0.200	0.0298	mg/L	EPA 6020B		5	10/25/17 12:45	10/30/17 17:33	7100738	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:20	7100738	CSW
Calcium	118	25.0	2.02	mg/L	EPA 6020B		50	10/25/17 12:45	10/25/17 20:26	7100738	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:20	7100738	CSW
Cobalt	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/25/17 12:45	10/25/17 20:20	7100738	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:20	7100738	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:20	7100738	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:20	7100738	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/25/17 12:45	10/25/17 20:20	7100738	CSW
Lithium	ND	0.250	0.0075	mg/L	EPA 6020B	R-01	5	10/25/17 12:45	10/30/17 17:33	7100738	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/30/17 09:15	10/30/17 16:17	7100767	MTC



**PACE ANALYTICAL SERVICES, LLC.**

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 2480 Maner Road  
 Atlanta GA, 30339

October 31, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0714

Project: CCR Event

Client ID: PZ-7D

Lab Number ID: AAJ0714-04

Date/Time Sampled: 10/19/2017 11:15:00AM

Date/Time Received: 10/20/2017 9:15:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	318	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	7.4	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/27/17 00:18	7100769	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/25/17 19:28	10/27/17 00:18	7100769	RLC
Sulfate	55	2.0	0.03	mg/L	EPA 300.0		2	10/25/17 19:28	10/27/17 15:47	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:32	7100738	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:32	7100738	CSW
Barium	0.0091	0.0100	0.0004	mg/L	EPA 6020B	J	1	10/25/17 12:45	10/25/17 20:32	7100738	CSW
Beryllium	ND	0.0030	0.0005	mg/L	EPA 6020B		5	10/25/17 12:45	10/30/17 17:38	7100738	CSW
Boron	0.326	0.200	0.0298	mg/L	EPA 6020B		5	10/25/17 12:45	10/30/17 17:38	7100738	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:32	7100738	CSW
Calcium	107	25.0	2.02	mg/L	EPA 6020B		50	10/25/17 12:45	10/25/17 20:38	7100738	CSW
Chromium	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/25/17 12:45	10/25/17 20:32	7100738	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:32	7100738	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:32	7100738	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:32	7100738	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:32	7100738	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/25/17 12:45	10/25/17 20:32	7100738	CSW
Lithium	ND	0.250	0.0075	mg/L	EPA 6020B	R-01	5	10/25/17 12:45	10/30/17 17:38	7100738	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/30/17 09:15	10/30/17 16:24	7100767	MTC



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October 31, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0714

Project: CCR Event

Client ID: PZ-19

Lab Number ID: AAJ0714-05

Date/Time Sampled: 10/19/2017 12:50:00PM

Date/Time Received: 10/20/2017 9:15:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	448	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	6.5	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/27/17 02:22	7100769	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/25/17 19:28	10/27/17 02:22	7100769	RLC
Sulfate	92	5.0	0.08	mg/L	EPA 300.0		5	10/25/17 19:28	10/27/17 16:08	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:43	7100738	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:43	7100738	CSW
Barium	0.0542	0.0100	0.0004	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:43	7100738	CSW
Beryllium	ND	0.0030	0.0005	mg/L	EPA 6020B		5	10/25/17 12:45	10/30/17 17:44	7100738	CSW
Boron	0.660	0.200	0.0298	mg/L	EPA 6020B		5	10/25/17 12:45	10/30/17 17:44	7100738	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:43	7100738	CSW
Calcium	140	25.0	2.02	mg/L	EPA 6020B		50	10/25/17 12:45	10/25/17 20:49	7100738	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:43	7100738	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:43	7100738	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:43	7100738	CSW
Molybdenum	0.0021	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/25/17 12:45	10/25/17 20:43	7100738	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:43	7100738	CSW
Thallium	0.0005	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/25/17 12:45	10/25/17 20:43	7100738	CSW
Lithium	0.0130	0.250	0.0075	mg/L	EPA 6020B	R-01, J	5	10/25/17 12:45	10/30/17 17:44	7100738	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/30/17 09:15	10/30/17 16:26	7100767	MTC





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October 31, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0714

Project: CCR Event

Client ID: Dup-02

Lab Number ID: AAJ0714-06

Date/Time Sampled: 10/19/2017 12:00:00AM

Date/Time Received: 10/20/2017 9:15:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>General Chemistry</b>											
Total Dissolved Solids	449	25	10	mg/L	SM 2540 C		1	10/23/17 18:45	10/23/17 18:45	7100670	JPT
<b>Inorganic Anions</b>											
Chloride	6.5	0.25	0.02	mg/L	EPA 300.0		1	10/25/17 19:28	10/27/17 02:43	7100769	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/25/17 19:28	10/27/17 02:43	7100769	RLC
Sulfate	91	5.0	0.08	mg/L	EPA 300.0		5	10/25/17 19:28	10/27/17 16:29	7100769	RLC
<b>Metals, Total</b>											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:55	7100738	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:55	7100738	CSW
Barium	0.0547	0.0100	0.0004	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:55	7100738	CSW
Beryllium	ND	0.0030	0.0005	mg/L	EPA 6020B		5	10/25/17 12:45	10/30/17 17:50	7100738	CSW
Boron	0.672	0.200	0.0298	mg/L	EPA 6020B		5	10/25/17 12:45	10/30/17 17:50	7100738	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:55	7100738	CSW
Calcium	134	25.0	2.02	mg/L	EPA 6020B		50	10/25/17 12:45	10/25/17 21:00	7100738	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:55	7100738	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:55	7100738	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:55	7100738	CSW
Molybdenum	0.0021	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/25/17 12:45	10/25/17 20:55	7100738	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/25/17 12:45	10/25/17 20:55	7100738	CSW
Thallium	0.0005	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/25/17 12:45	10/25/17 20:55	7100738	CSW
Lithium	0.0136	0.250	0.0075	mg/L	EPA 6020B	R-01, J	5	10/25/17 12:45	10/30/17 17:50	7100738	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/30/17 09:15	10/30/17 16:29	7100767	MTC



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Attention: Mr. Joju Abraham

October 31, 2017

**Report No.: AAJ0714**

**General Chemistry - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7100670 - SM 2540 C</b>											
<b>Blank (7100670-BLK1)</b>						Prepared & Analyzed: 10/23/17					
Total Dissolved Solids	ND	25	10	mg/L							
<b>LCS (7100670-BS1)</b>						Prepared & Analyzed: 10/23/17					
Total Dissolved Solids	354	25	10	mg/L	400.00		88	84-108			
<b>Duplicate (7100670-DUP1)</b>						Source: AAJ0677-05 Prepared & Analyzed: 10/23/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
<b>Duplicate (7100670-DUP2)</b>						Source: AAJ0677-13 Prepared & Analyzed: 10/23/17					
Total Dissolved Solids	254	25	10	mg/L		256			0.8	10	



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October 31, 2017

**Report No.: AAJ0714**

**Inorganic Anions - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7100769 - EPA 300.0</b>											
<b>Blank (7100769-BLK1)</b>						Prepared: 10/25/17 Analyzed: 10/26/17					
Chloride	ND	0.25	0.02	mg/L							
Fluoride	ND	0.30	0.03	mg/L							
Sulfate	ND	1.0	0.02	mg/L							
<b>LCS (7100769-BS1)</b>						Prepared: 10/25/17 Analyzed: 10/26/17					
Chloride	10.2	0.25	0.02	mg/L	10.020		102	90-110			
Fluoride	10.0	0.30	0.03	mg/L	10.020		100	90-110			
Sulfate	10.2	1.0	0.02	mg/L	10.050		102	90-110			
<b>Matrix Spike (7100769-MS1)</b>						Source: AAJ0677-03 Prepared: 10/25/17 Analyzed: 10/26/17					
Chloride	14.9	0.25	0.02	mg/L	10.020	4.60	103	90-110			
Fluoride	10.6	0.30	0.03	mg/L	10.020	0.05	105	90-110			
Sulfate	16.3	1.0	0.02	mg/L	10.050	6.39	99	90-110			
<b>Matrix Spike (7100769-MS2)</b>						Source: AAJ0714-03 Prepared: 10/25/17 Analyzed: 10/26/17					
Chloride	16.9	0.25	0.02	mg/L	10.020	6.38	105	90-110			
Fluoride	11.0	0.30	0.03	mg/L	10.020	ND	109	90-110			
Sulfate	92.0	1.0	0.02	mg/L	10.050	91.3	7	90-110			QM-02
<b>Matrix Spike Dup (7100769-MSD1)</b>						Source: AAJ0677-03 Prepared: 10/25/17 Analyzed: 10/26/17					
Chloride	14.9	0.25	0.02	mg/L	10.020	4.60	103	90-110	0.3	15	
Fluoride	10.6	0.30	0.03	mg/L	10.020	0.05	105	90-110	0.4	15	
Sulfate	16.4	1.0	0.02	mg/L	10.050	6.39	100	90-110	0.5	15	



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October 31, 2017

**Report No.: AAJ0714**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 7100738 - EPA 3005A**

**Blank (7100738-BLK1)**

Prepared & Analyzed: 10/25/17

Antimony	ND	0.0030	0.0006	mg/L							
Arsenic	ND	0.0050	0.0005	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00009	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.0001	mg/L							
Calcium	ND	0.500	0.0404	mg/L							
Chromium	ND	0.0100	0.0005	mg/L							
Cobalt	ND	0.0100	0.0003	mg/L							
Copper	ND	0.0250	0.0003	mg/L							
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0012	mg/L							
Zinc	ND	0.0100	0.0012	mg/L							
Lithium	ND	0.0500	0.0015	mg/L							

**LCS (7100738-BS1)**

Prepared & Analyzed: 10/25/17

Antimony	0.106	0.0030	0.0006	mg/L	0.10000		106	80-120			
Arsenic	0.0972	0.0050	0.0005	mg/L	0.10000		97	80-120			
Barium	0.0987	0.0100	0.0004	mg/L	0.10000		99	80-120			
Beryllium	0.106	0.0030	0.00009	mg/L	0.10000		106	80-120			
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000		101	80-120			
Chromium	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Cobalt	0.0973	0.0100	0.0003	mg/L	0.10000		97	80-120			
Copper	0.102	0.0250	0.0003	mg/L	0.10000		102	80-120			
Lead	0.102	0.0050	0.00007	mg/L	0.10000		102	80-120			
Nickel	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Selenium	0.0960	0.0100	0.0018	mg/L	0.10000		96	80-120			
Silver	0.102	0.0100	0.0002	mg/L	0.10000		102	80-120			
Thallium	0.103	0.0010	0.00005	mg/L	0.10000		103	80-120			
Vanadium	0.108	0.0100	0.0012	mg/L	0.10000		108	80-120			
Zinc	0.0977	0.0100	0.0012	mg/L	0.10000		98	80-120			
Lithium	0.113	0.0500	0.0015	mg/L	0.10000		113	80-120			



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October 31, 2017

**Report No.: AAJ0714**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7100738 - EPA 3005A</b>											
<b>Duplicate (7100738-DUP1)</b>			<b>Source: AAJ0247-16RE1</b>				<b>Prepared &amp; Analyzed: 10/25/17</b>				
Antimony	ND	0.0030	0.0006	mg/L		ND				20	
Arsenic	0.0013	0.0050	0.0005	mg/L		0.0013			1	20	J
Barium	0.0558	0.0100	0.0004	mg/L		0.0549			2	20	
Beryllium	ND	0.0030	0.00009	mg/L		ND				20	
Cadmium	ND	0.0010	0.0001	mg/L		ND				20	
Chromium	ND	0.0100	0.0005	mg/L		ND				20	
Cobalt	0.0055	0.0100	0.0003	mg/L		0.0056			3	20	J
Copper	ND	0.0250	0.0003	mg/L		ND				20	
Lead	ND	0.0050	0.00007	mg/L		ND				20	
Nickel	0.0108	0.0100	0.0005	mg/L		0.0110			1	20	
Selenium	ND	0.0100	0.0018	mg/L		ND				20	
Silver	ND	0.0100	0.0002	mg/L		ND				20	
Thallium	0.00008	0.0010	0.00005	mg/L		ND				20	J
Vanadium	ND	0.0100	0.0012	mg/L		ND				20	
Zinc	0.0069	0.0100	0.0012	mg/L		0.0069			0.3	20	J
Lithium	ND	0.0500	0.0015	mg/L		ND				20	
<b>Matrix Spike (7100738-MS1)</b>			<b>Source: AAJ0714-03</b>				<b>Prepared &amp; Analyzed: 10/25/17</b>				
Antimony	0.104	0.0030	0.0006	mg/L	0.10000	ND	104	75-125			
Arsenic	0.104	0.0050	0.0005	mg/L	0.10000	ND	104	75-125			
Barium	0.168	0.0100	0.0004	mg/L	0.10000	0.0681	100	75-125			
Beryllium	0.101	0.0150	0.0005	mg/L	0.10000	ND	101	75-125			
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000	ND	101	75-125			
Chromium	0.107	0.0100	0.0005	mg/L	0.10000	ND	107	75-125			
Cobalt	0.0998	0.0100	0.0003	mg/L	0.10000	0.0005	99	75-125			
Copper	0.100	0.0250	0.0003	mg/L	0.10000	ND	100	75-125			
Lead	0.0995	0.0050	0.00007	mg/L	0.10000	ND	99	75-125			
Nickel	0.106	0.0100	0.0005	mg/L	0.10000	0.0012	105	75-125			
Selenium	0.104	0.0100	0.0018	mg/L	0.10000	ND	104	75-125			
Silver	0.0989	0.0100	0.0002	mg/L	0.10000	ND	99	75-125			
Thallium	0.102	0.0010	0.00005	mg/L	0.10000	0.0001	102	75-125			
Vanadium	0.108	0.0100	0.0012	mg/L	0.10000	ND	108	75-125			
Zinc	0.102	0.0100	0.0012	mg/L	0.10000	ND	102	75-125			
Lithium	0.105	0.250	0.0075	mg/L	0.10000	ND	105	75-125			J



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Attention: Mr. Joju Abraham

October 31, 2017

**Report No.: AAJ0714**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7100738 - EPA 3005A</b>											
<b>Matrix Spike Dup (7100738-MSD1)</b>			<b>Source: AAJ0714-03</b>			<b>Prepared &amp; Analyzed: 10/25/17</b>					
Antimony	0.103	0.0030	0.0006	mg/L	0.10000	ND	103	75-125	0.5	20	
Arsenic	0.104	0.0050	0.0005	mg/L	0.10000	ND	104	75-125	0.01	20	
Barium	0.162	0.0100	0.0004	mg/L	0.10000	0.0681	94	75-125	4	20	
Beryllium	0.0969	0.0030	0.00009	mg/L	0.10000	ND	97	75-125	4	20	
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000	ND	101	75-125	0.08	20	
Chromium	0.105	0.0100	0.0005	mg/L	0.10000	ND	105	75-125	2	20	
Cobalt	0.101	0.0100	0.0003	mg/L	0.10000	0.0005	100	75-125	0.9	20	
Copper	0.0990	0.0250	0.0003	mg/L	0.10000	ND	99	75-125	1	20	
Lead	0.100	0.0050	0.00007	mg/L	0.10000	ND	100	75-125	0.8	20	
Nickel	0.105	0.0100	0.0005	mg/L	0.10000	0.0012	104	75-125	1	20	
Selenium	0.101	0.0100	0.0018	mg/L	0.10000	ND	101	75-125	3	20	
Silver	0.0987	0.0100	0.0002	mg/L	0.10000	ND	99	75-125	0.2	20	
Thallium	0.102	0.0010	0.00005	mg/L	0.10000	0.0001	102	75-125	0.1	20	
Vanadium	0.110	0.0100	0.0012	mg/L	0.10000	ND	110	75-125	2	20	
Zinc	0.102	0.0100	0.0012	mg/L	0.10000	ND	102	75-125	0.02	20	
Lithium	0.106	0.0500	0.0015	mg/L	0.10000	ND	106	75-125	0.8	20	
<b>Post Spike (7100738-PS1)</b>			<b>Source: AAJ0714-03</b>			<b>Prepared &amp; Analyzed: 10/25/17</b>					
Antimony	94.0			ug/L	100.00	0.0578	94	80-120			
Arsenic	99.0			ug/L	100.00	0.420	99	80-120			
Barium	160			ug/L	100.00	68.1	92	80-120			
Beryllium	95.4			ug/L	100.00	0.0500	95	80-120			
Cadmium	100			ug/L	100.00	0.0105	100	80-120			
Chromium	100			ug/L	100.00	0.0633	100	80-120			
Cobalt	96.4			ug/L	100.00	0.482	96	80-120			
Copper	94.3			ug/L	100.00	0.224	94	80-120			
Lead	96.4			ug/L	100.00	0.0189	96	80-120			
Nickel	99.7			ug/L	100.00	1.21	98	80-120			
Selenium	94.8			ug/L	100.00	0.0815	95	80-120			
Silver	97.3			ug/L	100.00	0.0037	97	80-120			
Thallium	98.4			ug/L	100.00	0.129	98	80-120			
Vanadium	103			ug/L	100.00	-0.426	103	80-120			
Zinc	94.7			ug/L	100.00	1.02	94	80-120			
Lithium	99.3			ug/L	100.00	0.250	99	80-120			



**PACE ANALYTICAL SERVICES, LLC.**

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

Georgia Power  
 2480 Maner Road  
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 31, 2017

**Report No.: AAJ0714**

**Metals, Total - Quality Control**

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 7100767 - EPA 7470A</b>											
<b>Blank (7100767-BLK1)</b>						Prepared & Analyzed: 10/30/17					
Mercury	ND	0.00050	0.000036	mg/L							
<b>LCS (7100767-BS1)</b>						Prepared & Analyzed: 10/30/17					
Mercury	0.00244	0.00050	0.000036	mg/L	2.5000E-3		98	80-120			
<b>Duplicate (7100767-DUP1)</b>						Source: AAJ0585-06 Prepared & Analyzed: 10/30/17					
Mercury	0.0239	0.00250	0.00018	mg/L		0.0237			0.7	20	
<b>Matrix Spike (7100767-MS1)</b>						Source: AAJ0714-05 Prepared & Analyzed: 10/30/17					
Mercury	0.00238	0.00050	0.000036	mg/L	2.5000E-3	ND	95	75-125			
<b>Matrix Spike Dup (7100767-MSD1)</b>						Source: AAJ0714-05 Prepared & Analyzed: 10/30/17					
Mercury	0.00242	0.00050	0.000036	mg/L	2.5000E-3	ND	97	75-125	2	20	
<b>Post Spike (7100767-PS1)</b>						Source: AAJ0714-05 Prepared & Analyzed: 10/30/17					
Mercury	1.74			ug/L	1.6667	-0.00612	104	80-120			



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Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 31, 2017

**Legend**

**Definition of Laboratory Terms**

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

**Sample Information**

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

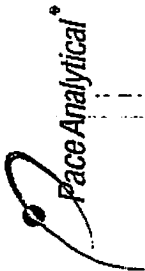
1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

**Definition of Qualifiers**

- R-01** Elevated reporting limit due to matrix interference.
- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

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





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

**CHAIN OF CUSTODY RECORD**

PAGE: 1 OF 1

<b>CLIENT NAME:</b> Georgia Power		<b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Joju Abraham		<b>CC:</b> Maria Padilla Heath McCortle		<b>PO #:</b> GPC10684198	
<b>PROJECT NAME/STATE:</b> Plant Mitchell Phase II CCR, GA		<b>PROJECT #:</b> 6122160170.04		<b>REQUESTED COMPLETION DATE:</b>		<b>DATE/TIME:</b> 10/19/17 1630		<b>DATE/TIME:</b> 10/20/17 10915	
<b>RECEIVED BY AND TIME:</b> Dana Brown / Project Cust		<b>RECEIVED BY:</b>		<b>RECEIVED BY LAB/ TIME:</b> B. Rahman		<b>TEMPERATURE:</b> Min: 1.2 Max:		<b>DATE/TIME:</b>	
<b>RECEIVED BY LAB/ TIME:</b>		<b>RECEIVED BY:</b>		<b>RECEIVED BY LAB/ TIME:</b>		<b>TEMPERATURE:</b> Min: Max:		<b>DATE/TIME:</b>	

CONTAINER TYPE: PRESERVATION: # of	ANALYSIS REQUESTED			DATE/TIME:
	P	P	P	
3		7	7	
4				
4				
6				

CONTAINER TYPE: PRESERVATION: # of	ANALYSIS REQUESTED			DATE/TIME:
	P	P	P	
3		7	7	
4				
4				
6				

CONTAINER TYPE: PRESERVATION: # of	ANALYSIS REQUESTED			DATE/TIME:
	P	P	P	
3		7	7	
4				
4				
6				

CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
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4				
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6				

CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
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4				
6				

CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
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CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
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CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
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CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
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CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
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CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
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CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
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CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
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CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
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CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
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CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
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CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
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4				
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CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
3		7	7	
4				
4				
6				

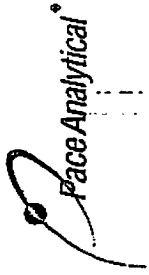
CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
3		7	7	
4				
4				
6				

CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
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4				
4				
6				

CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
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CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
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4				
6				

CONTAINER TYPE: PRESERVATION: # of	P	P	P	DATE/TIME:
3		7	7	
4				
4				
6				



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**CHAIN OF CUSTODY RECORD**

PAGE: 1 OF 1

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<b>PROJECT NAME/STATE:</b> Plant Mitchell Phase II CCR, GA		<b>PROJECT #:</b> 6122160170.04		<b>DATE/TIME:</b> 10/19/17 1630		<b>DATE/TIME:</b> 10/19/17 0915		<b>Temperature:</b> Min: 1.2 Max:	
Collection DATE	Collection TIME	MATRIX CODE	GRAB	SAMPLE IDENTIFICATION	RELINQUISHED BY:	DATE/TIME:	RELINQUISHED BY:	DATE/TIME:	RECEIVED BY LAB:
10/19/17	1115	GW	X	PZ-7D	David Howard / Project Chemist	10/19/17 1630	David Howard / Project Chemist	10/19/17 0915	W. A. Gunnan
↓	1250	GW	X	PZ-19					
↓	-	GW	X	DUP-02 Temp Blank					

CONTAINER TYPE	ANALYSIS REQUESTED	CONTAINER NUMBER	DATE/TIME
3	IC (C, T, SO4) EPA 800.0 TDS SM 2840C Radiation 226 & 228 SW-46 9315/9320	4	
3	IC (C, T, SO4) EPA 800.0 TDS SM 2840C Radiation 226 & 228 SW-46 9315/9320	5	
3	IC (C, T, SO4) EPA 800.0 TDS SM 2840C Radiation 226 & 228 SW-46 9315/9320	6	

CONTAINER TYPE	ANALYSIS REQUESTED	CONTAINER NUMBER	DATE/TIME
3	IC (C, T, SO4) EPA 800.0 TDS SM 2840C Radiation 226 & 228 SW-46 9315/9320	4	
3	IC (C, T, SO4) EPA 800.0 TDS SM 2840C Radiation 226 & 228 SW-46 9315/9320	5	
3	IC (C, T, SO4) EPA 800.0 TDS SM 2840C Radiation 226 & 228 SW-46 9315/9320	6	

CONTAINER TYPE	ANALYSIS REQUESTED	CONTAINER NUMBER	DATE/TIME
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3	IC (C, T, SO4) EPA 800.0 TDS SM 2840C Radiation 226 & 228 SW-46 9315/9320	6	

FOR LAB USE ONLY  
LAB #: AAJ0714  
Entered into LIMS: 810796997999  
Tracking #: 810796997999

**Sample Condition Upon Receipt**



Client Name: GIA Power Project # AAJ0714

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 810796997988/810796997999

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

Optional:  
Proj. Due Date  
Proj. Name

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used IR-4 Type of Ice:  Wet  Blue  None  Samples on ice, cooling process has begun

Cooler Temperature 1.2 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 10/20/17 DK

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

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? 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.**

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

**LOG-IN CHECKLIST**

**Printed: 10/20/2017 2:30:59PM**

**Attn:** Mr. Joju Abraham

**Client:** Georgia Power

**Project:** CCR Event

**Date Received:** 10/20/17 09:15

**Work Order:** AAJ0714

**Logged In By:** Mohammad M. Rahman

**OBSERVATIONS**

**#Samples:** 6

**#Containers:** 26

**Minimum Temp(C):** 1.2

**Maximum Temp(C):** 1.2

**Custody Seal(s) Used:** Yes

**CHECKLIST ITEMS**

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

**Comments:**

November 14, 2017

Mr. Joju Abraham  
Georgia Power  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: AAJ0714 Plant Mitchell  
Pace Project No.: 30233778

Dear Mr. Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 23, 2017. 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.

Revision 1: This report replaces the November 13, 2017 report. Report reissued November 14, 2017 to reflect correction of collection time for Sample 001 and Client Sample ID for Sample 002.

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

Sincerely,



Jacquelyn Collins  
jacquelyn.collins@pacelabs.com  
(724)850-5612  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
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## CERTIFICATIONS

Project: AAJ0714 Plant Mitchell  
Pace Project No.: 30233778

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
L-A-B DOD-ELAP Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH-0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana DHH/TNI Certification #: LA140008  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: PA00091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification  
Missouri Certification #: 235

Montana Certification #: Cert 0082  
Nebraska Certification #: NE-05-29-14  
Nevada Certification #: PA014572015-1  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188-14-8  
Utah/TNI Certification #: PA014572015-5  
USDA Soil Permit #: P330-14-00213  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 460198  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Certification  
Wyoming Certification #: 8TMS-L

---

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: AAJ0714 Plant Mitchell

Pace Project No.: 30233778

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30233778001	FB-02	Water	10/19/17 09:45	10/23/17 09:25
30233778002	EB-02	Water	10/19/17 10:05	10/23/17 09:25
30233778003	PZ-33	Water	10/19/17 11:52	10/23/17 09:25
30233778004	PZ-7D	Water	10/19/17 11:15	10/23/17 09:25
30233778005	PZ-19	Water	10/19/17 12:50	10/23/17 09:25
30233778006	DUP-02	Water	10/19/17 00:00	10/23/17 09:25

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: AAJ0714 Plant Mitchell  
Pace Project No.: 30233778

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30233778001	FB-02	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30233778002	EB-02	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30233778003	PZ-33	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30233778004	PZ-7D	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30233778005	PZ-19	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30233778006	DUP-02	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0714 Plant Mitchell

Pace Project No.: 30233778

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: FB-02</b> <b>Lab ID: 30233778001</b> Collected: 10/19/17 09:45      Received: 10/23/17 09:25      Matrix: Water PWS:      Site ID:      Sample Type:							
Radium-226		EPA 9315	<b>0.102 ± 0.120 (0.248)</b> C:90% T:NA	pCi/L	10/30/17 08:10	13982-63-3	
Radium-228		EPA 9320	<b>0.170 ± 0.535 (1.21)</b> C:79% T:83%	pCi/L	10/31/17 18:51	15262-20-1	
Total Radium		Total Radium Calculation	<b>0.272 ± 0.655 (1.46)</b>	pCi/L	11/10/17 12:34	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: EB-02</b> <b>Lab ID: 30233778002</b> Collected: 10/19/17 10:05      Received: 10/23/17 09:25      Matrix: Water PWS:      Site ID:      Sample Type:							
Radium-226		EPA 9315	<b>0.186 ± 0.127 (0.205)</b> C:98% T:NA	pCi/L	10/30/17 08:10	13982-63-3	
Radium-228		EPA 9320	<b>0.148 ± 0.304 (0.673)</b> C:81% T:87%	pCi/L	10/31/17 15:53	15262-20-1	
Total Radium		Total Radium Calculation	<b>0.334 ± 0.431 (0.878)</b>	pCi/L	11/10/17 12:34	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-33</b> <b>Lab ID: 30233778003</b> Collected: 10/19/17 11:52      Received: 10/23/17 09:25      Matrix: Water PWS:      Site ID:      Sample Type:							
Radium-226		EPA 9315	<b>0.633 ± 0.239 (0.282)</b> C:94% T:NA	pCi/L	10/30/17 08:10	13982-63-3	
Radium-228		EPA 9320	<b>0.115 ± 0.337 (0.754)</b> C:77% T:90%	pCi/L	10/31/17 11:39	15262-20-1	
Total Radium		Total Radium Calculation	<b>0.748 ± 0.576 (1.04)</b>	pCi/L	11/10/17 12:34	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-7D</b> <b>Lab ID: 30233778004</b> Collected: 10/19/17 11:15      Received: 10/23/17 09:25      Matrix: Water PWS:      Site ID:      Sample Type:							
Radium-226		EPA 9315	<b>0.221 ± 0.133 (0.189)</b> C:92% T:NA	pCi/L	10/30/17 08:11	13982-63-3	
Radium-228		EPA 9320	<b>0.108 ± 0.357 (0.805)</b> C:82% T:82%	pCi/L	10/31/17 15:50	15262-20-1	
Total Radium		Total Radium Calculation	<b>0.329 ± 0.490 (0.994)</b>	pCi/L	11/10/17 12:34	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: PZ-19</b> <b>Lab ID: 30233778005</b> Collected: 10/19/17 12:50      Received: 10/23/17 09:25      Matrix: Water PWS:      Site ID:      Sample Type:							
Radium-226		EPA 9315	<b>0.398 ± 0.183 (0.238)</b> C:95% T:NA	pCi/L	10/30/17 08:11	13982-63-3	
Radium-228		EPA 9320	<b>-0.0827 ± 0.322 (0.776)</b> C:79% T:80%	pCi/L	10/31/17 15:50	15262-20-1	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0714 Plant Mitchell

Pace Project No.: 30233778

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	<b>0.398 ± 0.505 (1.01)</b>	pCi/L	11/10/17 12:34	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.512 ± 0.206 (0.239)</b> C:92% T:NA	pCi/L	10/30/17 08:11	13982-63-3	
Radium-228	EPA 9320	<b>-0.0642 ± 0.373 (0.885)</b> C:81% T:76%	pCi/L	10/31/17 15:50	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.512 ± 0.579 (1.12)</b>	pCi/L	11/10/17 12:34	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: AAJ0714 Plant Mitchell

Pace Project No.: 30233778

QC Batch: 276729

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30233778001, 30233778002, 30233778003, 30233778004, 30233778005, 30233778006

METHOD BLANK: 1360113

Matrix: Water

Associated Lab Samples: 30233778001, 30233778002, 30233778003, 30233778004, 30233778005, 30233778006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0822 ± 0.415 (0.946) C:76% T:70%	pCi/L	10/31/17 11:39	

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: AAJ0714 Plant Mitchell

Pace Project No.: 30233778

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QC Batch: 276727 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Associated Lab Samples: 30233778001, 30233778002, 30233778003, 30233778004, 30233778005, 30233778006

---

METHOD BLANK: 1360112 Matrix: Water

Associated Lab Samples: 30233778001, 30233778002, 30233778003, 30233778004, 30233778005, 30233778006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.310 ± 0.164 (0.210) C:87% T:NA	pCi/L	10/30/17 08:09	

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: AAJ0714 Plant Mitchell

Pace Project No.: 30233778

### 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.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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Chain of Custody



Workorder: AAJ0714  
 Results Requested By: 11/14/2017

Workorder Name: Plant Mitchell  
 Owner Received Date:

Subcontract To:

Pace - Pittsburgh  
 1638 Roseytown Road  
 Stes. 2,3,4  
 Greensburg, PA 15601  
 Phone (724) 850-5600

Betsy McDaniel  
 Pace Analytical Atlanta  
 110 Technology Parkway  
 Peachtree Corners, GA 30092  
 Phone (770)-734-4200

Requested Analysis

WO#: 30233778



Preserved Containers

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	CONC	LAB USE ONLY
1	FB-02	G	10/19/2017 9:45	AAJ0714-01	W	2	001
2	EB-02	G	10/19/2017 10:05	AAJ0714-02	W	2	002
3	PZ-33	G	10/19/2017 11:52	AAJ0714-03	GW	4	003
4	PZ-7D	G	10/19/2017 11:15	AAJ0714-04	GW	2	004
5	PZ-19	G	10/19/2017 12:50	AAJ0714-05	GW	2	005
6	Dup-02	G	10/19/2017 0:00	AAJ0714-06	GW	2	006
7							
8							
9							
10							

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAFFMAN	10/20/17	Michael J...	10-23-17	0925
2					
3					

Cooler Temperature on Receipt NA °C Custody Seal Y or N Received on Ice Y or N Sample Intact Y or N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC. This chain of custody is considered complete as is since this information is available in the owner laboratory.

30233778

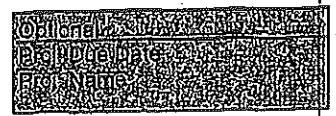
Sample Condition Upon Receipt



Client Name: GIA Power

Project # AA70714

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other  
Tracking #: 810796997988/810796997999  
Custody Seal on Cooler/Box Present:  yes  no Seals Intact:  yes  no



Packing Material:  Bubble Wrap  Bubble Bags  None  Other  
Thermometer Used IR-4 Type of Ice:  Wet  Blue  None  Samples on ice, cooling process has begun

Cooler Temperature 1.2 Biological Tissue is Frozen: Yes No  
Temp should be above freezing to 6°C

Date and Initials of person examining contents: 10/20/17 MK

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody Relinquished:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.	
-Includes date/time/ID/Analysis Matrix: <u>G10</u>			
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.	
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.	
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Field Data Required? Y / N  
Person Contacted: \_\_\_\_\_  
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)

Pittsburgh Lab Sample Condition Upon Receipt



Client Name: Pace GA

Project # 30233778

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 741366593918

Label	<u>ML</u>
LIMS Login	<u>ML</u>

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

Thermometer Used N/A    Type of Ice: Wet Blue None

Cooler Temperature Observed Temp N/A °C    Correction Factor: \_\_\_\_\_ °C    Final Temp: \_\_\_\_\_ °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: ML 10-23-17

Comments:	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC: -Includes date/time/ID      Matrix: <u>WT</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used: -Pace Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Orthophosphate field filtered	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.
Hex Cr Aqueous Compliance/NPDES sample field filtered	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.
Organic Samples checked for dechlorination:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15.
All containers have been checked for preservation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>PH &lt; 2</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>ML</u> Date/time of preservation: _____ Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.
Trip Blank Present:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rad Aqueous Samples Screened > 0.5 mrem/hr	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>ML</u> Date: <u>10-23-17</u>

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

A check in this box indicates that additional information has been stored in ereports.

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)

\*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.



# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JC2  
Date: 10/26/2017  
Worklist: 38405  
Matrix: DW

**Method Blank Assessment**

MB Sample ID: 1360112  
MB concentration: 0.310  
MB Counting Uncertainty: 0.157  
MB MDC: 0.210  
MB Numerical Performance Indicator: 3.87  
MB Status vs Numerical Indicator: N/A  
MB Status vs. MDC: See Comment\*

**Laboratory Control Sample Assessment**

LCSD (Y or N)?	N
LCSD38405	LCSD38405
Count Date:	10/30/2017
Spike I.D.:	17-030
Spike Concentration (pCi/mL):	80.188
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.502
Target Conc. (pCi/L, g, F):	15.979
Uncertainty (Calculated):	1.472
Result (pCi/L, g, F):	13.843
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.946
Numerical Performance Indicator:	-2.39
Percent Recovery:	86.64%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

**Duplicate Sample Assessment**

Sample I.D.:	30233778003
Duplicate Sample I.D.:	30233778003DUP
Duplicate Result (pCi/L, g, F):	0.633
Sample Result Counting Uncertainty (pCi/L, g, F):	0.220
Sample Duplicate Result (pCi/L, g, F):	0.740
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.248
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-0.633
Duplicate RPD:	15.59%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.  
30233778003  
30233778003DUP

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

Comments:

\*The method blank result is below the reporting limit for this analysis and is acceptable.

**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Spike I.D.:

MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
Spike Volume Used in MS (mL):  
Spike Volume Used in MSD (mL):  
MS Aliquot (L, g, F):  
MS Target Conc. (pCi/L, g, F):  
MSD Aliquot (L, g, F):  
MSD Target Conc. (pCi/L, g, F):  
Spike uncertainty (calculated):

Sample Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
MS Numerical Performance Indicator:  
MS Percent Recovery:  
MSD Percent Recovery:  
MS Status vs Numerical Indicator:  
MSD Status vs Numerical Indicator:  
MS Status vs Recovery:  
MSD Status vs Recovery:

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Spike I.D.:

Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
Duplicate Numerical Performance Indicator:  
MS/MSD Duplicate RPD:  
MS/MSD Duplicate Status vs Numerical Indicator:  
MS/MSD Duplicate Status vs RPD:

1 of 1

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: VAL  
Date: 10/27/2017  
Worklist: 38406  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1360113
MB concentration:	0.082
M/B Counting Uncertainty:	0.415
MB MDC:	0.946
MB Numerical Performance Indicator:	0.39
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		N
LCSID (Y or N)?		LCSID38406
Count Date:	10/31/2017	
Spike I.D.:	17-033	
Spike Concentration (pCi/mL):	23.144	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.801	
Target Conc. (pCi/L, g, F):	5.780	
Uncertainty (Calculated):	0.416	
Result (pCi/L, g, F):	6.191	
LCSID/LCSD Counting Uncertainty (pCi/L, g, F):	0.734	
Numerical Performance Indicator:	107.11%	
Percent Recovery:	0.95	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Duplicate Sample Assessment	
Sample I.D.:	30233778003
Duplicate Sample I.D.:	30233778003DUP
Sample Result (pCi/L, g, F):	0.115
Sample Duplicate Result (pCi/L, g, F):	0.336
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	-0.115
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.280
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	1.029
Duplicate RPD:	-134110.10%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

*Handwritten signature/initials*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

May 16, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262069

Dear Joju Abraham:

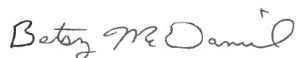
Enclosed are the analytical results for sample(s) received by the laboratory on February 21, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

REV05082018\_report revised to correct MDL / J-flag settings.

REV05162018\_report revised to set reporting limits in accordance with project scope.

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: Maria Padilla, Georgia Power  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262069

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### Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092	North Carolina Certification #: 381
Florida DOH Certification #: E87315	South Carolina Certification #: 98011001
Georgia DW Inorganics Certification #: 812	Texas Certification #: T104704397-08-TX
Georgia DW Microbiology Certification #: 812	Virginia Certification #: 460204

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### Pennsylvania Certification IDs

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

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### Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804	North Carolina Wastewater Certification #: 40
Florida/NELAP Certification #: E87648	South Carolina Certification #: 99030001
Massachusetts Certification #: M-NC030	Virginia/VELAP Certification #: 460222
North Carolina Drinking Water Certification #: 37712	

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262069

Lab ID	Sample ID	Matrix	Date Collected	Date Received
262069001	PZ-1D	Water	02/20/18 10:50	02/21/18 09:30
262069002	PZ-1D	Water	02/20/18 10:50	02/21/18 09:30
262069003	PZ-31	Water	02/20/18 12:20	02/21/18 09:30
262069004	PZ-31	Water	02/20/18 12:20	02/21/18 09:30
262069005	PZ-14	Water	02/20/18 14:20	02/21/18 09:30
262069006	PZ-14	Water	02/20/18 14:20	02/21/18 09:30
262069007	PZ-23	Water	02/20/18 15:27	02/21/18 09:30
262069008	PZ-23	Water	02/20/18 15:27	02/21/18 09:30
262069009	PZ-2S	Water	02/20/18 12:09	02/21/18 09:30
262069010	PZ-2S	Water	02/20/18 12:09	02/21/18 09:30
262069011	PZ-32	Water	02/20/18 14:35	02/21/18 09:30
262069012	PZ-32	Water	02/20/18 14:35	02/21/18 09:30

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262069

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
262069001	PZ-1D	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262069002	PZ-1D	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
262069003	PZ-31	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262069004	PZ-31	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
262069005	PZ-14	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262069006	PZ-14	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
262069007	PZ-23	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262069008	PZ-23	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
262069009	PZ-2S	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262069010	PZ-2S	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
262069011	PZ-32	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262069

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
262069012	PZ-32	SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
		EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262069

Sample: PZ-1D		Lab ID: 262069001		Collected: 02/20/18 10:50		Received: 02/21/18 09:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	<b>0.00094J</b>	mg/L	0.0030	0.00078	1	02/27/18 10:06	02/28/18 19:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	02/27/18 10:06	02/28/18 19:05	7440-38-2	
Barium	<b>0.027</b>	mg/L	0.010	0.00078	1	02/27/18 10:06	02/28/18 19:05	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	02/27/18 10:06	02/28/18 19:05	7440-41-7	
Boron	<b>0.024J</b>	mg/L	0.040	0.0039	1	02/27/18 10:06	02/28/18 19:05	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:06	02/28/18 19:05	7440-43-9	
Calcium	<b>46.8</b>	mg/L	25.0	0.69	50	02/27/18 10:06	02/28/18 19:11	7440-70-2	
Chromium	<b>0.0029J</b>	mg/L	0.010	0.0016	1	02/27/18 10:06	02/28/18 19:05	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	02/27/18 10:06	02/28/18 19:05	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	02/27/18 10:06	02/28/18 19:05	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	02/27/18 10:06	02/28/18 19:05	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:06	02/28/18 19:05	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:06	02/28/18 19:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/27/18 10:06	02/28/18 19:05	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	02/27/18 15:30	02/28/18 17:29	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>138</b>	mg/L	25.0	25.0	1		02/27/18 11:49		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>3.3</b>	mg/L	0.25	0.024	1		02/23/18 01:29	16887-00-6	
Fluoride	<b>0.098J</b>	mg/L	0.30	0.029	1		02/23/18 01:29	16984-48-8	
Sulfate	<b>2.3</b>	mg/L	1.0	0.017	1		02/23/18 01:29	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262069

Sample: PZ-31		Lab ID: 262069003		Collected: 02/20/18 12:20		Received: 02/21/18 09:30		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	02/27/18 10:06	02/28/18 19:17	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	02/27/18 10:06	02/28/18 19:17	7440-38-2		
Barium	<b>0.015</b>	mg/L	0.010	0.00078	1	02/27/18 10:06	02/28/18 19:17	7440-39-3		
Beryllium	ND	mg/L	0.015	0.00025	5	02/27/18 10:06	03/05/18 13:22	7440-41-7	D3	
Boron	<b>0.046J</b>	mg/L	0.20	0.020	5	02/27/18 10:06	03/05/18 13:22	7440-42-8	D3	
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:06	02/28/18 19:17	7440-43-9		
Calcium	<b>86.5</b>	mg/L	25.0	0.69	50	02/27/18 10:06	02/28/18 19:23	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	02/27/18 10:06	02/28/18 19:17	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	02/27/18 10:06	02/28/18 19:17	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	02/27/18 10:06	02/28/18 19:17	7439-92-1		
Lithium	ND	mg/L	0.25	0.0049	5	02/27/18 10:06	03/05/18 13:22	7439-93-2	D3	
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:06	02/28/18 19:17	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:06	02/28/18 19:17	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	02/27/18 10:06	02/28/18 19:17	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	02/27/18 15:30	02/28/18 17:32	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>264</b>	mg/L	25.0	25.0	1		02/27/18 11:49			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>4.4</b>	mg/L	0.25	0.024	1		02/23/18 01:49	16887-00-6		
Fluoride	<b>0.21J</b>	mg/L	0.30	0.029	1		02/23/18 01:49	16984-48-8		
Sulfate	<b>5.2</b>	mg/L	1.0	0.017	1		02/23/18 01:49	14808-79-8		

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262069

Sample: PZ-14		Lab ID: 262069005		Collected: 02/20/18 14:20		Received: 02/21/18 09:30		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	02/27/18 10:06	02/28/18 19:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	02/27/18 10:06	02/28/18 19:40	7440-38-2	
Barium	<b>0.030</b>	mg/L	0.010	0.00078	1	02/27/18 10:06	02/28/18 19:40	7440-39-3	
Beryllium	ND	mg/L	0.015	0.00025	5	02/27/18 10:06	03/05/18 13:27	7440-41-7	D3
Boron	<b>0.026J</b>	mg/L	0.20	0.020	5	02/27/18 10:06	03/05/18 13:27	7440-42-8	D3
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:06	02/28/18 19:40	7440-43-9	
Calcium	<b>93.1</b>	mg/L	25.0	0.69	50	02/27/18 10:06	02/28/18 19:46	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	02/27/18 10:06	02/28/18 19:40	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	02/27/18 10:06	02/28/18 19:40	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	02/27/18 10:06	02/28/18 19:40	7439-92-1	
Lithium	ND	mg/L	0.25	0.0049	5	02/27/18 10:06	03/05/18 13:27	7439-93-2	D3
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:06	02/28/18 19:40	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:06	02/28/18 19:40	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/27/18 10:06	02/28/18 19:40	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	02/27/18 15:30	02/28/18 17:34	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>295</b>	mg/L	25.0	25.0	1		02/27/18 11:57		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>5.1</b>	mg/L	0.25	0.024	1		02/23/18 02:30	16887-00-6	
Fluoride	<b>0.040J</b>	mg/L	0.30	0.029	1		02/23/18 02:30	16984-48-8	
Sulfate	<b>2.4</b>	mg/L	1.0	0.017	1		02/23/18 02:30	14808-79-8	

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262069

Sample: PZ-23		Lab ID: 262069007		Collected: 02/20/18 15:27		Received: 02/21/18 09:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	02/27/18 10:06	02/28/18 19:51	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	02/27/18 10:06	02/28/18 19:51	7440-38-2	
Barium	<b>0.050</b>	mg/L	0.010	0.00078	1	02/27/18 10:06	02/28/18 19:51	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	02/27/18 10:06	02/28/18 19:51	7440-41-7	
Boron	<b>0.16</b>	mg/L	0.040	0.0039	1	02/27/18 10:06	02/28/18 19:51	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:06	02/28/18 19:51	7440-43-9	
Calcium	<b>142</b>	mg/L	25.0	0.69	50	02/27/18 10:06	02/28/18 19:57	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	02/27/18 10:06	02/28/18 19:51	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	02/27/18 10:06	02/28/18 19:51	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	02/27/18 10:06	02/28/18 19:51	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	02/27/18 10:06	02/28/18 19:51	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:06	02/28/18 19:51	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:06	02/28/18 19:51	7782-49-2	
Thallium	<b>0.00026J</b>	mg/L	0.0010	0.00014	1	02/27/18 10:06	02/28/18 19:51	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	02/27/18 15:30	02/28/18 17:36	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>429</b>	mg/L	25.0	25.0	1		02/27/18 11:57		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>5.5</b>	mg/L	0.25	0.024	1		02/23/18 02:51	16887-00-6	
Fluoride	<b>0.30J</b>	mg/L	0.30	0.029	1		02/23/18 02:51	16984-48-8	
Sulfate	<b>34.7</b>	mg/L	10.0	0.17	10		03/02/18 20:35	14808-79-8	

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262069

Sample: PZ-2S		Lab ID: 262069009		Collected: 02/20/18 12:09		Received: 02/21/18 09:30		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	02/27/18 10:06	02/28/18 20:03	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	02/27/18 10:06	02/28/18 20:03	7440-38-2		
Barium	<b>0.0090J</b>	mg/L	0.010	0.00078	1	02/27/18 10:06	02/28/18 20:03	7440-39-3		
Beryllium	ND	mg/L	0.015	0.00025	5	02/27/18 10:06	03/05/18 13:33	7440-41-7	D3	
Boron	ND	mg/L	0.20	0.020	5	02/27/18 10:06	03/05/18 13:33	7440-42-8	D3	
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:06	02/28/18 20:03	7440-43-9		
Calcium	<b>44.4</b>	mg/L	25.0	0.69	50	02/27/18 10:06	02/28/18 20:08	7440-70-2		
Chromium	<b>0.0030J</b>	mg/L	0.010	0.0016	1	02/27/18 10:06	02/28/18 20:03	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	02/27/18 10:06	02/28/18 20:03	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	02/27/18 10:06	02/28/18 20:03	7439-92-1		
Lithium	ND	mg/L	0.25	0.0049	5	02/27/18 10:06	03/05/18 13:33	7439-93-2	D3	
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:06	02/28/18 20:03	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:06	02/28/18 20:03	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	02/27/18 10:06	02/28/18 20:03	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	02/27/18 15:30	02/28/18 17:39	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>150</b>	mg/L	25.0	25.0	1		02/27/18 11:57			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>2.9</b>	mg/L	0.25	0.024	1		02/23/18 03:12	16887-00-6		
Fluoride	<b>0.17J</b>	mg/L	0.30	0.029	1		02/23/18 03:12	16984-48-8		
Sulfate	<b>1.9</b>	mg/L	1.0	0.017	1		02/23/18 03:12	14808-79-8		

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262069

Sample: PZ-32		Lab ID: 262069011		Collected: 02/20/18 14:35		Received: 02/21/18 09:30		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	02/27/18 10:06	02/28/18 20:14	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	02/27/18 10:06	02/28/18 20:14	7440-38-2		
Barium	<b>0.015</b>	mg/L	0.010	0.00078	1	02/27/18 10:06	02/28/18 20:14	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	02/27/18 10:06	02/28/18 20:14	7440-41-7		
Boron	<b>0.011J</b>	mg/L	0.040	0.0039	1	02/27/18 10:06	02/28/18 20:14	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:06	02/28/18 20:14	7440-43-9		
Calcium	<b>64.1</b>	mg/L	25.0	0.69	50	02/27/18 10:06	02/28/18 20:20	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	02/27/18 10:06	02/28/18 20:14	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	02/27/18 10:06	02/28/18 20:14	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	02/27/18 10:06	02/28/18 20:14	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	02/27/18 10:06	02/28/18 20:14	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:06	02/28/18 20:14	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:06	02/28/18 20:14	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	02/27/18 10:06	02/28/18 20:14	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	02/27/18 15:30	02/28/18 17:46	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>163</b>	mg/L	25.0	25.0	1		02/27/18 11:57			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>3.0</b>	mg/L	0.25	0.024	1		02/23/18 03:32	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		02/23/18 03:32	16984-48-8		
Sulfate	<b>2.1</b>	mg/L	1.0	0.017	1		02/23/18 03:32	14808-79-8		

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262069

QC Batch: 1653 Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury  
Associated Lab Samples: 262069001, 262069003, 262069005, 262069007, 262069009, 262069011

METHOD BLANK: 9605 Matrix: Water  
Associated Lab Samples: 262069001, 262069003, 262069005, 262069007, 262069009, 262069011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	02/28/18 16:49	

LABORATORY CONTROL SAMPLE: 9606

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0029	116	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 9838 9839

Parameter	Units	262048003 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	.0025	.0025	0.0029	0.0029	115	117	75-125	1	20	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262069

QC Batch: 1650 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 262069001, 262069003, 262069005, 262069007, 262069009, 262069011

METHOD BLANK: 9599 Matrix: Water  
Associated Lab Samples: 262069001, 262069003, 262069005, 262069007, 262069009, 262069011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	02/28/18 15:31	
Arsenic	mg/L	ND	0.0050	0.00057	02/28/18 15:31	
Barium	mg/L	ND	0.010	0.00078	02/28/18 15:31	
Beryllium	mg/L	ND	0.0030	0.000050	02/28/18 15:31	
Boron	mg/L	ND	0.040	0.0039	02/28/18 15:31	
Cadmium	mg/L	ND	0.0010	0.000093	02/28/18 15:31	
Calcium	mg/L	ND	0.50	0.014	02/28/18 15:31	
Chromium	mg/L	ND	0.010	0.0016	02/28/18 15:31	
Cobalt	mg/L	ND	0.010	0.00052	02/28/18 15:31	
Lead	mg/L	ND	0.0050	0.00027	02/28/18 15:31	
Lithium	mg/L	ND	0.050	0.00097	02/28/18 15:31	
Molybdenum	mg/L	ND	0.010	0.0019	02/28/18 15:31	
Selenium	mg/L	ND	0.010	0.0014	02/28/18 15:31	
Thallium	mg/L	ND	0.0010	0.00014	02/28/18 15:31	

LABORATORY CONTROL SAMPLE: 9600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.11	109	80-120	
Arsenic	mg/L	.1	0.10	103	80-120	
Barium	mg/L	.1	0.11	106	80-120	
Beryllium	mg/L	.1	0.10	104	80-120	
Boron	mg/L	1	1.0	105	80-120	
Cadmium	mg/L	.1	0.10	104	80-120	
Calcium	mg/L	1	1.1	106	80-120	
Chromium	mg/L	.1	0.11	105	80-120	
Cobalt	mg/L	.1	0.10	104	80-120	
Lead	mg/L	.1	0.10	103	80-120	
Lithium	mg/L	.1	0.11	105	80-120	
Molybdenum	mg/L	.1	0.11	109	80-120	
Selenium	mg/L	.1	0.10	105	80-120	
Thallium	mg/L	.1	0.10	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 9685 9686

Parameter	Units	262048001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	.1	0.11	0.11	108	108	75-125	0	20	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262069

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 9685		9686		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		262048001 Result	MS Spike Conc.	MSD Spike Conc.									
Arsenic	mg/L	ND	.1	.1	0.10	0.10	104	104	75-125	0	20		
Barium	mg/L	53.3 ug/L	.1	.1	0.16	0.17	102	119	75-125	10	20		
Beryllium	mg/L	ND	.1	.1	0.10	0.11	104	107	75-125	3	20		
Boron	mg/L	ND	1	1	1.0	1.2	103	117	75-125	13	20		
Cadmium	mg/L	ND	.1	.1	0.10	0.10	100	103	75-125	2	20		
Calcium	mg/L	ND	1	1	15.6J	15.4J	157	140	75-125	1	20	M6	
Chromium	mg/L	ND	.1	.1	0.10	0.11	105	111	75-125	6	20		
Cobalt	mg/L	ND	.1	.1	0.10	0.11	101	109	75-125	7	20		
Lead	mg/L	ND	.1	.1	0.10	0.10	101	101	75-125	0	20		
Lithium	mg/L	ND	.1	.1	0.10	0.11	102	110	75-125	7	20		
Molybdenum	mg/L	ND	.1	.1	0.11	0.11	107	110	75-125	2	20		
Selenium	mg/L	ND	.1	.1	0.10	0.11	104	107	75-125	3	20		
Thallium	mg/L	ND	.1	.1	0.10	0.10	100	101	75-125	1	20		

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262069

QC Batch: 399829 Analysis Method: SM 2540C  
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids  
Associated Lab Samples: 262069001, 262069003

METHOD BLANK: 2217430 Matrix: Water  
Associated Lab Samples: 262069001, 262069003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	25.02	25.0	25.0	02/27/18 11:49	

LABORATORY CONTROL SAMPLE: 2217431

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	240	96	90-110	

SAMPLE DUPLICATE: 2217432

Parameter	Units	92374147007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	191	193	1	5	

SAMPLE DUPLICATE: 2217433

Parameter	Units	92374218002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	129	128	1	5	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262069

QC Batch: 399830 Analysis Method: SM 2540C  
 QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids  
 Associated Lab Samples: 262069005, 262069007, 262069009, 262069011

METHOD BLANK: 2217434 Matrix: Water

Associated Lab Samples: 262069005, 262069007, 262069009, 262069011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	25.02	25.0	25.0	02/27/18 11:57	

LABORATORY CONTROL SAMPLE: 2217435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	246	98	90-110	

SAMPLE DUPLICATE: 2217436

Parameter	Units	92374543023 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1600	1740	9	5	D6

SAMPLE DUPLICATE: 2217437

Parameter	Units	92374543024 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	124	120	3	5	

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**QUALITY CONTROL DATA**

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262069

QC Batch: 1441 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 262069001, 262069003, 262069005, 262069007, 262069009, 262069011

METHOD BLANK: 8751 Matrix: Water  
 Associated Lab Samples: 262069001, 262069003, 262069005, 262069007, 262069009, 262069011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	02/22/18 18:36	
Fluoride	mg/L	ND	0.30	0.029	02/22/18 18:36	
Sulfate	mg/L	ND	1.0	0.017	02/22/18 18:36	

LABORATORY CONTROL SAMPLE: 8752

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	10.2	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 8753 8754

Parameter	Units	262048001 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	14.0	14.0	97	97	90-110	0	15	
Fluoride	mg/L	0.17	10	10	10.1	10.1	99	99	90-110	0	15	
Sulfate	mg/L	64.6	10	10	66.3	66.3	17	18	90-110	0	15 E	

MATRIX SPIKE SAMPLE: 8755

Parameter	Units	262069003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	4.4	10	13.8	94	90-110	
Fluoride	mg/L	0.21J	10	9.8	96	90-110	
Sulfate	mg/L	5.2	10	14.8	96	90-110	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262069

**Sample: PZ-1D**      **Lab ID: 262069002**      Collected: 02/20/18 10:50      Received: 02/21/18 09:30      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.342 ± 0.246 (0.436)</b> C:84% T:NA	pCi/L	03/01/18 09:18	13982-63-3	
Radium-228	EPA 9320	<b>0.728 ± 0.524 (1.03)</b> C:73% T:84%	pCi/L	03/06/18 13:23	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.07 ± 0.770 (1.47)</b>	pCi/L	03/09/18 12:47	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262069

**Sample: PZ-31**      **Lab ID: 262069004**      Collected: 02/20/18 12:20      Received: 02/21/18 09:30      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.155 ± 0.156 (0.294)</b> <b>C:86% T:NA</b>	pCi/L	03/01/18 10:16	13982-63-3	
Radium-228	EPA 9320	<b>0.655 ± 0.460 (0.890)</b> <b>C:73% T:87%</b>	pCi/L	03/06/18 13:24	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.810 ± 0.616 (1.18)</b>	pCi/L	03/09/18 12:47	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262069

**Sample: PZ-14**      **Lab ID: 262069006**      Collected: 02/20/18 14:20      Received: 02/21/18 09:30      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.382 ± 0.218 (0.308)</b> C:85% T:NA	pCi/L	03/01/18 10:16	13982-63-3	
Radium-228	EPA 9320	<b>1.74 ± 0.600 (0.832)</b> C:73% T:86%	pCi/L	03/06/18 13:24	15262-20-1	
Total Radium	Total Radium Calculation	<b>2.12 ± 0.818 (1.14)</b>	pCi/L	03/09/18 12:47	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262069

**Sample: PZ-23**      **Lab ID: 262069008**      Collected: 02/20/18 15:27      Received: 02/21/18 09:30      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.583 ± 0.285 (0.362)</b> C:75% T:NA	pCi/L	03/01/18 10:17	13982-63-3	
Radium-228	EPA 9320	<b>0.392 ± 0.416 (0.863)</b> C:73% T:80%	pCi/L	03/06/18 13:24	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.975 ± 0.701 (1.23)</b>	pCi/L	03/09/18 12:47	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262069

**Sample: PZ-2S**      **Lab ID: 262069010**      Collected: 02/20/18 12:09      Received: 02/21/18 09:30      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.226 ± 0.187 (0.330)</b> C:80% T:NA	pCi/L	03/01/18 10:17	13982-63-3	
Radium-228	EPA 9320	<b>0.869 ± 0.452 (0.778)</b> C:71% T:82%	pCi/L	03/06/18 13:24	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.10 ± 0.639 (1.11)</b>	pCi/L	03/09/18 12:47	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262069

**Sample: PZ-32**      **Lab ID: 262069012**      Collected: 02/20/18 14:35      Received: 02/21/18 09:30      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.257 ± 0.206 (0.371)</b> C:78% T:NA	pCi/L	03/01/18 10:18	13982-63-3	
Radium-228	EPA 9320	<b>0.649 ± 0.402 (0.729)</b> C:74% T:82%	pCi/L	03/06/18 13:24	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.906 ± 0.608 (1.10)</b>	pCi/L	03/09/18 12:47	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262069

QC Batch: 289268

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 262069002, 262069004, 262069006, 262069008, 262069010, 262069012

METHOD BLANK: 1417374

Matrix: Water

Associated Lab Samples: 262069002, 262069004, 262069006, 262069008, 262069010, 262069012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.206 ± 0.148 (0.216) C:92% T:NA	pCi/L	03/01/18 10:12	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262069

QC Batch: 289271

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 262069002, 262069004, 262069006, 262069008, 262069010, 262069012

METHOD BLANK: 1417377

Matrix: Water

Associated Lab Samples: 262069002, 262069004, 262069006, 262069008, 262069010, 262069012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.557 ± 0.408 (0.796) C:80% T:87%	pCi/L	03/06/18 13:23	

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 Mitchell Ash Ponds

Pace Project No.: 262069

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-A Pace Analytical Services - Asheville

PASI-GA Pace Analytical Services - Atlanta, GA

PASI-PA Pace Analytical Services - Greensburg

### ANALYTE QUALIFIERS

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.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262069

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
262069001	PZ-1D	EPA 3005A	1650	EPA 6020B	1792
262069003	PZ-31	EPA 3005A	1650	EPA 6020B	1792
262069005	PZ-14	EPA 3005A	1650	EPA 6020B	1792
262069007	PZ-23	EPA 3005A	1650	EPA 6020B	1792
262069009	PZ-2S	EPA 3005A	1650	EPA 6020B	1792
262069011	PZ-32	EPA 3005A	1650	EPA 6020B	1792
262069001	PZ-1D	EPA 7470A	1653	EPA 7470A	1776
262069003	PZ-31	EPA 7470A	1653	EPA 7470A	1776
262069005	PZ-14	EPA 7470A	1653	EPA 7470A	1776
262069007	PZ-23	EPA 7470A	1653	EPA 7470A	1776
262069009	PZ-2S	EPA 7470A	1653	EPA 7470A	1776
262069011	PZ-32	EPA 7470A	1653	EPA 7470A	1776
262069002	PZ-1D	EPA 9315	289268		
262069004	PZ-31	EPA 9315	289268		
262069006	PZ-14	EPA 9315	289268		
262069008	PZ-23	EPA 9315	289268		
262069010	PZ-2S	EPA 9315	289268		
262069012	PZ-32	EPA 9315	289268		
262069002	PZ-1D	EPA 9320	289271		
262069004	PZ-31	EPA 9320	289271		
262069006	PZ-14	EPA 9320	289271		
262069008	PZ-23	EPA 9320	289271		
262069010	PZ-2S	EPA 9320	289271		
262069012	PZ-32	EPA 9320	289271		
262069002	PZ-1D	Total Radium Calculation	290744		
262069004	PZ-31	Total Radium Calculation	290744		
262069006	PZ-14	Total Radium Calculation	290744		
262069008	PZ-23	Total Radium Calculation	290744		
262069010	PZ-2S	Total Radium Calculation	290744		
262069012	PZ-32	Total Radium Calculation	290744		
262069001	PZ-1D	SM 2540C	399829		
262069003	PZ-31	SM 2540C	399829		
262069005	PZ-14	SM 2540C	399830		
262069007	PZ-23	SM 2540C	399830		
262069009	PZ-2S	SM 2540C	399830		
262069011	PZ-32	SM 2540C	399830		
262069001	PZ-1D	EPA 300.0	1441		
262069003	PZ-31	EPA 300.0	1441		
262069005	PZ-14	EPA 300.0	1441		
262069007	PZ-23	EPA 300.0	1441		
262069009	PZ-2S	EPA 300.0	1441		
262069011	PZ-32	EPA 300.0	1441		

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**Sample Condition Upon Receipt**



Client Name: GIA Power

Project # \_\_\_\_\_

**WO#: 262069**

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: \_\_\_\_\_

PM: BM

Due Date: 02/28/18

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

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 0.4

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 2/21/18 MK

Temp should be above freezing to 6°C

Comments: \_\_\_\_\_

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

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? 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)



May 16, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262141

Dear Joju Abraham:

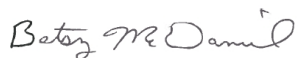
Enclosed are the analytical results for sample(s) received by the laboratory on February 22, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

REV05082018\_report revised to correct MDL / J-flag settings.

REV05162018\_report revised to set reporting limits in accordance with project scope.

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: Maria Padilla, Georgia Power  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262141

---

### 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  
Texas Certification #: T104704397-08-TX  
Virginia Certification #: 460204

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### 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

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### Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
Massachusetts Certification #: M-NC030  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

Lab ID	Sample ID	Matrix	Date Collected	Date Received
262141001	EB-01	Water	02/21/18 07:50	02/22/18 09:55
262141002	EB-01	Water	02/21/18 07:50	02/22/18 09:55
262141003	FB-01	Water	02/21/18 08:05	02/22/18 09:55
262141004	FB-01	Water	02/21/18 08:05	02/22/18 09:55
262141005	PZ-16	Water	02/21/18 09:00	02/22/18 09:55
262141006	PZ-16	Water	02/21/18 09:00	02/22/18 09:55
262141007	PZ-25	Water	02/21/18 11:25	02/22/18 09:55
262141008	PZ-25	Water	02/21/18 11:25	02/22/18 09:55
262141009	PZ-7D	Water	02/21/18 12:45	02/22/18 09:55
262141010	PZ-7D	Water	02/21/18 12:45	02/22/18 09:55
262141011	PZ-18	Water	02/21/18 14:03	02/22/18 09:55
262141012	PZ-18	Water	02/21/18 14:03	02/22/18 09:55
262141013	PZ-15	Water	02/21/18 10:07	02/22/18 09:55
262141014	PZ-15	Water	02/21/18 10:07	02/22/18 09:55
262141015	PZ-17	Water	02/21/18 12:22	02/22/18 09:55
262141016	PZ-17	Water	02/21/18 12:22	02/22/18 09:55
262141017	PZ-33	Water	02/21/18 15:05	02/22/18 09:55
262141018	PZ-33	Water	02/21/18 15:05	02/22/18 09:55
262141019	Dup-02	Water	02/21/18 00:00	02/22/18 09:55
262141020	Dup-02	Water	02/21/18 00:00	02/22/18 09:55
262141021	Dup-01	Water	02/21/18 00:00	02/22/18 09:55
262141022	Dup-01	Water	02/21/18 00:00	02/22/18 09:55
262141023	PZ-19	Water	02/21/18 15:45	02/22/18 09:55
262141024	PZ-19	Water	02/21/18 15:45	02/22/18 09:55

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262141

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
262141001	EB-01	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262141002	EB-01	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262141003	FB-01	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262141004	FB-01	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262141005	PZ-16	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262141006	PZ-16	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262141007	PZ-25	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262141008	PZ-25	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262141009	PZ-7D	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262141010	PZ-7D	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262141011	PZ-18	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262141

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
262141012	PZ-18	SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
		EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
262141013	PZ-15	Total Radium Calculation	CMC	1	PASI-PA
		EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
262141014	PZ-15	SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
		EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
262141015	PZ-17	Total Radium Calculation	CMC	1	PASI-PA
		EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
262141016	PZ-17	SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
		EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
262141017	PZ-33	Total Radium Calculation	CMC	1	PASI-PA
		EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
262141018	PZ-33	SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
		EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
262141019	Dup-02	Total Radium Calculation	CMC	1	PASI-PA
		EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
262141020	Dup-02	SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
		EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
262141021	Dup-01	Total Radium Calculation	CMC	1	PASI-PA
		EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
262141022	Dup-01	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262141023	PZ-19	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262141024	PZ-19	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

Sample: EB-01		Lab ID: 262141001		Collected: 02/21/18 07:50		Received: 02/22/18 09:55		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	02/27/18 10:07	02/28/18 20:08	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	02/27/18 10:07	02/28/18 20:08	7440-38-2		
Barium	ND	mg/L	0.010	0.00078	1	02/27/18 10:07	02/28/18 20:08	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	02/27/18 10:07	02/28/18 20:08	7440-41-7		
Boron	<b>0.011J</b>	mg/L	0.040	0.0039	1	02/27/18 10:07	02/28/18 20:08	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:07	02/28/18 20:08	7440-43-9		
Calcium	<b>0.040J</b>	mg/L	0.50	0.014	1	02/27/18 10:07	02/28/18 20:08	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	02/27/18 10:07	02/28/18 20:08	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	02/27/18 10:07	02/28/18 20:08	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	02/27/18 10:07	02/28/18 20:08	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	02/27/18 10:07	02/28/18 20:08	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:07	02/28/18 20:08	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:07	02/28/18 20:08	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	02/27/18 10:07	02/28/18 20:08	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<b>0.000063J</b>	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 17:40	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>25.02</b>	mg/L	25.0	25.0	1		02/27/18 18:50			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>0.12J</b>	mg/L	0.25	0.024	1		02/28/18 23:14	16887-00-6	B	
Fluoride	ND	mg/L	0.30	0.029	1		02/28/18 23:14	16984-48-8		
Sulfate	<b>0.059J</b>	mg/L	1.0	0.017	1		02/28/18 23:14	14808-79-8		

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262141

Sample: <b>FB-01</b>		Lab ID: <b>262141003</b>		Collected: 02/21/18 08:05		Received: 02/22/18 09:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	02/27/18 10:07	02/28/18 20:14	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	02/27/18 10:07	02/28/18 20:14	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	02/27/18 10:07	02/28/18 20:14	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	02/27/18 10:07	02/28/18 20:14	7440-41-7	
Boron	<b>0.0092J</b>	mg/L	0.040	0.0039	1	02/27/18 10:07	02/28/18 20:14	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:07	02/28/18 20:14	7440-43-9	
Calcium	<b>0.037J</b>	mg/L	0.50	0.014	1	02/27/18 10:07	02/28/18 20:14	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	02/27/18 10:07	02/28/18 20:14	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	02/27/18 10:07	02/28/18 20:14	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	02/27/18 10:07	02/28/18 20:14	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	02/27/18 10:07	02/28/18 20:14	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:07	02/28/18 20:14	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:07	02/28/18 20:14	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/27/18 10:07	02/28/18 20:14	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	<b>0.000055J</b>	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 17:43	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>25.02</b>	mg/L	25.0	25.0	1		02/27/18 18:50		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>0.049J</b>	mg/L	0.25	0.024	1		02/28/18 23:35	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		02/28/18 23:35	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		02/28/18 23:35	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262141

Sample: PZ-16		Lab ID: 262141005		Collected: 02/21/18 09:00		Received: 02/22/18 09:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	02/27/18 10:07	02/28/18 20:31	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	02/27/18 10:07	02/28/18 20:31	7440-38-2	
Barium	<b>0.046</b>	mg/L	0.010	0.00078	1	02/27/18 10:07	02/28/18 20:31	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	02/27/18 10:07	02/28/18 20:31	7440-41-7	
Boron	<b>0.21</b>	mg/L	0.040	0.0039	1	02/27/18 10:07	02/28/18 20:31	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:07	02/28/18 20:31	7440-43-9	
Calcium	<b>81.8</b>	mg/L	25.0	0.69	50	02/27/18 10:07	02/28/18 20:37	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	02/27/18 10:07	02/28/18 20:31	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	02/27/18 10:07	02/28/18 20:31	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	02/27/18 10:07	02/28/18 20:31	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	02/27/18 10:07	02/28/18 20:31	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:07	02/28/18 20:31	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:07	02/28/18 20:31	7782-49-2	
Thallium	<b>0.00018J</b>	mg/L	0.0010	0.00014	1	02/27/18 10:07	02/28/18 20:31	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	<b>0.000068J</b>	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 17:16	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>285</b>	mg/L	25.0	25.0	1		02/27/18 18:50		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>7.3</b>	mg/L	0.25	0.024	1		02/28/18 23:55	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		02/28/18 23:55	16984-48-8	
Sulfate	<b>48.2</b>	mg/L	5.0	0.085	5		03/06/18 05:19	14808-79-8	

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262141

Sample: PZ-25		Lab ID: 262141007		Collected: 02/21/18 11:25		Received: 02/22/18 09:55		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	02/27/18 10:07	02/28/18 20:42	7440-36-0		
Arsenic	<b>0.00071J</b>	mg/L	0.0050	0.00057	1	02/27/18 10:07	02/28/18 20:42	7440-38-2		
Barium	<b>0.11</b>	mg/L	0.010	0.00078	1	02/27/18 10:07	02/28/18 20:42	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	02/27/18 10:07	02/28/18 20:42	7440-41-7		
Boron	<b>0.22</b>	mg/L	0.040	0.0039	1	02/27/18 10:07	02/28/18 20:42	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:07	02/28/18 20:42	7440-43-9		
Calcium	<b>93.9</b>	mg/L	25.0	0.69	50	02/27/18 10:07	02/28/18 20:48	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	02/27/18 10:07	02/28/18 20:42	7440-47-3		
Cobalt	<b>0.00075J</b>	mg/L	0.010	0.00052	1	02/27/18 10:07	02/28/18 20:42	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	02/27/18 10:07	02/28/18 20:42	7439-92-1		
Lithium	<b>0.0063J</b>	mg/L	0.050	0.00097	1	02/27/18 10:07	02/28/18 20:42	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:07	02/28/18 20:42	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:07	02/28/18 20:42	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	02/27/18 10:07	02/28/18 20:42	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<b>0.000053J</b>	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 17:45	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>297</b>	mg/L	25.0	25.0	1		02/27/18 18:50			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>2.9</b>	mg/L	0.25	0.024	1		03/01/18 01:39	16887-00-6		
Fluoride	<b>0.29J</b>	mg/L	0.30	0.029	1		03/01/18 01:39	16984-48-8		
Sulfate	<b>46.8</b>	mg/L	5.0	0.085	5		03/06/18 05:40	14808-79-8		

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

**Sample: PZ-7D**      **Lab ID: 262141009**      Collected: 02/21/18 12:45      Received: 02/22/18 09:55      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b> Analytical Method: EPA 6020B      Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.0030	0.00078	1	02/27/18 10:07	02/28/18 20:54	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	02/27/18 10:07	02/28/18 20:54	7440-38-2	
Barium	<b>0.0086J</b>	mg/L	0.010	0.00078	1	02/27/18 10:07	02/28/18 20:54	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	02/27/18 10:07	02/28/18 20:54	7440-41-7	
Boron	<b>0.29</b>	mg/L	0.040	0.0039	1	02/27/18 10:07	02/28/18 20:54	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:07	02/28/18 20:54	7440-43-9	
Calcium	<b>118</b>	mg/L	25.0	0.69	50	02/27/18 10:07	02/28/18 20:59	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	02/27/18 10:07	02/28/18 20:54	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	02/27/18 10:07	02/28/18 20:54	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	02/27/18 10:07	02/28/18 20:54	7439-92-1	
Lithium	<b>0.0034J</b>	mg/L	0.050	0.00097	1	02/27/18 10:07	02/28/18 20:54	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:07	02/28/18 20:54	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:07	02/28/18 20:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/27/18 10:07	02/28/18 20:54	7440-28-0	
<b>7470 Mercury</b> Analytical Method: EPA 7470A      Preparation Method: EPA 7470A									
Mercury	<b>0.000053J</b>	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 17:47	7439-97-6	
<b>2540C Total Dissolved Solids</b> Analytical Method: SM 2540C									
Total Dissolved Solids	<b>367</b>	mg/L	25.0	25.0	1		02/27/18 18:50		
<b>300.0 IC Anions 28 Days</b> Analytical Method: EPA 300.0									
Chloride	<b>7.6</b>	mg/L	0.25	0.024	1		03/01/18 01:59	16887-00-6	
Fluoride	<b>0.045J</b>	mg/L	0.30	0.029	1		03/01/18 01:59	16984-48-8	
Sulfate	<b>52.1</b>	mg/L	5.0	0.085	5		03/06/18 06:01	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

Sample: PZ-18		Lab ID: 262141011		Collected: 02/21/18 14:03		Received: 02/22/18 09:55		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	02/27/18 10:07	02/28/18 21:05	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	02/27/18 10:07	02/28/18 21:05	7440-38-2		
Barium	<b>0.029</b>	mg/L	0.010	0.00078	1	02/27/18 10:07	02/28/18 21:05	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	02/27/18 10:07	02/28/18 21:05	7440-41-7		
Boron	<b>0.33</b>	mg/L	0.040	0.0039	1	02/27/18 10:07	02/28/18 21:05	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:07	02/28/18 21:05	7440-43-9		
Calcium	<b>118</b>	mg/L	25.0	0.69	50	02/27/18 10:07	02/28/18 21:11	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	02/27/18 10:07	02/28/18 21:05	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	02/27/18 10:07	02/28/18 21:05	7440-48-4		
Lead	<b>0.00043J</b>	mg/L	0.0050	0.00027	1	02/27/18 10:07	02/28/18 21:05	7439-92-1		
Lithium	<b>0.0021J</b>	mg/L	0.050	0.00097	1	02/27/18 10:07	02/28/18 21:05	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:07	02/28/18 21:05	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:07	02/28/18 21:05	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	02/27/18 10:07	02/28/18 21:05	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<b>0.000057J</b>	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 17:50	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>409</b>	mg/L	25.0	25.0	1		02/27/18 18:50			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>7.1</b>	mg/L	0.25	0.024	1		03/01/18 02:41	16887-00-6		
Fluoride	<b>0.086J</b>	mg/L	0.30	0.029	1		03/01/18 02:41	16984-48-8		
Sulfate	<b>91.8</b>	mg/L	10.0	0.17	10		03/06/18 06:21	14808-79-8		

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262141

Sample: PZ-15		Lab ID: 262141013		Collected: 02/21/18 10:07		Received: 02/22/18 09:55		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	02/27/18 10:07	02/28/18 21:16	7440-36-0		
Arsenic	<b>0.00089J</b>	mg/L	0.0050	0.00057	1	02/27/18 10:07	02/28/18 21:16	7440-38-2		
Barium	<b>0.076</b>	mg/L	0.010	0.00078	1	02/27/18 10:07	02/28/18 21:16	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	02/27/18 10:07	02/28/18 21:16	7440-41-7		
Boron	<b>0.21</b>	mg/L	0.040	0.0039	1	02/27/18 10:07	02/28/18 21:16	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:07	02/28/18 21:16	7440-43-9		
Calcium	<b>89.0</b>	mg/L	25.0	0.69	50	02/27/18 10:07	02/28/18 21:22	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	02/27/18 10:07	02/28/18 21:16	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	02/27/18 10:07	02/28/18 21:16	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	02/27/18 10:07	02/28/18 21:16	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	02/27/18 10:07	02/28/18 21:16	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:07	02/28/18 21:16	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:07	02/28/18 21:16	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	02/27/18 10:07	02/28/18 21:16	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<b>0.000097J</b>	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 17:52	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>312</b>	mg/L	25.0	25.0	1		02/27/18 18:50			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>7.2</b>	mg/L	0.25	0.024	1		03/01/18 03:01	16887-00-6		
Fluoride	<b>0.093J</b>	mg/L	0.30	0.029	1		03/01/18 03:01	16984-48-8		
Sulfate	<b>72.2</b>	mg/L	10.0	0.17	10		03/06/18 06:42	14808-79-8		

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262141

Sample: PZ-17		Lab ID: 262141015		Collected: 02/21/18 12:22		Received: 02/22/18 09:55		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	02/27/18 10:07	02/28/18 21:39	7440-36-0		
Arsenic	<b>0.00072J</b>	mg/L	0.0050	0.00057	1	02/27/18 10:07	02/28/18 21:39	7440-38-2		
Barium	<b>0.073</b>	mg/L	0.010	0.00078	1	02/27/18 10:07	02/28/18 21:39	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	02/27/18 10:07	02/28/18 21:39	7440-41-7		
Boron	<b>0.29</b>	mg/L	0.040	0.0039	1	02/27/18 10:07	02/28/18 21:39	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:07	02/28/18 21:39	7440-43-9		
Calcium	<b>107</b>	mg/L	25.0	0.69	50	02/27/18 10:07	02/28/18 21:45	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	02/27/18 10:07	02/28/18 21:39	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	02/27/18 10:07	02/28/18 21:39	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	02/27/18 10:07	02/28/18 21:39	7439-92-1		
Lithium	<b>0.0022J</b>	mg/L	0.050	0.00097	1	02/27/18 10:07	02/28/18 21:39	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:07	02/28/18 21:39	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:07	02/28/18 21:39	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	02/27/18 10:07	02/28/18 21:39	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<b>0.000086J</b>	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 17:54	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>411</b>	mg/L	25.0	25.0	1		02/27/18 18:50			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>7.4</b>	mg/L	0.25	0.024	1		03/01/18 03:22	16887-00-6		
Fluoride	<b>0.24J</b>	mg/L	0.30	0.029	1		03/01/18 03:22	16984-48-8		
Sulfate	<b>98.8</b>	mg/L	10.0	0.17	10		03/06/18 08:28	14808-79-8		

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

Sample: PZ-33		Lab ID: 262141017		Collected: 02/21/18 15:05		Received: 02/22/18 09:55		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	02/27/18 10:07	02/28/18 21:51	7440-36-0		
Arsenic	<b>0.00094J</b>	mg/L	0.0050	0.00057	1	02/27/18 10:07	02/28/18 21:51	7440-38-2		
Barium	<b>0.085</b>	mg/L	0.010	0.00078	1	02/27/18 10:07	02/28/18 21:51	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	02/27/18 10:07	02/28/18 21:51	7440-41-7		
Boron	<b>0.36</b>	mg/L	0.040	0.0039	1	02/27/18 10:07	02/28/18 21:51	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:07	02/28/18 21:51	7440-43-9		
Calcium	<b>122</b>	mg/L	25.0	0.69	50	02/27/18 10:07	02/28/18 21:57	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	02/27/18 10:07	02/28/18 21:51	7440-47-3		
Cobalt	<b>0.0012J</b>	mg/L	0.010	0.00052	1	02/27/18 10:07	02/28/18 21:51	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	02/27/18 10:07	02/28/18 21:51	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	02/27/18 10:07	02/28/18 21:51	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:07	02/28/18 21:51	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:07	02/28/18 21:51	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	02/27/18 10:07	02/28/18 21:51	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<b>0.000043J</b>	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 17:57	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>435</b>	mg/L	25.0	25.0	1		02/27/18 18:50			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>6.9</b>	mg/L	0.25	0.024	1		03/01/18 03:43	16887-00-6		
Fluoride	<b>0.039J</b>	mg/L	0.30	0.029	1		03/01/18 03:43	16984-48-8		
Sulfate	<b>93.6</b>	mg/L	10.0	0.17	10		03/06/18 08:49	14808-79-8		

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

**Sample: Dup-02**      **Lab ID: 262141019**      Collected: 02/21/18 00:00      Received: 02/22/18 09:55      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b> Analytical Method: EPA 6020B      Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.0030	0.00078	1	02/27/18 10:07	02/28/18 22:02	7440-36-0	
Arsenic	<b>0.00095J</b>	mg/L	0.0050	0.00057	1	02/27/18 10:07	02/28/18 22:02	7440-38-2	
Barium	<b>0.084</b>	mg/L	0.010	0.00078	1	02/27/18 10:07	02/28/18 22:02	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	02/27/18 10:07	02/28/18 22:02	7440-41-7	
Boron	<b>0.37</b>	mg/L	0.040	0.0039	1	02/27/18 10:07	02/28/18 22:02	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:07	02/28/18 22:02	7440-43-9	
Calcium	<b>127</b>	mg/L	25.0	0.69	50	02/27/18 10:07	02/28/18 22:08	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	02/27/18 10:07	02/28/18 22:02	7440-47-3	
Cobalt	<b>0.0011J</b>	mg/L	0.010	0.00052	1	02/27/18 10:07	02/28/18 22:02	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	02/27/18 10:07	02/28/18 22:02	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	02/27/18 10:07	02/28/18 22:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:07	02/28/18 22:02	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:07	02/28/18 22:02	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/27/18 10:07	02/28/18 22:02	7440-28-0	
<b>7470 Mercury</b> Analytical Method: EPA 7470A      Preparation Method: EPA 7470A									
Mercury	ND	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 17:59	7439-97-6	
<b>2540C Total Dissolved Solids</b> Analytical Method: SM 2540C									
Total Dissolved Solids	<b>426</b>	mg/L	25.0	25.0	1		02/28/18 09:52		
<b>300.0 IC Anions 28 Days</b> Analytical Method: EPA 300.0									
Chloride	<b>6.8</b>	mg/L	0.25	0.024	1		03/01/18 04:03	16887-00-6	
Fluoride	<b>0.048J</b>	mg/L	0.30	0.029	1		03/01/18 04:03	16984-48-8	
Sulfate	<b>91.6</b>	mg/L	10.0	0.17	10		03/06/18 09:11	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262141

Sample: Dup-01		Lab ID: 262141021		Collected: 02/21/18 00:00		Received: 02/22/18 09:55		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	02/27/18 10:07	02/28/18 22:14	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	02/27/18 10:07	02/28/18 22:14	7440-38-2		
Barium	<b>0.058</b>	mg/L	0.010	0.00078	1	02/27/18 10:07	02/28/18 22:14	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	02/27/18 10:07	02/28/18 22:14	7440-41-7		
Boron	<b>0.62</b>	mg/L	0.040	0.0039	1	02/27/18 10:07	02/28/18 22:14	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:07	02/28/18 22:14	7440-43-9		
Calcium	<b>144</b>	mg/L	25.0	0.69	50	02/27/18 10:07	02/28/18 22:19	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	02/27/18 10:07	02/28/18 22:14	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	02/27/18 10:07	02/28/18 22:14	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	02/27/18 10:07	02/28/18 22:14	7439-92-1		
Lithium	<b>0.0082J</b>	mg/L	0.050	0.00097	1	02/27/18 10:07	02/28/18 22:14	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:07	02/28/18 22:14	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:07	02/28/18 22:14	7782-49-2		
Thallium	<b>0.00050J</b>	mg/L	0.0010	0.00014	1	02/27/18 10:07	02/28/18 22:14	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<b>0.000063J</b>	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 18:01	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>539</b>	mg/L	25.0	25.0	1		02/28/18 09:52			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>7.7</b>	mg/L	0.25	0.024	1		03/01/18 04:24	16887-00-6		
Fluoride	<b>0.42</b>	mg/L	0.30	0.029	1		03/01/18 04:24	16984-48-8		
Sulfate	<b>82.7</b>	mg/L	10.0	0.17	10		03/06/18 09:32	14808-79-8		

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

Sample: PZ-19		Lab ID: 262141023		Collected: 02/21/18 15:45		Received: 02/22/18 09:55		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	02/27/18 10:07	02/28/18 22:25	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	02/27/18 10:07	02/28/18 22:25	7440-38-2	
Barium	<b>0.058</b>	mg/L	0.010	0.00078	1	02/27/18 10:07	02/28/18 22:25	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	02/27/18 10:07	02/28/18 22:25	7440-41-7	
Boron	<b>0.60</b>	mg/L	0.040	0.0039	1	02/27/18 10:07	02/28/18 22:25	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	02/27/18 10:07	02/28/18 22:25	7440-43-9	
Calcium	<b>145</b>	mg/L	25.0	0.69	50	02/27/18 10:07	02/28/18 22:31	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	02/27/18 10:07	02/28/18 22:25	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	02/27/18 10:07	02/28/18 22:25	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	02/27/18 10:07	02/28/18 22:25	7439-92-1	
Lithium	<b>0.0085J</b>	mg/L	0.050	0.00097	1	02/27/18 10:07	02/28/18 22:25	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	02/27/18 10:07	02/28/18 22:25	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	02/27/18 10:07	02/28/18 22:25	7782-49-2	
Thallium	<b>0.00049J</b>	mg/L	0.0010	0.00014	1	02/27/18 10:07	02/28/18 22:25	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	<b>0.000045J</b>	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 18:09	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>500</b>	mg/L	50.0	50.0	1		02/28/18 09:52		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>7.6</b>	mg/L	0.25	0.024	1		03/01/18 04:44	16887-00-6	
Fluoride	<b>0.37</b>	mg/L	0.30	0.029	1		03/01/18 04:44	16984-48-8	
Sulfate	<b>84.5</b>	mg/L	10.0	0.17	10		03/06/18 09:53	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262141

QC Batch: 1878 Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury  
Associated Lab Samples: 262141001, 262141003, 262141005, 262141007, 262141009, 262141011, 262141013, 262141015, 262141017, 262141019, 262141021, 262141023

METHOD BLANK: 10581 Matrix: Water  
Associated Lab Samples: 262141001, 262141003, 262141005, 262141007, 262141009, 262141011, 262141013, 262141015, 262141017, 262141019, 262141021, 262141023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	03/05/18 17:12	

LABORATORY CONTROL SAMPLE: 10582

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0025	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 11116 11117

Parameter	Units	262141005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	0.000068J	.0025	.0025	0.0025	0.0025	97	98	75-125	1	20	

SAMPLE DUPLICATE: 11114

Parameter	Units	261482004 Result	Dup Result	RPD	Max RPD	Qualifiers
Mercury	mg/L	0.70 ug/L	0.00062	12	20	H1

SAMPLE DUPLICATE: 11115

Parameter	Units	261482006 Result	Dup Result	RPD	Max RPD	Qualifiers
Mercury	mg/L	0.44 ug/L	0.00045J	3	20	H1

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

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QC Batch: 1651 Analysis Method: EPA 6020B  
 QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
 Associated Lab Samples: 262141001, 262141003, 262141005, 262141007, 262141009, 262141011, 262141013, 262141015, 262141017, 262141019, 262141021, 262141023

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METHOD BLANK: 9601 Matrix: Water  
 Associated Lab Samples: 262141001, 262141003, 262141005, 262141007, 262141009, 262141011, 262141013, 262141015, 262141017, 262141019, 262141021, 262141023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	02/28/18 18:25	
Arsenic	mg/L	ND	0.0050	0.00057	02/28/18 18:25	
Barium	mg/L	ND	0.010	0.00078	02/28/18 18:25	
Beryllium	mg/L	ND	0.0030	0.000050	02/28/18 18:25	
Boron	mg/L	ND	0.040	0.0039	02/28/18 18:25	
Cadmium	mg/L	ND	0.0010	0.000093	02/28/18 18:25	
Calcium	mg/L	ND	0.50	0.014	02/28/18 18:25	
Chromium	mg/L	ND	0.010	0.0016	02/28/18 18:25	
Cobalt	mg/L	ND	0.010	0.00052	02/28/18 18:25	
Lead	mg/L	ND	0.0050	0.00027	02/28/18 18:25	
Lithium	mg/L	ND	0.050	0.00097	02/28/18 18:25	
Molybdenum	mg/L	ND	0.010	0.0019	02/28/18 18:25	
Selenium	mg/L	ND	0.010	0.0014	02/28/18 18:25	
Thallium	mg/L	ND	0.0010	0.00014	02/28/18 18:25	

LABORATORY CONTROL SAMPLE: 9602

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	103	80-120	
Arsenic	mg/L	.1	0.10	100	80-120	
Barium	mg/L	.1	0.10	100	80-120	
Beryllium	mg/L	.1	0.11	107	80-120	
Boron	mg/L	1	1.0	105	80-120	
Cadmium	mg/L	.1	0.10	102	80-120	
Calcium	mg/L	1	1.0	101	80-120	
Chromium	mg/L	.1	0.10	103	80-120	
Cobalt	mg/L	.1	0.10	102	80-120	
Lead	mg/L	.1	0.10	102	80-120	
Lithium	mg/L	.1	0.11	107	80-120	
Molybdenum	mg/L	.1	0.11	106	80-120	
Selenium	mg/L	.1	0.10	102	80-120	
Thallium	mg/L	.1	0.10	103	80-120	

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

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 9687		9688		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		262138001 Result	MS Spike Conc.	MSD Spike Conc.									
Antimony	mg/L	ND	.1	.1	0.11	0.11	112	113	75-125	1	20		
Arsenic	mg/L	0.96J ug/L	.1	.1	0.11	0.11	110	111	75-125	1	20		
Barium	mg/L	25.5 ug/L	.1	.1	0.13	0.13	107	109	75-125	1	20		
Beryllium	mg/L	5.3 ug/L	.1	.1	0.091	0.089	86	84	75-125	2	20		
Boron	mg/L	18600 ug/L	1	1	19.3	19.6	69	103	75-125	2	20	M6	
Cadmium	mg/L	2.9 ug/L	.1	.1	0.10	0.11	102	105	75-125	3	20		
Calcium	mg/L	184000 ug/L	1	1	187	188	331	354	75-125	0	20	M6	
Chromium	mg/L	ND	.1	.1	0.11	0.11	108	110	75-125	2	20		
Cobalt	mg/L	ND	.1	.1	0.10	0.11	104	106	75-125	2	20		
Lead	mg/L	ND	.1	.1	0.096	0.097	96	97	75-125	1	20		
Lithium	mg/L	8.2J ug/L	.1	.1	0.093	0.093	85	85	75-125	0	20		
Molybdenum	mg/L	ND	.1	.1	0.11	0.11	115	114	75-125	0	20		
Selenium	mg/L	253 ug/L	.1	.1	0.38	0.38	124	125	75-125	0	20		
Thallium	mg/L	ND	.1	.1	0.097	0.098	97	98	75-125	0	20		

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262141

QC Batch: 399936 Analysis Method: SM 2540C  
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids  
Associated Lab Samples: 262141001, 262141003, 262141005, 262141007, 262141009, 262141011, 262141013, 262141015, 262141017

METHOD BLANK: 2218070 Matrix: Water  
Associated Lab Samples: 262141001, 262141003, 262141005, 262141007, 262141009, 262141011, 262141013, 262141015, 262141017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	25.02	25.0	25.0	02/27/18 18:50	

LABORATORY CONTROL SAMPLE: 2218071

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	234	94	90-110	

SAMPLE DUPLICATE: 2218072

Parameter	Units	92374543042 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	113	119	5	5	

SAMPLE DUPLICATE: 2218073

Parameter	Units	262140007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	25.02		5	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

QC Batch: 399992

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 262141019, 262141021, 262141023

METHOD BLANK: 2218282

Matrix: Water

Associated Lab Samples: 262141019, 262141021, 262141023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	25.02	25.0	25.0	02/28/18 09:52	

LABORATORY CONTROL SAMPLE: 2218283

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	250	100	90-110	

SAMPLE DUPLICATE: 2218284

Parameter	Units	262141019 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	426	436	2	5	

SAMPLE DUPLICATE: 2218285

Parameter	Units	92374543067 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	28.0	63.0	77	5	D6

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262141

QC Batch: 1766 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 262141001, 262141003, 262141005, 262141007, 262141009, 262141011, 262141013, 262141015, 262141017, 262141019, 262141021, 262141023

METHOD BLANK: 10018 Matrix: Water  
Associated Lab Samples: 262141001, 262141003, 262141005, 262141007, 262141009, 262141011, 262141013, 262141015, 262141017, 262141019, 262141021, 262141023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.26	0.25	0.024	02/28/18 19:27	
Fluoride	mg/L	ND	0.30	0.029	02/28/18 19:27	
Sulfate	mg/L	ND	1.0	0.017	02/28/18 19:27	

LABORATORY CONTROL SAMPLE: 10019

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.3	103	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: 10020 10021

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		262138001 Result	Spike Conc.	Spike Conc.	MS Result						
Chloride	mg/L	6.2	10	10	16.0	15.9	97	96	90-110	1	15
Fluoride	mg/L	ND	10	10	12.1	12.0	121	120	90-110	1	15 M1
Sulfate	mg/L	905	10	10	376	376	-5280	-5290	90-110	0	15 E

MATRIX SPIKE SAMPLE: 10022

Parameter	Units	262140001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	6.7	10	16.1	94	90-110	
Fluoride	mg/L	ND	10	10.4	104	90-110	
Sulfate	mg/L	46.7	10	51.5	48	90-110 E	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

**Sample: EB-01**      **Lab ID: 262141002**      Collected: 02/21/18 07:50      Received: 02/22/18 09:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.270 ± 0.227 (0.399)</b> <b>C:83% T:NA</b>	pCi/L	03/14/18 10:13	13982-63-3	
Radium-228	EPA 9320	<b>0.523 ± 0.640 (1.36)</b> <b>C:76% T:77%</b>	pCi/L	03/19/18 17:14	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.793 ± 0.867 (1.76)</b>	pCi/L	03/21/18 13:40	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

**Sample: FB-01**      **Lab ID: 262141004**      Collected: 02/21/18 08:05      Received: 02/22/18 09:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.329 ± 0.296 (0.573)</b> <b>C:78% T:NA</b>	pCi/L	03/14/18 10:14	13982-63-3	
Radium-228	EPA 9320	<b>0.451 ± 0.621 (1.33)</b> <b>C:68% T:85%</b>	pCi/L	03/19/18 17:14	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.780 ± 0.917 (1.90)</b>	pCi/L	03/21/18 13:40	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

**Sample: PZ-16**      **Lab ID: 262141006**      Collected: 02/21/18 09:00      Received: 02/22/18 09:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.302 ± 0.265 (0.483)</b> C:73% T:NA	pCi/L	03/14/18 10:16	13982-63-3	
Radium-228	EPA 9320	<b>0.0708 ± 0.556 (1.26)</b> C:71% T:82%	pCi/L	03/19/18 17:14	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.373 ± 0.821 (1.74)</b>	pCi/L	03/21/18 13:40	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

**Sample: PZ-25**      **Lab ID: 262141008**      Collected: 02/21/18 11:25      Received: 02/22/18 09:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.326 ± 0.287 (0.513)</b> <b>C:64% T:NA</b>	pCi/L	03/14/18 10:14	13982-63-3	
Radium-228	EPA 9320	<b>0.537 ± 0.432 (0.864)</b> <b>C:73% T:93%</b>	pCi/L	03/19/18 17:17	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.863 ± 0.719 (1.38)</b>	pCi/L	03/21/18 13:40	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

**Sample: PZ-7D**      **Lab ID: 262141010**      Collected: 02/21/18 12:45      Received: 02/22/18 09:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.204 ± 0.232 (0.454)</b> <b>C:68% T:NA</b>	pCi/L	03/14/18 10:14	13982-63-3	
Radium-228	EPA 9320	<b>0.300 ± 0.483 (1.05)</b> <b>C:65% T:83%</b>	pCi/L	03/19/18 17:17	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.504 ± 0.715 (1.50)</b>	pCi/L	03/21/18 13:40	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

**Sample: PZ-18**      **Lab ID: 262141012**      Collected: 02/21/18 14:03      Received: 02/22/18 09:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.175 ± 0.251 (0.543)</b> <b>C:76% T:NA</b>	pCi/L	03/14/18 10:14	13982-63-3	
Radium-228	EPA 9320	<b>0.561 ± 0.518 (1.06)</b> <b>C:69% T:84%</b>	pCi/L	03/19/18 17:17	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.736 ± 0.769 (1.60)</b>	pCi/L	03/21/18 13:40	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

**Sample: PZ-15**      **Lab ID: 262141014**      Collected: 02/21/18 10:07      Received: 02/22/18 09:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.428 ± 0.277 (0.399)</b> C:79% T:NA	pCi/L	03/14/18 10:14	13982-63-3	
Radium-228	EPA 9320	<b>0.414 ± 0.450 (0.940)</b> C:75% T:81%	pCi/L	03/19/18 17:17	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.842 ± 0.727 (1.34)</b>	pCi/L	03/21/18 13:40	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

**Sample: PZ-17**      **Lab ID: 262141016**      Collected: 02/21/18 12:22      Received: 02/22/18 09:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.450 ± 0.304 (0.477)</b> <b>C:69% T:NA</b>	pCi/L	03/14/18 10:14	13982-63-3	
Radium-228	EPA 9320	<b>0.951 ± 0.509 (0.905)</b> <b>C:69% T:83%</b>	pCi/L	03/19/18 17:17	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.40 ± 0.813 (1.38)</b>	pCi/L	03/21/18 13:40	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

**Sample: PZ-33**      **Lab ID: 262141018**      Collected: 02/21/18 15:05      Received: 02/22/18 09:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.269 ± 0.210 (0.344)</b> C:86% T:NA	pCi/L	03/14/18 10:14	13982-63-3	
Radium-228	EPA 9320	<b>0.783 ± 0.412 (0.722)</b> C:75% T:87%	pCi/L	03/19/18 15:48	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.05 ± 0.622 (1.07)</b>	pCi/L	03/21/18 13:40	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

**Sample: Dup-02**      **Lab ID: 262141020**      Collected: 02/21/18 00:00      Received: 02/22/18 09:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.432 ± 0.365 (0.691)</b> <b>C:55% T:NA</b>	pCi/L	03/14/18 10:15	13982-63-3	
Radium-228	EPA 9320	<b>0.260 ± 0.316 (0.667)</b> <b>C:79% T:83%</b>	pCi/L	03/19/18 15:48	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.692 ± 0.681 (1.36)</b>	pCi/L	03/21/18 13:40	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

**Sample: Dup-01**      **Lab ID: 262141022**      Collected: 02/21/18 00:00      Received: 02/22/18 09:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.369 ± 0.266 (0.436)</b> <b>C:81% T:NA</b>	pCi/L	03/14/18 10:15	13982-63-3	
Radium-228	EPA 9320	<b>0.473 ± 0.354 (0.693)</b> <b>C:76% T:94%</b>	pCi/L	03/19/18 15:48	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.842 ± 0.620 (1.13)</b>	pCi/L	03/21/18 13:40	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

**Sample: PZ-19**      **Lab ID: 262141024**      Collected: 02/21/18 15:45      Received: 02/22/18 09:55      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.584 ± 0.302 (0.385)</b> C:84% T:NA	pCi/L	03/14/18 10:15	13982-63-3	
Radium-228	EPA 9320	<b>0.444 ± 0.353 (0.696)</b> C:77% T:84%	pCi/L	03/19/18 15:48	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.03 ± 0.655 (1.08)</b>	pCi/L	03/21/18 13:40	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

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QC Batch:	290898	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	262141002, 262141004, 262141006, 262141008, 262141010, 262141012, 262141014, 262141016, 262141018, 262141020, 262141022, 262141024		

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METHOD BLANK:	1424477	Matrix:	Water
Associated Lab Samples:	262141002, 262141004, 262141006, 262141008, 262141010, 262141012, 262141014, 262141016, 262141018, 262141020, 262141022, 262141024		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.524 ± 0.423 (0.845) C:78% T:75%	pCi/L	03/19/18 11:52	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 262141

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QC Batch:	290896	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	262141002, 262141004, 262141006, 262141008, 262141010, 262141012, 262141014, 262141016, 262141018, 262141020, 262141022, 262141024		

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METHOD BLANK:	1424475	Matrix:	Water
Associated Lab Samples:	262141002, 262141004, 262141006, 262141008, 262141010, 262141012, 262141014, 262141016, 262141018, 262141020, 262141022, 262141024		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.418 ± 0.284 (0.409) C:64% T:NA	pCi/L	03/14/18 10:13	

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262141

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.  
ND - Not Detected at or above adjusted reporting limit.  
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.  
MDL - Adjusted Method Detection Limit.  
PQL - Practical Quantitation Limit.  
RL - Reporting Limit.  
S - Surrogate  
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
Act - Activity  
Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).  
Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)  
(MDC) - Minimum Detectable Concentration  
Trac - Tracer Recovery (%)  
Carr - Carrier Recovery (%)  
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.  
TNI - The NELAC Institute.

### LABORATORIES

PASI-A Pace Analytical Services - Asheville  
PASI-GA Pace Analytical Services - Atlanta, GA  
PASI-PA Pace Analytical Services - Greensburg

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.  
D6 The precision between the sample and sample duplicate exceeded laboratory control limits.  
E Analyte concentration exceeded the calibration range. The reported result is estimated.  
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.  
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 Mitchell Ash Ponds

Pace Project No.: 262141

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
262141001	EB-01	EPA 3005A	1651	EPA 6020B	1802
262141003	FB-01	EPA 3005A	1651	EPA 6020B	1802
262141005	PZ-16	EPA 3005A	1651	EPA 6020B	1802
262141007	PZ-25	EPA 3005A	1651	EPA 6020B	1802
262141009	PZ-7D	EPA 3005A	1651	EPA 6020B	1802
262141011	PZ-18	EPA 3005A	1651	EPA 6020B	1802
262141013	PZ-15	EPA 3005A	1651	EPA 6020B	1802
262141015	PZ-17	EPA 3005A	1651	EPA 6020B	1802
262141017	PZ-33	EPA 3005A	1651	EPA 6020B	1802
262141019	Dup-02	EPA 3005A	1651	EPA 6020B	1802
262141021	Dup-01	EPA 3005A	1651	EPA 6020B	1802
262141023	PZ-19	EPA 3005A	1651	EPA 6020B	1802
262141001	EB-01	EPA 7470A	1878	EPA 7470A	2028
262141003	FB-01	EPA 7470A	1878	EPA 7470A	2028
262141005	PZ-16	EPA 7470A	1878	EPA 7470A	2028
262141007	PZ-25	EPA 7470A	1878	EPA 7470A	2028
262141009	PZ-7D	EPA 7470A	1878	EPA 7470A	2028
262141011	PZ-18	EPA 7470A	1878	EPA 7470A	2028
262141013	PZ-15	EPA 7470A	1878	EPA 7470A	2028
262141015	PZ-17	EPA 7470A	1878	EPA 7470A	2028
262141017	PZ-33	EPA 7470A	1878	EPA 7470A	2028
262141019	Dup-02	EPA 7470A	1878	EPA 7470A	2028
262141021	Dup-01	EPA 7470A	1878	EPA 7470A	2028
262141023	PZ-19	EPA 7470A	1878	EPA 7470A	2028
262141002	EB-01	EPA 9315	290896		
262141004	FB-01	EPA 9315	290896		
262141006	PZ-16	EPA 9315	290896		
262141008	PZ-25	EPA 9315	290896		
262141010	PZ-7D	EPA 9315	290896		
262141012	PZ-18	EPA 9315	290896		
262141014	PZ-15	EPA 9315	290896		
262141016	PZ-17	EPA 9315	290896		
262141018	PZ-33	EPA 9315	290896		
262141020	Dup-02	EPA 9315	290896		
262141022	Dup-01	EPA 9315	290896		
262141024	PZ-19	EPA 9315	290896		
262141002	EB-01	EPA 9320	290898		
262141004	FB-01	EPA 9320	290898		
262141006	PZ-16	EPA 9320	290898		
262141008	PZ-25	EPA 9320	290898		
262141010	PZ-7D	EPA 9320	290898		
262141012	PZ-18	EPA 9320	290898		
262141014	PZ-15	EPA 9320	290898		
262141016	PZ-17	EPA 9320	290898		
262141018	PZ-33	EPA 9320	290898		
262141020	Dup-02	EPA 9320	290898		
262141022	Dup-01	EPA 9320	290898		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 262141

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
262141024	PZ-19	EPA 9320	290898		
262141002	EB-01	Total Radium Calculation	292016		
262141004	FB-01	Total Radium Calculation	292016		
262141006	PZ-16	Total Radium Calculation	292016		
262141008	PZ-25	Total Radium Calculation	292016		
262141010	PZ-7D	Total Radium Calculation	292016		
262141012	PZ-18	Total Radium Calculation	292016		
262141014	PZ-15	Total Radium Calculation	292016		
262141016	PZ-17	Total Radium Calculation	292016		
262141018	PZ-33	Total Radium Calculation	292016		
262141020	Dup-02	Total Radium Calculation	292016		
262141022	Dup-01	Total Radium Calculation	292016		
262141024	PZ-19	Total Radium Calculation	292016		
262141001	EB-01	SM 2540C	399936		
262141003	FB-01	SM 2540C	399936		
262141005	PZ-16	SM 2540C	399936		
262141007	PZ-25	SM 2540C	399936		
262141009	PZ-7D	SM 2540C	399936		
262141011	PZ-18	SM 2540C	399936		
262141013	PZ-15	SM 2540C	399936		
262141015	PZ-17	SM 2540C	399936		
262141017	PZ-33	SM 2540C	399936		
262141019	Dup-02	SM 2540C	399992		
262141021	Dup-01	SM 2540C	399992		
262141023	PZ-19	SM 2540C	399992		
262141001	EB-01	EPA 300.0	1766		
262141003	FB-01	EPA 300.0	1766		
262141005	PZ-16	EPA 300.0	1766		
262141007	PZ-25	EPA 300.0	1766		
262141009	PZ-7D	EPA 300.0	1766		
262141011	PZ-18	EPA 300.0	1766		
262141013	PZ-15	EPA 300.0	1766		
262141015	PZ-17	EPA 300.0	1766		
262141017	PZ-33	EPA 300.0	1766		
262141019	Dup-02	EPA 300.0	1766		
262141021	Dup-01	EPA 300.0	1766		
262141023	PZ-19	EPA 300.0	1766		

### REPORT OF LABORATORY ANALYSIS

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Couler # of

**CHAIN OF CUSTODY RECORD**

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

PAGE: 1 OF 1

CLIENT NAME: Georgia Power		CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		REPORT TO: Joju Abraham Heath McCorkle		CC: Maria Padilla PO #: GPC10684198		REQUESTED COMPLETION DATE: START DATE: JAT PROJECT NAME/STATE: Plant Mitchell Phase II CCR / GA		PROJECT #: 6122-16-0170.04	
Collection DATE	Collection TIME	MATRIX CODE	GRA B	SAMPLE IDENTIFICATION	CONTAINER TYPE: PRESERVATION: # of	P	P	P	P	P	P
22118	07:50	W	✓	FB-01	Meigs App. III & IV EPA 6020/7470 IC (Cl, F, SO4) EPA 300.0 TDS SM 2540C Rad m 228 & 228 SW-846 9315/9320	3	7	7	3	3	3
22118	08:05	W	✓	FB-01							


CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H <sub>2</sub> SO <sub>4</sub> , ≤6°C
G - CLEAR GLASS	3 - HNO <sub>3</sub>
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , ≤6°C
	7 - ≤6°C not frozen

MATRIX CODES:	REMARKS/ADDITIONAL INFORMATION
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

**NO#: 262141**



**262141**

Tracking #: 810796998300

ANALYSIS REQUESTED	RELINQUISHED BY:	DATE/TIME:
	<i>[Signature]</i>	2-21-18 / 17:00
	<i>[Signature]</i>	

SAMPLE SHIPPED VIA:	COURIER	CLIENT	OTHER	FS
UPS (FED-EX)	# of Coolers	Cooler ID:		

RECEIVED BY LAB:	RECEIVED BY:	DATE/TIME:	TEMPERATURE:	MIN:	MAX:
<i>[Signature]</i>	<i>[Signature]</i>	02/22/18 0955		0.3	

**CHAIN OF CUSTODY RECORD**

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PAGE: 1 OF 1

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

**REPORT TO:** Joju Abraham  
 CC: Mania Padilla  
 Heath McCorkle

**REQUESTED COMPLETION DATE:** NO RETURN  
 PO #: GPC10684198

**PROJECT NAME/STATE:** Plant 11, Techell Phase 2 CCR / GA

**PROJECT #:** 6122-16-0170.04

Collection DATE	Collection Time	MATRIX CODE	SAMPLE IDENTIFICATION				ANALYSIS REQUESTED	CONTAINER TYPE	CONTAINER #	CONTAINER PRESERVATION	LAB #	DATE/TIME	DATE/TIME	
			C	G	R	A								
2-21-18	09:00	GW	✓				6	4	SW-846 9315/9320	SW-846 9315/9320	4	2-21-18	09:00	12:45
2-21-18	11:25	GM	✓				4	2	SM 2540C	SM 2540C	2	2-21-18	11:25	12:45
2-21-18	12:45	GW	✓				4	2	EPA 6020/7470 Meigs App. III & IV IC (C.F. 904) EPA 300.0 TDS	EPA 6020/7470 Meigs App. III & IV IC (C.F. 904) EPA 300.0 TDS	2	2-21-18	12:45	12:45

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

**PRESERVATION**  
 1 - HCl, 56°C  
 2 - H<sub>2</sub>SO<sub>4</sub>, 56°C  
 3 - HNO<sub>3</sub>  
 4 - NaOH, 56°C  
 5 - NaOH/ZnAc, 56°C  
 6 - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, 56°C  
 7 - 56°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**  
 2X 1L for Radium 226 lab  
 QC

**WO#: 262141**

**PM: 8M Due Date: 03/01/18**  
**CLIENT: GAPower - CCR**

**LAB #:** FUK LAB USE ONLY

**Entered into LIMS:**  
**Tracking #:** 810796998274

**RECEIVED BY AND TITLE:** Jeryl Parker, J. R. Corp.  
**DATE/TIME:** 2-21-18 09:00 - 12:45

**RECEIVED BY:** [Signature]  
**DATE/TIME:** 2-21-18

**RECEIVED BY LAB:** [Signature]  
**DATE/TIME:** 02/22/18 09:55

**Temperature:** Min: 0.3 Max: [ ]

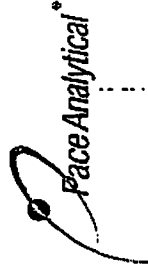
**SHIPMENT STATUS:** SAMPLE SHIPPED VIA: UPS  
 Intact: [ ] Broken: [ ]  
 Broken: [ ] Not Present: [ ]

**COURIER:** [ ]  
**CLIENT:** [ ]  
**OTHER:** [ ]  
**FS:** [ ]

**CHAIN OF CUSTODY RECORD**

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PAGE: 1 OF 1



<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-508-7239		<b>REPORT TO:</b> Joju Abraham Health McConrle PO #: GPC-10684198		<b>CC:</b> Maria Padilla Health McConrle	
<b>PROJECT #:</b> 6122-16-0170.04 Plan + Mitchell Phase II CCR / GA		<b>PROJECT NAME/STATE:</b>			
<b>REQUIRED COMPLETION DATE:</b> ORIGINAL TAT		<b>REPORT TO:</b>			
<b>RECEIVED BY LAB:</b> J. Adelman Temperature: 02/22/18 09:55 Min: Max: 0.3		<b>RECEIVED BY:</b> Field DATE/TIME: 2-21-18 10:07-14:00 DATE/TIME:		<b>RELINQUISHED BY:</b> [Signature] DATE/TIME: 2-21-18 16:45	
<b>SAMPLED BY AND TITLE:</b> Dorel Hawkins / Team		<b>RELINQUISHED BY:</b> [Signature]		<b>CLIENT:</b> GAPower - CCR	
<b>DATE/TIME:</b> 2-21-18 10:07-14:00		<b>DATE/TIME:</b> 2-21-18 16:45		<b>LAB #:</b> 8107 9689 8296	
<b>DATE/TIME:</b> 02/22/18 09:55		<b>DATE/TIME:</b>		<b>Entered into LIMS:</b>	
<b>DATE/TIME:</b>		<b>DATE/TIME:</b>		<b>Tracking #:</b>	
<b>DATE/TIME:</b>		<b>DATE/TIME:</b>		<b>Tracking #:</b>	

CONTAINER TYPE	ANALYSIS REQUESTED	DATE/TIME	CLIENT	OTHER	FS
P - PLASTIC	P				
A - AMBER GLASS	P				
G - CLEAR GLASS	P				
V - VOA VIAL	P				
S - STERILE	P				
O - OTHER	P				

CONTAINER TYPE	ANALYSIS REQUESTED	DATE/TIME	CLIENT	OTHER	FS
P - PLASTIC	P				
A - AMBER GLASS	P				
G - CLEAR GLASS	P				
V - VOA VIAL	P				
S - STERILE	P				
O - OTHER	P				

CONTAINER TYPE	ANALYSIS REQUESTED	DATE/TIME	CLIENT	OTHER	FS
P - PLASTIC	P				
A - AMBER GLASS	P				
G - CLEAR GLASS	P				
V - VOA VIAL	P				
S - STERILE	P				
O - OTHER	P				

CONTAINER TYPE	ANALYSIS REQUESTED	DATE/TIME	CLIENT	OTHER	FS
P - PLASTIC	P				
A - AMBER GLASS	P				
G - CLEAR GLASS	P				
V - VOA VIAL	P				
S - STERILE	P				
O - OTHER	P				

CONTAINER TYPE	ANALYSIS REQUESTED	DATE/TIME	CLIENT	OTHER	FS
P - PLASTIC	P				
A - AMBER GLASS	P				
G - CLEAR GLASS	P				
V - VOA VIAL	P				
S - STERILE	P				
O - OTHER	P				

CONTAINER TYPE	ANALYSIS REQUESTED	DATE/TIME	CLIENT	OTHER	FS
P - PLASTIC	P				
A - AMBER GLASS	P				
G - CLEAR GLASS	P				
V - VOA VIAL	P				
S - STERILE	P				
O - OTHER	P				

CONTAINER TYPE	ANALYSIS REQUESTED	DATE/TIME	CLIENT	OTHER	FS
P - PLASTIC	P				
A - AMBER GLASS	P				
G - CLEAR GLASS	P				
V - VOA VIAL	P				
S - STERILE	P				
O - OTHER	P				

CONTAINER TYPE	ANALYSIS REQUESTED	DATE/TIME	CLIENT	OTHER	FS
P - PLASTIC	P				
A - AMBER GLASS	P				
G - CLEAR GLASS	P				
V - VOA VIAL	P				
S - STERILE	P				
O - OTHER	P				

CONTAINER TYPE	ANALYSIS REQUESTED	DATE/TIME	CLIENT	OTHER	FS
P - PLASTIC	P				
A - AMBER GLASS	P				
G - CLEAR GLASS	P				
V - VOA VIAL	P				
S - STERILE	P				
O - OTHER	P				

**WO#: 262141**

**PM: 8M Due Date: 03/01/18**  
**CLIENT: GAPower - CCR**

FOR LAB USE ONLY

LAB #:  
 Entered into LIMS:  
 Tracking #:

8107 9689 8296

Pace COG Revised.xlsx



Pace Analytical Services, Inc.  
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(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

**CHAIN OF CUSTODY RECORD**

PAGE: 1 OF 1

<b>CLIENT NAME:</b> Georgia Power		<b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Joju Abraham Health McCorkle		<b>CC:</b> Maria Padilla Health McCorkle		<b>REQUESTED COMPLETION DATE:</b> Normal FAT GPC10684198		<b>PROJECT NAME/STATE:</b> Plant Mitchell Phase II CCR / GA		<b>PROJECT #:</b> 6122-16-0170.04	
Collection DATE	Collection TIME	MATRIX CODE	C O R M A P B	SAMPLE IDENTIFICATION	CONTAINER TYPE	PRESEVATION	# of CONTAINERS	ANALYSIS REQUESTED	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	
2-21-18	15:05	GW	✓	P2-33	4	SM 2540C	4	IC (Cl, T, SO4) MPA 6020/7470 Meis App. III & IV	2-21-18 15:05	2-21-18 15:05	2-21-18 15:05	2-21-18 15:05	
2-21-18	—	GW	✓	Dup-02	4	TDS	4	IC (Cl, T, SO4) MPA 300.0	2-21-18 15:05	2-21-18 15:05	2-21-18 15:05	2-21-18 15:05	
2-21-18	—	GW	✓	Dup-01	4	MPA 2540C	4	IC (Cl, T, SO4) MPA 300.0	2-21-18 15:05	2-21-18 15:05	2-21-18 15:05	2-21-18 15:05	
2-21-18	15:45	GW	✓	PZ-19	4	Rad m 226 & 228 GW-946 8315/9320	4	IC (Cl, T, SO4) MPA 6020/7470 Meis App. III & IV	2-21-18 15:05	2-21-18 15:05	2-21-18 15:05	2-21-18 15:05	

**WO#: 262141**

PM: BM Due Date: 02/01/18  
CLIENT: GA Power - CCR

LAB #: FOR LAB USE ONLY  
Entered into LIMS:  
Tracking #: 810796998285

Pace COC Revised.xlsx

**Sample Condition Upon Receipt**



Client Name: GA Power

Project #

**WO#: 262141**

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

PM: BM Due Date: 03/01/18

Tracking #: \_\_\_\_\_ Custody Seal on Copier/Box Present:  yes  no

CLIENT: GAPower-CCR

Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used 83 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Date and initials of person examining contents: 2/22/18 MA

Cooler Temperature 0.3 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

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

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? 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)

July 18, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267048

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 12, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267048

---

### 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

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267048

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
267048001	PZ-1D	Water	07/11/18 11:23	07/12/18 09:20
267048002	PZ-31	Water	07/11/18 13:00	07/12/18 09:20
267048003	PZ-14	Water	07/11/18 14:45	07/12/18 09:20
267048004	PZ-23	Water	07/11/18 16:00	07/12/18 09:20

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267048

Lab ID	Sample ID	Method	Analysts	Analytes Reported
267048001	PZ-1D	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267048002	PZ-31	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267048003	PZ-14	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267048004	PZ-23	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267048

Sample: PZ-1D		Lab ID: 267048001		Collected: 07/11/18 11:23		Received: 07/12/18 09:20		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	<b>0.0019J</b>	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/17/18 18:18	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/17/18 18:18	7440-38-2		
Barium	<b>0.032</b>	mg/L	0.010	0.00078	1	07/13/18 10:44	07/17/18 18:18	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/17/18 18:18	7440-41-7		
Boron	<b>0.017J</b>	mg/L	0.040	0.0039	1	07/13/18 10:44	07/17/18 18:18	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/17/18 18:18	7440-43-9		
Calcium	<b>65.3</b>	mg/L	25.0	0.69	50	07/13/18 10:44	07/17/18 18:24	7440-70-2		
Chromium	<b>0.0057J</b>	mg/L	0.010	0.0016	1	07/13/18 10:44	07/17/18 18:18	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/17/18 18:18	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/17/18 18:18	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/17/18 18:18	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 18:18	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/17/18 18:18	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/17/18 18:18	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 11:19	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>153</b>	mg/L	25.0	10.0	1		07/16/18 12:50			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>2.9</b>	mg/L	0.25	0.024	1		07/14/18 04:31	16887-00-6	B	
Fluoride	ND	mg/L	0.30	0.029	1		07/14/18 04:31	16984-48-8		
Sulfate	<b>2.5</b>	mg/L	1.0	0.017	1		07/14/18 04:31	14808-79-8		

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267048

**Sample: PZ-31**      **Lab ID: 267048002**      Collected: 07/11/18 13:00      Received: 07/12/18 09:20      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b> Analytical Method: EPA 6020B      Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/17/18 18:41	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/17/18 18:41	7440-38-2	
Barium	<b>0.011</b>	mg/L	0.010	0.00078	1	07/13/18 10:44	07/17/18 18:41	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/17/18 18:41	7440-41-7	
Boron	<b>0.014J</b>	mg/L	0.040	0.0039	1	07/13/18 10:44	07/17/18 18:41	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/17/18 18:41	7440-43-9	
Calcium	<b>95.4</b>	mg/L	25.0	0.69	50	07/13/18 10:44	07/17/18 18:46	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/17/18 18:41	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/17/18 18:41	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/17/18 18:41	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/17/18 18:41	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 18:41	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/17/18 18:41	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/17/18 18:41	7440-28-0	
<b>7470 Mercury</b> Analytical Method: EPA 7470A      Preparation Method: EPA 7470A									
Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 11:22	7439-97-6	
<b>2540C Total Dissolved Solids</b> Analytical Method: SM 2540C									
Total Dissolved Solids	<b>273</b>	mg/L	25.0	10.0	1		07/16/18 12:50		
<b>300.0 IC Anions 28 Days</b> Analytical Method: EPA 300.0									
Chloride	<b>4.0</b>	mg/L	0.25	0.024	1		07/14/18 04:51	16887-00-6	
Fluoride	<b>0.087J</b>	mg/L	0.30	0.029	1		07/14/18 04:51	16984-48-8	
Sulfate	<b>3.6</b>	mg/L	1.0	0.017	1		07/14/18 04:51	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267048

Sample: PZ-14		Lab ID: 267048003		Collected: 07/11/18 14:45		Received: 07/12/18 09:20		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/17/18 18:52	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/17/18 18:52	7440-38-2		
Barium	<b>0.027</b>	mg/L	0.010	0.00078	1	07/13/18 10:44	07/17/18 18:52	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/17/18 18:52	7440-41-7		
Boron	<b>0.026J</b>	mg/L	0.040	0.0039	1	07/13/18 10:44	07/17/18 18:52	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/17/18 18:52	7440-43-9		
Calcium	<b>111</b>	mg/L	25.0	0.69	50	07/13/18 10:44	07/17/18 18:58	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/17/18 18:52	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/17/18 18:52	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/17/18 18:52	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/17/18 18:52	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 18:52	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/17/18 18:52	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/17/18 18:52	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 11:24	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>294</b>	mg/L	25.0	10.0	1		07/16/18 12:50			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>4.9</b>	mg/L	0.25	0.024	1		07/14/18 05:12	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		07/14/18 05:12	16984-48-8		
Sulfate	<b>3.8</b>	mg/L	1.0	0.017	1		07/14/18 05:12	14808-79-8		

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267048

Sample: PZ-23		Lab ID: 267048004		Collected: 07/11/18 16:00		Received: 07/12/18 09:20		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/17/18 19:04	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/17/18 19:04	7440-38-2		
Barium	<b>0.051</b>	mg/L	0.010	0.00078	1	07/13/18 10:44	07/17/18 19:04	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/17/18 19:04	7440-41-7		
Boron	<b>0.17</b>	mg/L	0.040	0.0039	1	07/13/18 10:44	07/18/18 12:38	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/17/18 19:04	7440-43-9		
Calcium	<b>159</b>	mg/L	25.0	0.69	50	07/13/18 10:44	07/17/18 19:09	7440-70-2		
Chromium	<b>0.0021J</b>	mg/L	0.010	0.0016	1	07/13/18 10:44	07/17/18 19:04	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/17/18 19:04	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/17/18 19:04	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/17/18 19:04	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 19:04	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/17/18 19:04	7782-49-2		
Thallium	<b>0.00018J</b>	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/17/18 19:04	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 11:27	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>440</b>	mg/L	25.0	10.0	1		07/16/18 12:50			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>5.1</b>	mg/L	0.25	0.024	1		07/14/18 06:55	16887-00-6		
Fluoride	<b>0.077J</b>	mg/L	0.30	0.029	1		07/14/18 06:55	16984-48-8		
Sulfate	<b>35.4</b>	mg/L	1.0	0.017	1		07/14/18 06:55	14808-79-8		

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267048

QC Batch: 9878

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Associated Lab Samples: 267048001, 267048002, 267048003, 267048004

METHOD BLANK: 44808

Matrix: Water

Associated Lab Samples: 267048001, 267048002, 267048003, 267048004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	07/17/18 10:25	

LABORATORY CONTROL SAMPLE: 44809

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0025	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44810 44811

Parameter	Units	267013001 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	.0025	.0025	0.0023	0.0022	91	90	75-125	2	20	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267048

QC Batch: 9744 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 267048001, 267048002, 267048003, 267048004

METHOD BLANK: 44235 Matrix: Water  
Associated Lab Samples: 267048001, 267048002, 267048003, 267048004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	07/17/18 16:25	
Arsenic	mg/L	ND	0.0050	0.00057	07/17/18 16:25	
Barium	mg/L	ND	0.010	0.00078	07/17/18 16:25	
Beryllium	mg/L	ND	0.0030	0.000050	07/17/18 16:25	
Boron	mg/L	ND	0.040	0.0039	07/17/18 16:25	
Cadmium	mg/L	ND	0.0010	0.000093	07/17/18 16:25	
Calcium	mg/L	ND	0.50	0.014	07/17/18 16:25	
Chromium	mg/L	ND	0.010	0.0016	07/17/18 16:25	
Cobalt	mg/L	ND	0.010	0.00052	07/17/18 16:25	
Lead	mg/L	ND	0.0050	0.00027	07/17/18 16:25	
Lithium	mg/L	ND	0.050	0.00097	07/17/18 16:25	
Molybdenum	mg/L	ND	0.010	0.0019	07/17/18 16:25	
Selenium	mg/L	ND	0.010	0.0014	07/17/18 16:25	
Thallium	mg/L	ND	0.0010	0.00014	07/17/18 16:25	

LABORATORY CONTROL SAMPLE: 44236

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	104	80-120	
Arsenic	mg/L	.1	0.10	101	80-120	
Barium	mg/L	.1	0.10	103	80-120	
Beryllium	mg/L	.1	0.11	106	80-120	
Boron	mg/L	1	1.1	105	80-120	
Cadmium	mg/L	.1	0.10	100	80-120	
Calcium	mg/L	1	1.0	103	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.098	98	80-120	
Lead	mg/L	.1	0.099	99	80-120	
Lithium	mg/L	.1	0.11	108	80-120	
Molybdenum	mg/L	.1	0.10	104	80-120	
Selenium	mg/L	.1	0.10	102	80-120	
Thallium	mg/L	.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44237 44238

Parameter	Units	267013010 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Antimony	mg/L	ND	.1	0.11	0.11	0.11	111	108	75-125	2	20	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267048

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44237		44238		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		267013010 Result	MS Spike Conc.	MSD Spike Conc.									
Arsenic	mg/L	0.00063J	.1	.1	0.11	0.10	105	104	75-125	1	20		
Barium	mg/L	0.087	.1	.1	0.22	0.21	129	123	75-125	3	20	M1	
Beryllium	mg/L	ND	.1	.1	0.11	0.10	107	104	75-125	2	20		
Boron	mg/L	2.9	1	1	3.9	3.9	108	101	75-125	2	20		
Cadmium	mg/L	ND	.1	.1	0.11	0.10	106	102	75-125	4	20		
Calcium	mg/L	4.5	1	1	5.6	5.6	104	105	75-125	0	20		
Chromium	mg/L	0.0023J	.1	.1	0.11	0.10	109	102	75-125	6	20		
Cobalt	mg/L	ND	.1	.1	0.11	0.10	107	101	75-125	6	20		
Lead	mg/L	ND	.1	.1	0.10	0.098	101	98	75-125	4	20		
Lithium	mg/L	ND	.1	.1	0.11	0.11	108	108	75-125	1	20		
Molybdenum	mg/L	ND	.1	.1	0.11	0.11	108	105	75-125	2	20		
Selenium	mg/L	0.0016J	.1	.1	0.097	0.098	96	96	75-125	0	20		
Thallium	mg/L	ND	.1	.1	0.10	0.098	102	98	75-125	4	20		

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267048

QC Batch: 9854 Analysis Method: SM 2540C  
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids  
Associated Lab Samples: 267048001, 267048002, 267048003, 267048004

LABORATORY CONTROL SAMPLE: 44721

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	402	100	84-108	

SAMPLE DUPLICATE: 44722

Parameter	Units	266978001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	45.0	46.0	2	10	

SAMPLE DUPLICATE: 44723

Parameter	Units	267056007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	10.0J	20.0J	67	10	D6

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267048

QC Batch: 9751 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 267048001, 267048002, 267048003, 267048004

METHOD BLANK: 44261 Matrix: Water  
 Associated Lab Samples: 267048001, 267048002, 267048003, 267048004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.36	0.25	0.024	07/13/18 20:35	
Fluoride	mg/L	ND	0.30	0.029	07/13/18 20:35	
Sulfate	mg/L	ND	1.0	0.017	07/13/18 20:35	

LABORATORY CONTROL SAMPLE: 44262

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: 44263 44264

Parameter	Units	267013001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	25.9	1	1	33.9	34.1	803	823	90-110	1	15	M1
Fluoride	mg/L	ND	1	1	13.0	13.1	1300	1310	90-110	1	15	M1
Sulfate	mg/L	369	1	1	232	233	-13700	-13600	90-110	1	15	E, M1

MATRIX SPIKE SAMPLE: 44265

Parameter	Units	267013002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.30	10	9.8	95	90-110	
Fluoride	mg/L	ND	10	10.0	100	90-110	
Sulfate	mg/L	ND	10	9.7	97	90-110	

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267048

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### 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.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267048

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267048001	PZ-1D	EPA 3005A	9744	EPA 6020B	9946
267048002	PZ-31	EPA 3005A	9744	EPA 6020B	9946
267048003	PZ-14	EPA 3005A	9744	EPA 6020B	9946
267048004	PZ-23	EPA 3005A	9744	EPA 6020B	9946
267048001	PZ-1D	EPA 7470A	9878	EPA 7470A	9912
267048002	PZ-31	EPA 7470A	9878	EPA 7470A	9912
267048003	PZ-14	EPA 7470A	9878	EPA 7470A	9912
267048004	PZ-23	EPA 7470A	9878	EPA 7470A	9912
267048001	PZ-1D	SM 2540C	9854		
267048002	PZ-31	SM 2540C	9854		
267048003	PZ-14	SM 2540C	9854		
267048004	PZ-23	SM 2540C	9854		
267048001	PZ-1D	EPA 300.0	9751		
267048002	PZ-31	EPA 300.0	9751		
267048003	PZ-14	EPA 300.0	9751		
267048004	PZ-23	EPA 300.0	9751		

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**CHAIN OF CUSTODY RECORD**

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 (770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

PAGE: 1 OF 1

**CLIENT NAME:** Georgia Power  
**CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:**  
 241 Ralph McGill Blvd SE  
 Atlanta, GA 30308  
 404-508-7239

**REPORT TO:** Joju Abraham  
 Health McCorkle

**REQUESTED COMPLETION DATE:** *5/22/18*

**PROJECT NAME/STATE:** Plant Mitchell CR Phase II, GA

**PROJECT #:** 6122160170.04

**CC:** Maria Padilla  
**PO #:** GPC10684198

CONTAINER TYPE:	ANALYSIS REQUESTED			
	P	P	P	P
PRESERVATION:	3	7	7	3
# of				
CONTAINERS				
	Metals App. III & IV EPA 820/7470	IC (Cl, F, SO4) EPA 300.0	TDS SM 2540C	Radium 226 & 228 GW-846 9315/9320
4	X	X	X	X
4	X	X	X	X
4	X	X	X	X
4	X	X	X	X


CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, 56°C
A - AMBER GLASS	2 - H <sub>2</sub> SO <sub>4</sub> , 56°C
G - CLEAR GLASS	3 - HNO <sub>3</sub>
V - VOA VIAL	4 - NaOH, 56°C
S - STERILE	5 - NaOH/ZnAc, 56°C
O - OTHER	6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C
	7 - 56°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#: 267048**



267048

**SAMPLED BY AND TITLE:** E. G. Allen / Tech 4  
**RECEIVED BY:** *Raymond*

**DATE/TIME:** 7/11/18 / 1730  
**DATE/TIME:** 7/11/18 / 1800

**REQUISITIONED BY:** Howard  
**RELINQUISHED BY:**

**DATE/TIME:** 7/11/18 / 1800

**REQUIREMENTS:** *None*

**REMARKS:** *Temp Blank*

**DATE/TIME:** 07/12/18 0920  
**Temperature:** Min: *1.8* Max: *1.8*

**PH/checked:** *Yes*  
**OTES:** No NA Yes No NA

**RECEIVED BY LAB:** *Raymond*

**DATE/TIME:** 07/12/18 0920

**TEMPERATURE:** Min: *1.8* Max: *1.8*

**PH/checked:** *Yes*  
**OTES:** No NA Yes No NA

**LAB #:** 267048

**FOR LAB USE ONLY**

**ENTERED INTO LIMS:** Tracking #: \_\_\_\_\_

**CLIENT:** FS

**COURIER:** # of Coolers \_\_\_\_\_

**OTHER:** FS

**COOLER ID:** \_\_\_\_\_

**USPS (FED-EX):**  **Not Present**

**Seal:**  Intact  Broken

**Page GOC Revised: xlsx**

**Sample Condition Upon Receipt**

Face Analytical

Client Name: GIA power

Project #

**WO#: 267048**

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 812193944352

PM: BM

Due Date: 07/19/18

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

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 1.8      Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 7/12/18 MR

Comments:

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Field Data Required?

Y N

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.

August 09, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267049

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 12, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267049

---

### 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

---

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267049

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
267049001	PZ-1D	Water	07/11/18 11:23	07/12/18 09:20
267049002	PZ-31	Water	07/11/18 13:00	07/12/18 09:20
267049003	PZ-14	Water	07/11/18 14:45	07/12/18 09:20
267049004	PZ-23	Water	07/11/18 16:00	07/12/18 09:20

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267049

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
267049001	PZ-1D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267049002	PZ-31	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267049003	PZ-14	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267049004	PZ-23	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267049

**Sample: PZ-1D**      **Lab ID: 267049001**      Collected: 07/11/18 11:23      Received: 07/12/18 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.292 ± 0.214 (0.354)</b> C:96% T:NA	pCi/L	07/25/18 10:02	13982-63-3	
Radium-228	EPA 9320	<b>0.533 ± 0.423 (0.844)</b> C:71% T:88%	pCi/L	08/01/18 16:08	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.825 ± 0.637 (1.20)</b>	pCi/L	08/03/18 14:15	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267049

**Sample: PZ-31**      **Lab ID: 267049002**      Collected: 07/11/18 13:00      Received: 07/12/18 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.160 ± 0.192 (0.380)</b> <b>C:81% T:NA</b>	pCi/L	07/25/18 10:02	13982-63-3	
Radium-228	EPA 9320	<b>0.589 ± 0.454 (0.904)</b> <b>C:71% T:86%</b>	pCi/L	08/01/18 16:08	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.749 ± 0.646 (1.28)</b>	pCi/L	08/03/18 14:15	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267049

**Sample: PZ-14**      **Lab ID: 267049003**      Collected: 07/11/18 14:45      Received: 07/12/18 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.116 ± 0.183 (0.406)</b> <b>C:93% T:NA</b>	pCi/L	07/25/18 09:46	13982-63-3	
Radium-228	EPA 9320	<b>0.116 ± 0.417 (0.942)</b> <b>C:70% T:79%</b>	pCi/L	08/01/18 16:08	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.232 ± 0.600 (1.35)</b>	pCi/L	08/03/18 14:15	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267049

**Sample: PZ-23**      **Lab ID: 267049004**      Collected: 07/11/18 16:00      Received: 07/12/18 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.664 ± 0.302 (0.381)</b> C:95% T:NA	pCi/L	07/25/18 09:46	13982-63-3	
Radium-228	EPA 9320	<b>0.623 ± 0.415 (0.795)</b> C:72% T:86%	pCi/L	08/01/18 16:08	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.29 ± 0.717 (1.18)</b>	pCi/L	08/03/18 14:15	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267049

---

QC Batch:	306536	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	267049001, 267049002, 267049003, 267049004		

---

METHOD BLANK:	1498638	Matrix:	Water
Associated Lab Samples:	267049001, 267049002, 267049003, 267049004		

---

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.142 ± 0.222 (0.491) C:92% T:NA	pCi/L	07/25/18 07:09	

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 Mitchell Ash Ponds

Pace Project No.: 267049

QC Batch: 306535

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 267049001, 267049002, 267049003, 267049004

METHOD BLANK: 1498635

Matrix: Water

Associated Lab Samples: 267049001, 267049002, 267049003, 267049004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.647 ± 0.329 (0.551) C:74% T:89%	pCi/L	08/01/18 12:54	

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 Mitchell Ash Ponds  
Pace Project No.: 267049

---

### 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

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267049

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267049001	PZ-1D	EPA 9315	306536		
267049002	PZ-31	EPA 9315	306536		
267049003	PZ-14	EPA 9315	306536		
267049004	PZ-23	EPA 9315	306536		
267049001	PZ-1D	EPA 9320	306535		
267049002	PZ-31	EPA 9320	306535		
267049003	PZ-14	EPA 9320	306535		
267049004	PZ-23	EPA 9320	306535		
267049001	PZ-1D	Total Radium Calculation	308363		
267049002	PZ-31	Total Radium Calculation	308363		
267049003	PZ-14	Total Radium Calculation	308363		
267049004	PZ-23	Total Radium Calculation	308363		

**REPORT OF LABORATORY ANALYSIS**

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**CHAIN OF CUSTODY RECORD**

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

PAGE: 1 OF 1

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

REPORT TO: Joju Abraham  
 CC: Maria Padilla  
 Heath McCorkle  
 PO #: GPC10684198

REQUESTED COMPLETION DATE: 5-Feb-2018

PROJECT NAME/STATE: Plant Mitchell Creek Phase II, GA

PROJECT #: 6122160170.04

CONTAINER TYPE	ANALYSIS REQUESTED	CONTAINER TYPE	PRESERVATION
P	P	P	1 - HCl, 56°C
A	P	P	2 - H <sub>2</sub> SO <sub>4</sub> , 56°C
B	P	P	3 - HNO <sub>3</sub>
	P	P	4 - NaOH, 56°C
I	P	P	5 - NaOH/ZnAc, 56°C
D	P	P	6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C
N	P	P	7 - 56°C not frozen
U	P	P	
M	P	P	
B	P	P	
E	P	P	
R	P	P	

**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

CONTAINER TYPE	PRESERVATION	ANALYSIS REQUESTED	REMARKS/ADDITIONAL INFORMATION
P	1 - HCl, 56°C		
A	2 - H <sub>2</sub> SO <sub>4</sub> , 56°C		
B	3 - HNO <sub>3</sub>		
I	4 - NaOH, 56°C		
D	5 - NaOH/ZnAc, 56°C		
N	6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C		
U	7 - 56°C not frozen		
M			
B			
E			
R			

Collection DATE	Collection TIME	MATRIX CODE	SAMPLE IDENTIFICATION
7/11/15	1123	GW	PZ-1D
	1300	GW	PZ-31
	1445	GW	PZ-14
	1600	GW	PZ-23
			Temp Blank

SAMPLED BY AND TITLE: E. G. Miller / Tech 7  
 RECEIVED BY: E. G. Miller  
 DATE/TIME: 7/11/18 / 1730

REQUISITIONED BY: D. Bennett / Howard  
 RELINQUISHED BY: D. Bennett  
 DATE/TIME: 7/11/18 / 1800

LAB #: 267049  
 ENTERED INTO LIMS: 7/11/18  
 TRACKING #: 1800

SHIPMENT STATUS: Intact Broken Not Present  
 SAMPLE SHIPPED VIA: USPS FED-EX  
 COURIER: USPS # of Coolers: 1  
 CLIENT: Georgia Power OTHER: FS

RECEIVED BY: Joju Abraham  
 DATE/TIME: 07/12/18 0920  
 Temperature: Min: 1.8 Max:

**NO#: 267049**



267049

**Sample Condition Upon Receipt**



Client Name: GIA power

Project # \_\_\_\_\_

**WO#: 267049**

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 812193944352

PM: **BM**

Due Date: **08/09/18**

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

**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 1.8

Biological Tissue is Frozen: Yes No

Date and initials of person examining contents: 7/12/18 MR

Temp should be above freezing to 6°C

Comments: \_\_\_\_\_

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Field Data Required?  Y  N

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

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: LAL  
Date: 7/24/2018  
Worklist: 42801  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1498638
MB concentration:	0.142
MB Counting Uncertainty:	0.221
MB MDC:	0.491
MB Numerical Performance Indicator:	1.26
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS (Y or N)?	Y
LCS42801		LCS42801	
Count Date:	7/26/2018	7/26/2018	
Spike I.D.:	17-030	17-030	
Spike Concentration (pCi/mL):	80.163	80.163	
Volume Used (mL):	0.10	0.10	
Aliquot Volume (L, g, F):	0.508	0.503	
Target Conc. (pCi/L, g, F):	15.772	15.938	
Uncertainty (Calculated):	1.453	1.468	
Result (pCi/L, g, F):	12.727	12.701	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.076	1.040	
Numerical Performance Indicator:	-3.30	-3.53	
Percent Recovery:	80.69%	79.69%	
Status vs Numerical Indicator:	N/A	N/A	
Status vs Recovery:	Pass	Pass	

Duplicate Sample Assessment	
Sample I.D.:	LCS42801
Duplicate Sample I.D.:	LCS42801
Sample Result (pCi/L, g, F):	12.727
Sample Duplicate Result (pCi/L, g, F):	1.076
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	12.701
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.040
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	0.034
Duplicate RPD:	0.20%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

8/1/18  
LAL

UAM 7/31/18

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: JLW  
Date: 7/25/2018  
Worklist: 42800  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1498635
MB concentration:	0.647
M/B Counting Uncertainty:	0.308
MB MDC:	0.551
MB Numerical Performance Indicator:	N/A
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	
LCSID (Y or N)?	N
LCS42800	LCS42800
Count Date:	8/1/2018
Spike I.D.:	18-026
Spike Concentration (pCi/mL):	40.475
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.803
Target Conc. (pCi/L, g, F):	5.038
Uncertainty (Calculated):	0.247
Result (pCi/L, g, F):	4.677
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.622
Numerical Performance Indicator:	-1.06
Percent Recovery:	92.83%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	267081001
Duplicate Sample I.D.:	267081001DUP
Sample Result (pCi/L, g, F):	4.116
Sample Result Counting Uncertainty (pCi/L, g, F):	0.609
Sample Duplicate Result (pCi/L, g, F):	3.455
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.562
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	1.564
Duplicate RPD:	17.47%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

**Comments:**

\*The method blank result is below the reporting limit for this analysis and is acceptable.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

*Handwritten signature*

*Handwritten signature*

July 19, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267050

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 12, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267050

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### 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

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267050

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
267050001	EB-01	Water	07/11/18 09:15	07/12/18 09:20
267050002	PZ-2S	Water	07/11/18 12:45	07/12/18 09:20
267050003	PZ-2D	Water	07/11/18 14:14	07/12/18 09:20
267050004	PZ-32	Water	07/11/18 16:05	07/12/18 09:20

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267050

Lab ID	Sample ID	Method	Analysts	Analytes Reported
267050001	EB-01	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267050002	PZ-2S	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267050003	PZ-2D	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267050004	PZ-32	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267050

**Sample: EB-01**      **Lab ID: 267050001**      Collected: 07/11/18 09:15      Received: 07/12/18 09:20      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b> Analytical Method: EPA 6020B      Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/17/18 19:15	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/17/18 19:15	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	07/13/18 10:44	07/17/18 19:15	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/17/18 19:15	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	07/13/18 10:44	07/17/18 19:15	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/17/18 19:15	7440-43-9	
Calcium	<b>0.014J</b>	mg/L	0.50	0.014	1	07/13/18 10:44	07/17/18 19:15	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/17/18 19:15	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/17/18 19:15	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/17/18 19:15	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/17/18 19:15	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 19:15	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/17/18 19:15	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/17/18 19:15	7440-28-0	
<b>7470 Mercury</b> Analytical Method: EPA 7470A      Preparation Method: EPA 7470A									
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 11:57	7439-97-6	
<b>2540C Total Dissolved Solids</b> Analytical Method: SM 2540C									
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		07/16/18 12:51		
<b>300.0 IC Anions 28 Days</b> Analytical Method: EPA 300.0									
Chloride	<b>0.078J</b>	mg/L	0.25	0.024	1		07/14/18 04:58	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/14/18 04:58	16984-48-8	M1
Sulfate	ND	mg/L	1.0	0.017	1		07/14/18 04:58	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267050

**Sample: PZ-2S**      **Lab ID: 267050002**      Collected: 07/11/18 12:45      Received: 07/12/18 09:20      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B    Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/17/18 19:21	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/17/18 19:21	7440-38-2	
Barium	<b>0.0069J</b>	mg/L	0.010	0.00078	1	07/13/18 10:44	07/17/18 19:21	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/17/18 19:21	7440-41-7	
Boron	<b>0.0099J</b>	mg/L	0.040	0.0039	1	07/13/18 10:44	07/17/18 19:21	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/17/18 19:21	7440-43-9	
Calcium	<b>44.9</b>	mg/L	25.0	0.69	50	07/13/18 10:44	07/17/18 19:26	7440-70-2	
Chromium	<b>0.0039J</b>	mg/L	0.010	0.0016	1	07/13/18 10:44	07/17/18 19:21	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/17/18 19:21	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/17/18 19:21	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/17/18 19:21	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 19:21	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/17/18 19:21	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/17/18 19:21	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A    Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 11:43	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>154</b>	mg/L	25.0	10.0	1		07/16/18 12:51		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>2.7</b>	mg/L	0.25	0.024	1		07/14/18 06:04	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		07/14/18 06:04	16984-48-8	M1
Sulfate	<b>1.5</b>	mg/L	1.0	0.017	1		07/14/18 06:04	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267050

Sample: PZ-2D		Lab ID: 267050003		Collected: 07/11/18 14:14		Received: 07/12/18 09:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	<b>0.0024J</b>	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/17/18 19:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/17/18 19:44	7440-38-2	
Barium	<b>0.0056J</b>	mg/L	0.010	0.00078	1	07/13/18 10:44	07/17/18 19:44	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/17/18 19:44	7440-41-7	
Boron	<b>0.017J</b>	mg/L	0.040	0.0039	1	07/13/18 10:44	07/17/18 19:44	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/17/18 19:44	7440-43-9	
Calcium	<b>15.6</b>	mg/L	5.0	0.14	10	07/13/18 10:44	07/18/18 12:44	7440-70-2	
Chromium	<b>0.0096J</b>	mg/L	0.010	0.0016	1	07/13/18 10:44	07/17/18 19:44	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/17/18 19:44	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/17/18 19:44	7439-92-1	
Lithium	<b>0.0011J</b>	mg/L	0.050	0.00097	1	07/13/18 10:44	07/17/18 19:44	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 19:44	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/17/18 19:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/17/18 19:44	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 12:00	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>84.0</b>	mg/L	25.0	10.0	1		07/16/18 12:51		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>2.6</b>	mg/L	0.25	0.024	1		07/14/18 06:26	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		07/14/18 06:26	16984-48-8	
Sulfate	<b>5.4</b>	mg/L	1.0	0.017	1		07/14/18 06:26	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267050

Sample: PZ-32		Lab ID: 267050004		Collected: 07/11/18 16:05		Received: 07/12/18 09:20		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/17/18 19:55	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/17/18 19:55	7440-38-2		
Barium	<b>0.016</b>	mg/L	0.010	0.00078	1	07/13/18 10:44	07/17/18 19:55	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/17/18 19:55	7440-41-7		
Boron	<b>0.014J</b>	mg/L	0.040	0.0039	1	07/13/18 10:44	07/17/18 19:55	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/17/18 19:55	7440-43-9		
Calcium	<b>60.4</b>	mg/L	25.0	0.69	50	07/13/18 10:44	07/18/18 12:49	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/17/18 19:55	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/17/18 19:55	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/17/18 19:55	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/17/18 19:55	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 19:55	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/17/18 19:55	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/17/18 19:55	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 12:02	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>192</b>	mg/L	25.0	10.0	1		07/16/18 12:51			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>2.8</b>	mg/L	0.25	0.024	1		07/14/18 06:47	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		07/14/18 06:47	16984-48-8		
Sulfate	<b>2.0</b>	mg/L	1.0	0.017	1		07/14/18 06:47	14808-79-8		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267050

QC Batch: 9889 Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury  
Associated Lab Samples: 267050001, 267050002, 267050003, 267050004

METHOD BLANK: 44843 Matrix: Water  
Associated Lab Samples: 267050001, 267050002, 267050003, 267050004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	07/17/18 11:38	

LABORATORY CONTROL SAMPLE: 44844

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44847 44848

Parameter	Units	267050002 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	.0025	.0025	0.0026	0.0026	102	102	75-125	0	20	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267050

QC Batch: 9744 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 267050001, 267050002, 267050003, 267050004

METHOD BLANK: 44235 Matrix: Water  
Associated Lab Samples: 267050001, 267050002, 267050003, 267050004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	07/17/18 16:25	
Arsenic	mg/L	ND	0.0050	0.00057	07/17/18 16:25	
Barium	mg/L	ND	0.010	0.00078	07/17/18 16:25	
Beryllium	mg/L	ND	0.0030	0.000050	07/17/18 16:25	
Boron	mg/L	ND	0.040	0.0039	07/17/18 16:25	
Cadmium	mg/L	ND	0.0010	0.000093	07/17/18 16:25	
Calcium	mg/L	ND	0.50	0.014	07/17/18 16:25	
Chromium	mg/L	ND	0.010	0.0016	07/17/18 16:25	
Cobalt	mg/L	ND	0.010	0.00052	07/17/18 16:25	
Lead	mg/L	ND	0.0050	0.00027	07/17/18 16:25	
Lithium	mg/L	ND	0.050	0.00097	07/17/18 16:25	
Molybdenum	mg/L	ND	0.010	0.0019	07/17/18 16:25	
Selenium	mg/L	ND	0.010	0.0014	07/17/18 16:25	
Thallium	mg/L	ND	0.0010	0.00014	07/17/18 16:25	

LABORATORY CONTROL SAMPLE: 44236

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	104	80-120	
Arsenic	mg/L	.1	0.10	101	80-120	
Barium	mg/L	.1	0.10	103	80-120	
Beryllium	mg/L	.1	0.11	106	80-120	
Boron	mg/L	1	1.1	105	80-120	
Cadmium	mg/L	.1	0.10	100	80-120	
Calcium	mg/L	1	1.0	103	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.098	98	80-120	
Lead	mg/L	.1	0.099	99	80-120	
Lithium	mg/L	.1	0.11	108	80-120	
Molybdenum	mg/L	.1	0.10	104	80-120	
Selenium	mg/L	.1	0.10	102	80-120	
Thallium	mg/L	.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44237 44238

Parameter	Units	267013010 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	.1	0.11	0.11	111	108	75-125	2	20	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267050

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44237		44238		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		267013010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	mg/L	0.00063J	.1	.1	0.11	0.10	105	104	75-125	1	20		
Barium	mg/L	0.087	.1	.1	0.22	0.21	129	123	75-125	3	20	M1	
Beryllium	mg/L	ND	.1	.1	0.11	0.10	107	104	75-125	2	20		
Boron	mg/L	2.9	1	1	3.9	3.9	108	101	75-125	2	20		
Cadmium	mg/L	ND	.1	.1	0.11	0.10	106	102	75-125	4	20		
Calcium	mg/L	4.5	1	1	5.6	5.6	104	105	75-125	0	20		
Chromium	mg/L	0.0023J	.1	.1	0.11	0.10	109	102	75-125	6	20		
Cobalt	mg/L	ND	.1	.1	0.11	0.10	107	101	75-125	6	20		
Lead	mg/L	ND	.1	.1	0.10	0.098	101	98	75-125	4	20		
Lithium	mg/L	ND	.1	.1	0.11	0.11	108	108	75-125	1	20		
Molybdenum	mg/L	ND	.1	.1	0.11	0.11	108	105	75-125	2	20		
Selenium	mg/L	0.0016J	.1	.1	0.097	0.098	96	96	75-125	0	20		
Thallium	mg/L	ND	.1	.1	0.10	0.098	102	98	75-125	4	20		

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267050

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QC Batch:	9854	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
Associated Lab Samples: 267050001, 267050002, 267050003, 267050004			

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LABORATORY CONTROL SAMPLE: 44721

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	402	100	84-108	

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SAMPLE DUPLICATE: 44722

Parameter	Units	266978001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	45.0	46.0	2	10	

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SAMPLE DUPLICATE: 44723

Parameter	Units	267056007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	10.0J	20.0J	67	10	D6

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267050

QC Batch: 9752 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 267050001, 267050002, 267050003, 267050004

METHOD BLANK: 44266 Matrix: Water  
Associated Lab Samples: 267050001, 267050002, 267050003, 267050004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.075J	0.25	0.024	07/14/18 04:15	
Fluoride	mg/L	ND	0.30	0.029	07/14/18 04:15	
Sulfate	mg/L	ND	1.0	0.017	07/14/18 04:15	

LABORATORY CONTROL SAMPLE: 44267

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.9	99	90-110	
Fluoride	mg/L	10	10.7	107	90-110	
Sulfate	mg/L	10	10.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44268 44269

Parameter	Units	267050001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	0.078J	10	10	10.1	10.1	101	100	90-110	0	15	
Fluoride	mg/L	ND	10	10	11.3	11.3	113	113	90-110	0	15	M1
Sulfate	mg/L	ND	10	10	10.7	10.0	107	100	90-110	6	15	

MATRIX SPIKE SAMPLE: 44270

Parameter	Units	267050002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L		2.7	10	12.5	98	90-110
Fluoride	mg/L		ND	10	11.2	112	90-110 M1
Sulfate	mg/L		1.5	10	11.3	97	90-110

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267050

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### 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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267050

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267050001	EB-01	EPA 3005A	9744	EPA 6020B	9946
267050002	PZ-2S	EPA 3005A	9744	EPA 6020B	9946
267050003	PZ-2D	EPA 3005A	9744	EPA 6020B	9946
267050004	PZ-32	EPA 3005A	9744	EPA 6020B	9946
267050001	EB-01	EPA 7470A	9889	EPA 7470A	9933
267050002	PZ-2S	EPA 7470A	9889	EPA 7470A	9933
267050003	PZ-2D	EPA 7470A	9889	EPA 7470A	9933
267050004	PZ-32	EPA 7470A	9889	EPA 7470A	9933
267050001	EB-01	SM 2540C	9854		
267050002	PZ-2S	SM 2540C	9854		
267050003	PZ-2D	SM 2540C	9854		
267050004	PZ-32	SM 2540C	9854		
267050001	EB-01	EPA 300.0	9752		
267050002	PZ-2S	EPA 300.0	9752		
267050003	PZ-2D	EPA 300.0	9752		
267050004	PZ-32	EPA 300.0	9752		

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**CHAIN OF CUSTODY RECORD**

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

PAGE: 1 OF 1

CLIENT NAME: Georgia Power  
 CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:  
 241 Ralph McGill Blvd SE  
 Atlanta, GA 30308  
 404-508-7239

REPORT TO: Joju Abraham  
 Health McCorkle  
 PO #: GPC10684198

REQUESTED COMPLETION DATE: *Standard*

PROJECT NAME/STATE: *Plant Mitchell CER Phase II, GA*  
 PROJECT #: *6122160170, 04*

CONTAINER TYPE: PRESERVATION:	ANALYSIS REQUESTED							CONTAINER TYPE: PRESERVATION:
	P	P	P	P	P	P	P	
# of CONTAINERS	3	7	7	3				
Metals App. III & IV	X	X	X	X	X	X	X	
EPA 8020/7470	X	X	X	X	X	X	X	
IC (C, T, SO4)	X	X	X	X	X	X	X	
FPA 800.0	X	X	X	X	X	X	X	
TDS	X	X	X	X	X	X	X	
GM 2540C	X	X	X	X	X	X	X	
Radionuclides 226 & 228 SW-646 9315/9320	X	X	X	X	X	X	X	

Collection DATE	Collection TIME	MATRIX CODE	SAMPLE IDENTIFICATION			
			C	G	R	A
7/11/18	0915	W	X	X	X	EB-01
↓	1245	GW	X	X	X	PZ-25
↓	1414	GW	X	X	X	PZ-2D
↓	1605	GW	X	X	X	PZ-32
						Temp Blank

L A B I D N U M B E R


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

PRESERVATION:  
 1 - HCl, 56°C  
 2 - H<sub>2</sub>SO<sub>4</sub>, 56°C  
 3 - HNO<sub>3</sub>  
 4 - NaOH, 56°C  
 5 - NaOH/ZnAc, 56°C  
 6 - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, 56°C  
 7 - 56°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

NO#: 267050



267050

SAMPLED BY AND TITLE: *D. Howell / Res. Chemist* DATE/TIME: *7/11/18 / 1720*

RECEIVED BY: *R. Abman* DATE/TIME: *7/11/18 / 0920*

TEMPERATURE: *1.8* Min: *1.8* Max: *1.8*

RELINQUISHED BY: *Danell Howard* DATE/TIME: *7/11/18 / 1800*

RELINQUISHED BY: *Danell Howard* DATE/TIME: *7/11/18 / 1800*

SAMPLE SHIPPED VIA:  UPS  USPS  FED-EX

CUSTOMER SEAL:  Intact  Broken  Not Present

COURIER: *# of Coolers* CLIENT: *OTHER* FS

LAB #: *FOR LAB USE ONLY*

Entered into LIMS: *Tracking #:*



Sample Condition Upon Receipt

Client Name: GAPower

Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 812193944963

WO#: **267050**

PM: BM Due Date: **07/19/18**

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 1.8

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 7/17/18 MK

Temp should be above freezing to 6°C

Comments:

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Field Data Required? Y N

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.



August 09, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267052

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 12, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267052

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### 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

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267052

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
267052001	EB-01	Water	07/11/18 09:15	07/12/18 09:20
267052002	PZ-2S	Water	07/11/18 12:45	07/12/18 09:20
267052003	PZ-2D	Water	07/11/18 14:14	07/12/18 09:20
267052004	PZ-32	Water	07/11/18 16:05	07/12/18 09:20

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267052

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
267052001	EB-01	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267052002	PZ-2S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267052003	PZ-2D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267052004	PZ-32	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267052

**Sample: EB-01**      **Lab ID: 267052001**      Collected: 07/11/18 09:15      Received: 07/12/18 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.109 ± 0.179 (0.398)</b> <b>C:91% T:NA</b>	pCi/L	07/25/18 07:10	13982-63-3	
Radium-228	EPA 9320	<b>0.262 ± 0.336 (0.712)</b> <b>C:68% T:84%</b>	pCi/L	08/01/18 12:54	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.371 ± 0.515 (1.11)</b>	pCi/L	08/03/18 14:15	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267052

**Sample: PZ-2S**      **Lab ID: 267052002**      Collected: 07/11/18 12:45      Received: 07/12/18 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.131 ± 0.205 (0.454)</b> C:97% T:NA	pCi/L	07/25/18 10:02	13982-63-3	
Radium-228	EPA 9320	<b>0.330 ± 0.360 (0.749)</b> C:72% T:79%	pCi/L	08/01/18 12:54	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.461 ± 0.565 (1.20)</b>	pCi/L	08/03/18 14:15	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267052

**Sample: PZ-2D**      **Lab ID: 267052003**      Collected: 07/11/18 14:14      Received: 07/12/18 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.144 ± 0.167 (0.333)</b> C:97% T:NA	pCi/L	07/25/18 10:02	13982-63-3	
Radium-228	EPA 9320	<b>1.52 ± 0.607 (0.968)</b> C:75% T:73%	pCi/L	08/01/18 16:08	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.66 ± 0.774 (1.30)</b>	pCi/L	08/03/18 14:15	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267052

**Sample: PZ-32**      **Lab ID: 267052004**      Collected: 07/11/18 16:05      Received: 07/12/18 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.243 ± 0.247 (0.495)</b> C:87% T:NA	pCi/L	07/25/18 09:45	13982-63-3	
Radium-228	EPA 9320	<b>0.262 ± 0.391 (0.843)</b> C:67% T:93%	pCi/L	08/01/18 16:08	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.505 ± 0.638 (1.34)</b>	pCi/L	08/03/18 14:15	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267052

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QC Batch:	306536	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	267052001, 267052002, 267052003, 267052004		

---

METHOD BLANK:	1498638	Matrix:	Water
Associated Lab Samples:	267052001, 267052002, 267052003, 267052004		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.142 ± 0.222 (0.491) C:92% T:NA	pCi/L	07/25/18 07:09	

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 Mitchell Ash Ponds

Pace Project No.: 267052

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QC Batch:	306535	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	267052001, 267052002, 267052003, 267052004		

---

METHOD BLANK:	1498635	Matrix:	Water
Associated Lab Samples:	267052001, 267052002, 267052003, 267052004		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.647 ± 0.329 (0.551) C:74% T:89%	pCi/L	08/01/18 12:54	

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 Mitchell Ash Ponds

Pace Project No.: 267052

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### 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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267052

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267052001	EB-01	EPA 9315	306536		
267052002	PZ-2S	EPA 9315	306536		
267052003	PZ-2D	EPA 9315	306536		
267052004	PZ-32	EPA 9315	306536		
267052001	EB-01	EPA 9320	306535		
267052002	PZ-2S	EPA 9320	306535		
267052003	PZ-2D	EPA 9320	306535		
267052004	PZ-32	EPA 9320	306535		
267052001	EB-01	Total Radium Calculation	308363		
267052002	PZ-2S	Total Radium Calculation	308363		
267052003	PZ-2D	Total Radium Calculation	308363		
267052004	PZ-32	Total Radium Calculation	308363		

### REPORT OF LABORATORY ANALYSIS

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**CHAIN OF CUSTODY RECORD**

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

PAGE: 1 OF 1

**CLIENT NAME:** Georgia Power  
**CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:** 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239  
**REPORT TO:** Joju Abraham  
**CC:** Maria Padilla Health McCorkle  
**REQUESTED COMPLETION DATE:** *Starbuck*  
**PO #:** GPC10684198  
**PROJECT NAME/STATE:** Plant M. tall celler Phase II, GA  
**PROJECT #:** 6122160170, 04

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

**PRESERVATION:**  
 1 - HCl, 56°C  
 2 - H<sub>2</sub>SO<sub>4</sub>, 56°C  
 3 - HNO<sub>3</sub>  
 4 - NaOH, 56°C  
 5 - NaOH/ZnAc, 56°C  
 6 - Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, 56°C  
 7 - 56°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

Collection DATE	Collection TIME	MATRIX CODE*	SAMPLE IDENTIFICATION				ANALYSIS REQUESTED	CONTAINER TYPE	# of CONTAINERS	RELINQUISHED BY	DATE/TIME	CLIENT	COURIER	OTHER	FS
			C	G	R	A									
7/11/18	0915	W	X	X	X	X	PA 3000 IC (Cl, P, SO4) EPA 820/7470 Metals App. III & IV	4	Panelly Howard	7/11/18 1720					
↓	1245	GW	X	X	X	X	TD SM 2540C Radium 226 & 228 GM-846 9315/9320	4		7/11/18 1800					
↓	1415	GW	X	X	X	X		4							
↓	1605	GW	X	X	X	X		4							

WO#: 267052

**SAMPLED BY AND TITLE:** D. Howard / Reg. Chemist  
**RECEIVED BY:** *Exalman*  
**DATE/TIME:** 7/11/18 1720  
**DATE/TIME:** 7/11/18 1800  
**RELINQUISHED BY:** Panelly Howard  
**DATE/TIME:** 7/11/18 1800  
**RECEIVED BY LAB:** *Exalman*  
**DATE/TIME:** 7/12/18 0920  
**TEMPERATURE:** Min: 1.8 Max:  
**PACKAGING:** Yes No NA  
**SEALING:** Intact Broken Not Present  
**COOLING:** # of Coolers  
**CLIENT:** OTHER FS  
**COOLING ID:**  
**ENTERED INTO LIMS:** Tracking #:  
**LAB #:**  
**FOR LAB USE ONLY**

**Sample Condition Upon Receipt**

Face Analytical

Client Name: GA Power

Project # \_\_\_\_\_

**WO#: 267052**

PM: BM

Due Date: 08/09/18

CLIENT: GA Power-CCR

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 812193944363

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

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used 83      Type of Ice: Wet Blue None

Cooler Temperature 1.8      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: 7/12/18 MK

Comments:

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Field Data Required?      Y      N

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 DEHR Certification Office i.e. out of hold, incorrect preservative, out of temp, incorrect containers

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: LAL  
Date: 7/24/2018  
Worklist: 42801  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1498638
MB concentration:	0.142
MB Counting Uncertainty:	0.221
MB MDC:	0.491
MB Numerical Performance Indicator:	1.26
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS (Y or N)?	Y
LCS42801		LCS42801	
Count Date:	7/26/2018	7/26/2018	
Spike I.D.:	17-030	17-030	
Spike Concentration (pCi/mL):	80.163	80.163	
Volume Used (mL):	0.10	0.10	
Aliquot Volume (L, g, F):	0.508	0.503	
Target Conc. (pCi/L, g, F):	15.772	15.938	
Uncertainty (Calculated):	1.453	1.468	
Result (pCi/L, g, F):	12.727	12.701	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.076	1.040	
Numerical Performance Indicator:	-3.30	-3.53	
Percent Recovery:	80.69%	79.69%	
Status vs Numerical Indicator:	N/A	N/A	
Status vs Recovery:	Pass	Pass	

Duplicate Sample Assessment	
Sample I.D.:	LCS42801
Duplicate Sample I.D.:	LCS42801
Sample Result (pCi/L, g, F):	12.727
Sample Duplicate Result (pCi/L, g, F):	1.076
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	12.701
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.040
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	0.034
Duplicate RPD:	0.20%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

8/1/18  
LAL

UAM 7/31/18

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: JLW  
Date: 7/25/2018  
Worklist: 42800  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1498635
MB concentration:	0.647
M/B Counting Uncertainty:	0.308
MB MDC:	0.551
MB Numerical Performance Indicator:	N/A
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	
LCSID (Y or N)?	N
LCS42800	LCS42800
Count Date:	8/1/2018
Spike I.D.:	18-026
Spike Concentration (pCi/mL):	40.475
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.803
Target Conc. (pCi/L, g, F):	5.038
Uncertainty (Calculated):	0.247
Result (pCi/L, g, F):	4.677
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.622
Numerical Performance Indicator:	-1.06
Percent Recovery:	92.83%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	267081001
Duplicate Sample I.D.:	267081001DUP
Sample Result (pCi/L, g, F):	4.116
Sample Result Counting Uncertainty (pCi/L, g, F):	0.609
Sample Duplicate Result (pCi/L, g, F):	3.455
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.562
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	1.564
Duplicate RPD:	17.47%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

**Comments:**

\*The method blank result is below the reporting limit for this analysis and is acceptable.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

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July 20, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267101

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 13, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267101

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### 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

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267101

Lab ID	Sample ID	Matrix	Date Collected	Date Received
267101001	PZ-15	Water	07/12/18 13:42	07/13/18 09:20
267101002	PZ-7D	Water	07/12/18 15:06	07/13/18 09:20
267101003	PZ-33	Water	07/12/18 16:24	07/13/18 09:20
267101004	Dup-02	Water	07/12/18 00:00	07/13/18 09:20

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267101

Lab ID	Sample ID	Method	Analysts	Analytes Reported
267101001	PZ-15	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267101002	PZ-7D	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267101003	PZ-33	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB, RLC	3
267101004	Dup-02	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB, RLC	3

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267101

Sample: PZ-15		Lab ID: 267101001		Collected: 07/12/18 13:42		Received: 07/13/18 09:20		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 17:48	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 17:48	7440-38-2		
Barium	<b>0.056</b>	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 17:48	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 17:48	7440-41-7		
Boron	<b>0.23</b>	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 17:48	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 17:48	7440-43-9		
Calcium	<b>94.5</b>	mg/L	25.0	0.69	50	07/17/18 11:31	07/19/18 17:54	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 17:48	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 17:48	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 17:48	7439-92-1		
Lithium	<b>0.0012J</b>	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 17:48	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 17:48	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 17:48	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 17:48	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 13:37	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>337</b>	mg/L	25.0	10.0	1		07/16/18 13:02			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>7.5</b>	mg/L	0.25	0.024	1		07/17/18 20:13	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		07/17/18 20:13	16984-48-8		
Sulfate	<b>80.5</b>	mg/L	10.0	0.17	10		07/19/18 16:25	14808-79-8		

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267101

Sample: PZ-7D		Lab ID: 267101002		Collected: 07/12/18 15:06		Received: 07/13/18 09:20		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 18:36	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 18:36	7440-38-2	
Barium	<b>0.0093J</b>	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 18:36	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 18:36	7440-41-7	
Boron	<b>0.32</b>	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 18:36	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 18:36	7440-43-9	
Calcium	<b>121</b>	mg/L	25.0	0.69	50	07/17/18 11:31	07/19/18 18:42	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 18:36	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 18:36	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 18:36	7439-92-1	
Lithium	<b>0.0038J</b>	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 18:36	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 18:36	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 18:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 18:36	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 13:40	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>423</b>	mg/L	25.0	10.0	1		07/16/18 13:02		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>7.1</b>	mg/L	0.25	0.024	1		07/17/18 20:33	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		07/17/18 20:33	16984-48-8	
Sulfate	<b>53.9</b>	mg/L	10.0	0.17	10		07/19/18 16:46	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267101

Sample: PZ-33		Lab ID: 267101003		Collected: 07/12/18 16:24		Received: 07/13/18 09:20		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 18:48	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 18:48	7440-38-2		
Barium	<b>0.076</b>	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 18:48	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 18:48	7440-41-7		
Boron	<b>0.41</b>	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 18:48	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 18:48	7440-43-9		
Calcium	<b>129</b>	mg/L	25.0	0.69	50	07/17/18 11:31	07/19/18 18:53	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 18:48	7440-47-3		
Cobalt	<b>0.00053J</b>	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 18:48	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 18:48	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 18:48	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 18:48	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 18:48	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 18:48	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 13:42	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>447</b>	mg/L	25.0	10.0	1		07/16/18 13:02			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>7.3</b>	mg/L	0.25	0.024	1		07/17/18 20:54	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		07/17/18 20:54	16984-48-8		
Sulfate	<b>89.4</b>	mg/L	10.0	0.17	10		07/19/18 18:32	14808-79-8		

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267101

Sample: Dup-02		Lab ID: 267101004		Collected: 07/12/18 00:00		Received: 07/13/18 09:20		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 18:59	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 18:59	7440-38-2		
Barium	<b>0.075</b>	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 18:59	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 18:59	7440-41-7		
Boron	<b>0.40</b>	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 18:59	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 18:59	7440-43-9		
Calcium	<b>132</b>	mg/L	25.0	0.69	50	07/17/18 11:31	07/19/18 19:05	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 18:59	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 18:59	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 18:59	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 18:59	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 18:59	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 18:59	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 18:59	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 13:44	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>441</b>	mg/L	25.0	10.0	1		07/16/18 13:02			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>7.3</b>	mg/L	0.25	0.024	1		07/17/18 21:15	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		07/17/18 21:15	16984-48-8		
Sulfate	<b>88.9</b>	mg/L	10.0	0.17	10		07/19/18 18:53	14808-79-8		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267101

QC Batch: 9896 Analysis Method: EPA 7470A  
 QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury  
 Associated Lab Samples: 267101001, 267101002, 267101003, 267101004

METHOD BLANK: 44864 Matrix: Water  
 Associated Lab Samples: 267101001, 267101002, 267101003, 267101004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	07/17/18 12:59	

LABORATORY CONTROL SAMPLE: 44865

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0026	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44866 44867

Parameter	Units	267060002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
Mercury	mg/L	ND	.0025	.0025	0.0025	0.0028	100	111	75-125	10	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.

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267101

QC Batch: 9923 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 267101001, 267101002, 267101003, 267101004

METHOD BLANK: 44985 Matrix: Water  
Associated Lab Samples: 267101001, 267101002, 267101003, 267101004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	07/19/18 17:08	
Arsenic	mg/L	ND	0.0050	0.00057	07/19/18 17:08	
Barium	mg/L	ND	0.010	0.00078	07/19/18 17:08	
Beryllium	mg/L	ND	0.0030	0.000050	07/19/18 17:08	
Boron	mg/L	ND	0.040	0.0039	07/19/18 17:08	
Cadmium	mg/L	ND	0.0010	0.000093	07/19/18 17:08	
Calcium	mg/L	ND	0.50	0.014	07/19/18 17:08	
Chromium	mg/L	ND	0.010	0.0016	07/19/18 17:08	
Cobalt	mg/L	ND	0.010	0.00052	07/19/18 17:08	
Lead	mg/L	ND	0.0050	0.00027	07/19/18 17:08	
Lithium	mg/L	ND	0.050	0.00097	07/19/18 17:08	
Molybdenum	mg/L	ND	0.010	0.0019	07/19/18 17:08	
Selenium	mg/L	ND	0.010	0.0014	07/19/18 17:08	
Thallium	mg/L	ND	0.0010	0.00014	07/19/18 17:08	

LABORATORY CONTROL SAMPLE: 44986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.11	108	80-120	
Arsenic	mg/L	.1	0.10	104	80-120	
Barium	mg/L	.1	0.10	104	80-120	
Beryllium	mg/L	.1	0.11	113	80-120	
Boron	mg/L	1	1.1	106	80-120	
Cadmium	mg/L	.1	0.11	106	80-120	
Calcium	mg/L	1	1.1	108	80-120	
Chromium	mg/L	.1	0.11	107	80-120	
Cobalt	mg/L	.1	0.11	105	80-120	
Lead	mg/L	.1	0.11	107	80-120	
Lithium	mg/L	.1	0.11	110	80-120	
Molybdenum	mg/L	.1	0.11	105	80-120	
Selenium	mg/L	.1	0.11	107	80-120	
Thallium	mg/L	.1	0.11	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44987 44988

Parameter	Units	267107001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					
Antimony	mg/L	ND	.1	.1	0.11	0.11	109	106	75-125	2	20

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267101

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44987		44988		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		267107001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	1	20		
Barium	mg/L	0.057	.1	.1	0.17	0.16	112	101	75-125	7	20		
Beryllium	mg/L	ND	.1	.1	0.094	0.096	94	96	75-125	3	20		
Boron	mg/L	0.64	1	1	1.4	1.5	79	82	75-125	2	20		
Cadmium	mg/L	ND	.1	.1	0.10	0.10	103	103	75-125	0	20		
Calcium	mg/L	140	1	1	141	138	122	-184	75-125	2	20	M6	
Chromium	mg/L	ND	.1	.1	0.10	0.10	101	100	75-125	1	20		
Cobalt	mg/L	ND	.1	.1	0.099	0.099	99	99	75-125	0	20		
Lead	mg/L	ND	.1	.1	0.10	0.099	100	99	75-125	1	20		
Lithium	mg/L	0.013J	.1	.1	0.11	0.11	95	96	75-125	1	20		
Molybdenum	mg/L	0.0022J	.1	.1	0.11	0.11	108	104	75-125	4	20		
Selenium	mg/L	ND	.1	.1	0.10	0.10	104	102	75-125	2	20		
Thallium	mg/L	0.00077J	.1	.1	0.10	0.10	102	100	75-125	2	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267101

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QC Batch: 9855 Analysis Method: SM 2540C  
 QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids  
 Associated Lab Samples: 267101001, 267101002, 267101003, 267101004

---

LABORATORY CONTROL SAMPLE: 44724

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

SAMPLE DUPLICATE: 44725

Parameter	Units	267056012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	485	495	2	10	

SAMPLE DUPLICATE: 44726

Parameter	Units	267101003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	447	453	1	10	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267101

QC Batch: 9904 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 267101001, 267101002, 267101003, 267101004

METHOD BLANK: 44910 Matrix: Water  
Associated Lab Samples: 267101001, 267101002, 267101003, 267101004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.064J	0.25	0.024	07/17/18 13:20	
Fluoride	mg/L	ND	0.30	0.029	07/17/18 13:20	
Sulfate	mg/L	ND	1.0	0.017	07/17/18 13:20	

LABORATORY CONTROL SAMPLE: 44911

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.6	96	90-110	
Fluoride	mg/L	10	10.3	103	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44912 44913

Parameter	Units	267060001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	72.6	10	10	67.0	67.1	-56	-55	90-110	0	15	E
Fluoride	mg/L	0.35	10	10	10.9	11.2	106	108	90-110	2	15	
Sulfate	mg/L	579	10	10	302	302	-2770	-2760	90-110	0	15	E

MATRIX SPIKE SAMPLE: 44914

Parameter	Units	267060002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	66.9	10	67.3	4	90-110	E
Fluoride	mg/L	0.62	10	10.9	102	90-110	
Sulfate	mg/L	598	10	304	-2940	90-110	E

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267101

---

### 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

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267101

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267101001	PZ-15	EPA 3005A	9923	EPA 6020B	10127
267101002	PZ-7D	EPA 3005A	9923	EPA 6020B	10127
267101003	PZ-33	EPA 3005A	9923	EPA 6020B	10127
267101004	Dup-02	EPA 3005A	9923	EPA 6020B	10127
267101001	PZ-15	EPA 7470A	9896	EPA 7470A	9944
267101002	PZ-7D	EPA 7470A	9896	EPA 7470A	9944
267101003	PZ-33	EPA 7470A	9896	EPA 7470A	9944
267101004	Dup-02	EPA 7470A	9896	EPA 7470A	9944
267101001	PZ-15	SM 2540C	9855		
267101002	PZ-7D	SM 2540C	9855		
267101003	PZ-33	SM 2540C	9855		
267101004	Dup-02	SM 2540C	9855		
267101001	PZ-15	EPA 300.0	9904		
267101002	PZ-7D	EPA 300.0	9904		
267101003	PZ-33	EPA 300.0	9904		
267101004	Dup-02	EPA 300.0	9904		

### REPORT OF LABORATORY ANALYSIS

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# CHAIN OF CUSTODY RECORD

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

PAGE: / OF |

**CLIENT NAME:** Georgia Power  
**CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:**  
 241 Ralph McGill Blvd SE  
 Atlanta, GA 30308  
 404-508-7239

**REPORT TO:** Joju Abraham  
 Health McCorkle

**REQUESTED COMPLETION DATE:** 3/18/18  
**PO #:** GPC10684198

**PROJECT NAME/STATE:** Plant Mitchell CCB Phase II, GA  
**PROJECT #:** 6122160170.04

CONTAINER TYPE	ANALYSIS REQUESTED						
	P	P	P	P	P	P	P
# of	3	7	7	3			
CONTAINERS →							
Metals App. III & IV	X	X	X	X	Radium 226 & 228	X	
EPA 8207/470	X	X	X	X	SM 2540C	X	
IC (Cl <sup>-</sup> , SO <sub>4</sub> )	X	X	X	X	TDS	X	
EPA 800	X	X	X	X			
GW	X	X	X	X			
GW	X	X	X	X			
GW	X	X	X	X			
GW	X	X	X	X			
Temp Blank							

**L A B I D N U M B E R** →

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

**PRESERVATION**  
 1 - HCl, 56°C  
 2 - H<sub>2</sub>SO<sub>4</sub>, 56°C  
 3 - HNO<sub>3</sub>  
 4 - NaOH, 56°C  
 5 - NaOH/NaAc, 56°C  
 6 - H<sub>2</sub>O<sub>2</sub>, 56°C  
 7 - 56°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**

**WO#: 267101**



267101

**SAMPLED BY AND TITLE:** Daniel Norwood  
**RECEIVED BY:** Daniel Norwood

**DATE/TIME:** 7/21/18 1745  
**DATE/TIME:** 7/21/18 1815

**REQUISITIONED BY:** Daniel Norwood  
**REQUISITIONED BY:** Daniel Norwood

**SAMPLE SHIPPED VIA:** UPS  
**FED-EX:** Not Present  
**USPS:** Not Present

**CLIENT:** FS  
**COURIER:** # of Coolers  
**OTHER:** Cooler ID:

**TEMPERATURE:** 1.5 Min: 1.5 Max:  
**NO. OF CONTAINERS:** No NA Yes No NA

**ENTERED INTO LIMS:**  
**TRACKING #:**



**Sample Condition Upon Receipt**

Face Analytical

Client Name: GIA Power

Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 812193944319

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

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 1.5 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

**WO#: 267101**

PM: **BM**

Due Date: **07/20/18**

CLIENT: **GAPower-CCR**

Date and Initials of person examining contents: 7/13/18 MR

Comments: \_\_\_\_\_

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Field Data Required?

Y N

**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.

August 09, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267102

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 13, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267102

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### 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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267102

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
267102001	PZ-15	Water	07/12/18 13:42	07/13/18 09:20
267102002	PZ-7D	Water	07/12/18 15:06	07/13/18 09:20
267102003	PZ-33	Water	07/12/18 16:24	07/13/18 09:20
267102004	Dup-02	Water	07/12/18 00:00	07/13/18 09:20

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267102

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
267102001	PZ-15	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267102002	PZ-7D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267102003	PZ-33	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267102004	Dup-02	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267102

**Sample: PZ-15**      **Lab ID: 267102001**      Collected: 07/12/18 13:42      Received: 07/13/18 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.454 ± 0.174 (0.166)</b> <b>C:83% T:NA</b>	pCi/L	07/30/18 08:58	13982-63-3	
Radium-228	EPA 9320	<b>0.0982 ± 0.445 (1.01)</b> <b>C:63% T:78%</b>	pCi/L	08/02/18 13:03	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.552 ± 0.619 (1.18)</b>	pCi/L	08/06/18 12:27	7440-14-4	

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267102

**Sample: PZ-7D**      **Lab ID: 267102002**      Collected: 07/12/18 15:06      Received: 07/13/18 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.188 ± 0.151 (0.282)</b> C:77% T:NA	pCi/L	07/30/18 08:58	13982-63-3	
Radium-228	EPA 9320	<b>-0.263 ± 0.499 (1.21)</b> C:57% T:79%	pCi/L	08/02/18 16:26	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.188 ± 0.650 (1.49)</b>	pCi/L	08/06/18 12:27	7440-14-4	

**REPORT OF LABORATORY ANALYSIS**

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267102

**Sample: PZ-33**      **Lab ID: 267102003**      Collected: 07/12/18 16:24      Received: 07/13/18 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.352 ± 0.160 (0.200)</b> <b>C:83% T:NA</b>	pCi/L	07/30/18 08:58	13982-63-3	
Radium-228	EPA 9320	<b>0.399 ± 0.546 (1.17)</b> <b>C:59% T:79%</b>	pCi/L	08/02/18 16:26	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.751 ± 0.706 (1.37)</b>	pCi/L	08/06/18 12:27	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267102

**Sample: Dup-02**      **Lab ID: 267102004**      Collected: 07/12/18 00:00      Received: 07/13/18 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.299 ± 0.148 (0.201)</b> <b>C:86% T:NA</b>	pCi/L	07/30/18 08:58	13982-63-3	
Radium-228	EPA 9320	<b>0.153 ± 0.523 (1.18)</b> <b>C:62% T:75%</b>	pCi/L	08/02/18 16:26	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.452 ± 0.671 (1.38)</b>	pCi/L	08/06/18 12:27	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267102

---

QC Batch:	306540	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	267102001, 267102002, 267102003, 267102004		

---

METHOD BLANK:	1498647	Matrix:	Water
Associated Lab Samples:	267102001, 267102002, 267102003, 267102004		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.216 ± 0.130 (0.183) C:89% T:NA	pCi/L	07/30/18 08:58	

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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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267102

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QC Batch:	306539	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	267102001, 267102002, 267102003, 267102004		

---

METHOD BLANK:	1498646	Matrix:	Water
Associated Lab Samples:	267102001, 267102002, 267102003, 267102004		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.687 ± 0.426 (0.797) C:69% T:81%	pCi/L	08/02/18 13:03	

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 Mitchell Ash Ponds

Pace Project No.: 267102

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### 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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267102

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267102001	PZ-15	EPA 9315	306540		
267102002	PZ-7D	EPA 9315	306540		
267102003	PZ-33	EPA 9315	306540		
267102004	Dup-02	EPA 9315	306540		
267102001	PZ-15	EPA 9320	306539		
267102002	PZ-7D	EPA 9320	306539		
267102003	PZ-33	EPA 9320	306539		
267102004	Dup-02	EPA 9320	306539		
267102001	PZ-15	Total Radium Calculation	308501		
267102002	PZ-7D	Total Radium Calculation	308501		
267102003	PZ-33	Total Radium Calculation	308501		
267102004	Dup-02	Total Radium Calculation	308501		

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

Pace Analytical

Client Name: GIA Power

Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 812193944319

**WO#: 267102**

PM: **BM** Due Date: **08/10/18**

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

**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 1.5 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 7/13/18 MR

Temp should be above freezing to 6°C

Comments: \_\_\_\_\_

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

**Client Notification/ Resolution:**

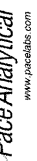
Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Field Data Required?  Y  N

**Project Manager Review:** \_\_\_\_\_ **Date:** \_\_\_\_\_

# Quality Control Sample Performance Assessment



www.faceanalytical.com

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

Test: Ra-228  
Analyst: JLLW  
Date: 7/26/2018  
Worklist: 42804  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1498646
MB Concentration:	0.687
MB Counting Uncertainty:	0.408
MB Counting Uncertainty:	0.797
MB MDC:	N/A
MB Numerical Performance Indicator:	3.30
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	8/2/2018
Spike I.D.:	18-026
Spike Concentration (pCi/mL):	40.461
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.802
Target Conc. (pCi/L, g, F):	5.047
Uncertainty (Calculated):	0.247
Result (pCi/L, g, F):	5.682
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.757
Numerical Performance Indicator:	1.56
Percent Recovery:	112.56%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	267124009
Duplicate Sample I.D.:	267124009DUP
Sample Result (pCi/L, g, F):	1.292
Sample Duplicate Result (pCi/L, g, F):	0.518
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.485
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.512
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-0.518
Duplicate RPD:	13.86%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

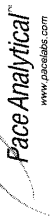
Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

*Handwritten signature*

*Handwritten initials: JLLW 8-3-18*



# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: LAL  
Date: 7/24/2018  
Worklist: 42805  
Matrix: DW

**Method Blank Assessment**

MB Sample ID: 1498647  
MB concentration: 0.216  
MB Counting Uncertainty: 0.126  
MB MDC: 0.183  
MB Numerical Performance Indicator: 3.37  
MB Status vs Numerical Indicator: N/A  
MB Status vs. MDC: See Comment\*

**Laboratory Control Sample Assessment**

LCSID: LCS42805 N  
LCS Name: LCS42805

Count Date: 7/30/2018  
Spike I.D.: 17-030  
Spike Concentration (pCi/mL): 80.162  
Volume Used (mL): 0.10  
Aliquot Volume (L, g, F): 0.502  
Target Conc. (pCi/L, g, F): 15.960  
Result (pCi/L, g, F): 1.470  
Uncertainty (Calculated): 13.005  
LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.533  
Numerical Performance Indicator: -3.70  
Percent Recovery: 81.48%  
Status vs Numerical Indicator: N/A  
Status vs Recovery: Pass

**Duplicate Sample Assessment**

Sample I.D.: 267124009  
Duplicate Sample I.D.: 267124009DUP  
Sample Result (pCi/L, g, F): 0.435  
Sample Result Counting Uncertainty (pCi/L, g, F): 0.168  
Sample Duplicate Result (pCi/L, g, F): 0.464  
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.115  
Are sample and/or duplicate results below MDC? See Below ##  
Duplicate Numerical Performance Indicator: -0.278  
Duplicate RPD: 6.41%  
Duplicate Status vs Numerical Indicator: N/A  
Duplicate Status vs RPD: Pass

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.  
267124009  
267124009DUP

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

Comments:  
\*The method blank result is below the reporting limit for this analysis and is acceptable.

**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Spike I.D.:  
MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
Spike Volume Used in MS (mL):  
Spike Volume Used in MSD (mL):  
MS Aliquot (L, g, F):  
MS Target Conc. (pCi/L, g, F):  
MSD Aliquot (L, g, F):  
MSD Target Conc. (pCi/L, g, F):  
Spike uncertainty (calculated):  
Sample Result:  
Sample Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
MS Numerical Performance Indicator:  
MSD Numerical Performance Indicator:  
MS Percent Recovery:  
MSD Percent Recovery:  
MS Status vs Numerical Indicator:  
MSD Status vs Numerical Indicator:  
MS Status vs Recovery:  
MSD Status vs Recovery:

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
Duplicate Numerical Performance Indicator:  
MS/MSD Duplicate RPD:  
MS/MSD Duplicate Status vs Numerical Indicator:  
MS/MSD Duplicate Status vs RPD:

8/15/18  
LAL

LAL 7/31/18

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: LAL  
Date: 7/24/2018  
Worklist: 42805  
Matrix: DW

**Method Blank Assessment**

MB Sample ID: 1498647  
MB concentration: 0.216  
MB Counting Uncertainty: 0.126  
MB MDC: 0.183  
MB Numerical Performance Indicator: 3.37  
MB Status vs Numerical Indicator: N/A  
MB Status vs. MDC: See Comment\*

**Laboratory Control Sample Assessment**

LCS42805	Y
Count Date: 7/30/2018	LCS42805
Spike I.D.: 17-030	17-030
Spike Concentration (pCi/mL): 80.162	80.162
Volume Used (mL): 0.10	0.10
Aliquot Volume (L, g, F): 0.502	0.513
Target Conc. (pCi/L, g, F): 15.960	15.618
Uncertainty (Calculated): 1.470	1.439
Result (pCi/L, g, F): 13.005	12.232
LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.533	0.565
Numerical Performance Indicator: -3.70	-4.29
Percent Recovery: 81.48%	78.32%
Status vs Numerical Indicator: N/A	N/A
Status vs Recovery: Pass	Pass

**Duplicate Sample Assessment**

Sample I.D.:	LCS42805
Duplicate Sample I.D.:	LCS42805
Sample Result (pCi/L, g, F):	13.005
Sample Result Counting Uncertainty (pCi/L, g, F):	0.533
Sample Duplicate Result (pCi/L, g, F):	12.232
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.565
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	1.949
Duplicate RPD:	6.12%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

267124009
267124009DUP

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

Comments:  
\*The method blank result is below the reporting limit for this analysis and is acceptable.

**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:

MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
Spike Volume Used in MS (mL):  
Spike Volume Used in MSD (mL):  
MS Aliquot (L, g, F):  
MS Target Conc. (pCi/L, g, F):  
MSD Aliquot (L, g, F):  
MSD Target Conc. (pCi/L, g, F):  
Spike uncertainty (calculated):

Sample Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
MS Numerical Performance Indicator:  
MSD Numerical Performance Indicator:  
MS Percent Recovery:  
MSD Percent Recovery:  
MS Status vs Numerical Indicator:  
MSD Status vs Numerical Indicator:  
MS Status vs Recovery:  
MSD Status vs Recovery:

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:

Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
Duplicate Numerical Performance Indicator:  
MS/MSD Duplicate RPD:  
MS/MSD Duplicate Status vs Numerical Indicator:  
MS/MSD Duplicate Status vs RPD:

7/31/18  
LAL

AM7/31/18

July 20, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267105

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 13, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267105

---

### 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

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267105

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
267105001	FB-01	Water	07/12/18 08:55	07/13/18 09:20
267105002	EB-02	Water	07/12/18 09:05	07/13/18 09:20
267105003	PZ-16+QC	Water	07/12/18 11:15	07/13/18 09:20

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267105

Lab ID	Sample ID	Method	Analysts	Analytes Reported
267105001	FB-01	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267105002	EB-02	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267105003	PZ-16+QC	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267105

Sample: <b>FB-01</b>		Lab ID: <b>267105001</b>		Collected: 07/12/18 08:55		Received: 07/13/18 09:20		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 19:10	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 19:10	7440-38-2		
Barium	ND	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 19:10	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 19:10	7440-41-7		
Boron	ND	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 19:10	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 19:10	7440-43-9		
Calcium	ND	mg/L	0.50	0.014	1	07/17/18 11:31	07/19/18 19:10	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 19:10	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 19:10	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 19:10	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 19:10	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 19:10	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 19:10	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 19:10	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 13:47	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		07/16/18 13:03			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>0.080J</b>	mg/L	0.25	0.024	1		07/17/18 21:35	16887-00-6	B	
Fluoride	ND	mg/L	0.30	0.029	1		07/17/18 21:35	16984-48-8		
Sulfate	ND	mg/L	1.0	0.017	1		07/17/18 21:35	14808-79-8		

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267105

Sample: EB-02		Lab ID: 267105002		Collected: 07/12/18 09:05		Received: 07/13/18 09:20		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 19:16	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 19:16	7440-38-2		
Barium	ND	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 19:16	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 19:16	7440-41-7		
Boron	ND	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 19:16	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 19:16	7440-43-9		
Calcium	ND	mg/L	0.50	0.014	1	07/17/18 11:31	07/19/18 19:16	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 19:16	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 19:16	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 19:16	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 19:16	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 19:16	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 19:16	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 19:16	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 16:22	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>15.0J</b>	mg/L	25.0	10.0	1		07/16/18 13:03			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	ND	mg/L	0.25	0.024	1		07/17/18 21:56	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		07/17/18 21:56	16984-48-8		
Sulfate	ND	mg/L	1.0	0.017	1		07/17/18 21:56	14808-79-8		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267105

Sample: PZ-16+QC		Lab ID: 267105003		Collected: 07/12/18 11:15		Received: 07/13/18 09:20		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 19:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 19:22	7440-38-2	
Barium	<b>0.043</b>	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 19:22	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 19:22	7440-41-7	
Boron	<b>0.21</b>	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 19:22	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 19:22	7440-43-9	
Calcium	<b>85.2</b>	mg/L	25.0	0.69	50	07/17/18 11:31	07/19/18 19:28	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 19:22	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 19:22	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 19:22	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 19:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 19:22	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 19:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 19:22	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 16:25	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>285</b>	mg/L	25.0	10.0	1		07/16/18 13:03		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>7.2</b>	mg/L	0.25	0.024	1		07/17/18 23:39	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		07/17/18 23:39	16984-48-8	
Sulfate	<b>48.8</b>	mg/L	1.0	0.017	1		07/17/18 23:39	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267105

QC Batch: 9896 Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury  
Associated Lab Samples: 267105001, 267105002, 267105003

METHOD BLANK: 44864 Matrix: Water  
Associated Lab Samples: 267105001, 267105002, 267105003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	07/17/18 12:59	

LABORATORY CONTROL SAMPLE: 44865

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0026	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44866 44867

Parameter	Units	267060002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
Mercury	mg/L	ND	.0025	.0025	0.0025	0.0028	100	111	75-125	10	20	

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267105

QC Batch: 9923 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 267105001, 267105002, 267105003

METHOD BLANK: 44985 Matrix: Water  
Associated Lab Samples: 267105001, 267105002, 267105003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	07/19/18 17:08	
Arsenic	mg/L	ND	0.0050	0.00057	07/19/18 17:08	
Barium	mg/L	ND	0.010	0.00078	07/19/18 17:08	
Beryllium	mg/L	ND	0.0030	0.000050	07/19/18 17:08	
Boron	mg/L	ND	0.040	0.0039	07/19/18 17:08	
Cadmium	mg/L	ND	0.0010	0.000093	07/19/18 17:08	
Calcium	mg/L	ND	0.50	0.014	07/19/18 17:08	
Chromium	mg/L	ND	0.010	0.0016	07/19/18 17:08	
Cobalt	mg/L	ND	0.010	0.00052	07/19/18 17:08	
Lead	mg/L	ND	0.0050	0.00027	07/19/18 17:08	
Lithium	mg/L	ND	0.050	0.00097	07/19/18 17:08	
Molybdenum	mg/L	ND	0.010	0.0019	07/19/18 17:08	
Selenium	mg/L	ND	0.010	0.0014	07/19/18 17:08	
Thallium	mg/L	ND	0.0010	0.00014	07/19/18 17:08	

LABORATORY CONTROL SAMPLE: 44986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.11	108	80-120	
Arsenic	mg/L	.1	0.10	104	80-120	
Barium	mg/L	.1	0.10	104	80-120	
Beryllium	mg/L	.1	0.11	113	80-120	
Boron	mg/L	1	1.1	106	80-120	
Cadmium	mg/L	.1	0.11	106	80-120	
Calcium	mg/L	1	1.1	108	80-120	
Chromium	mg/L	.1	0.11	107	80-120	
Cobalt	mg/L	.1	0.11	105	80-120	
Lead	mg/L	.1	0.11	107	80-120	
Lithium	mg/L	.1	0.11	110	80-120	
Molybdenum	mg/L	.1	0.11	105	80-120	
Selenium	mg/L	.1	0.11	107	80-120	
Thallium	mg/L	.1	0.11	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44987 44988

Parameter	Units	267107001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
			Spike Conc.	MS Result	MSD Spike Conc.	MSD Result					
Antimony	mg/L	ND	.1	0.11	.1	0.11	109	106	75-125	2	20

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267105

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44987		44988		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		267107001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	1	20		
Barium	mg/L	0.057	.1	.1	0.17	0.16	112	101	75-125	7	20		
Beryllium	mg/L	ND	.1	.1	0.094	0.096	94	96	75-125	3	20		
Boron	mg/L	0.64	1	1	1.4	1.5	79	82	75-125	2	20		
Cadmium	mg/L	ND	.1	.1	0.10	0.10	103	103	75-125	0	20		
Calcium	mg/L	140	1	1	141	138	122	-184	75-125	2	20	M6	
Chromium	mg/L	ND	.1	.1	0.10	0.10	101	100	75-125	1	20		
Cobalt	mg/L	ND	.1	.1	0.099	0.099	99	99	75-125	0	20		
Lead	mg/L	ND	.1	.1	0.10	0.099	100	99	75-125	1	20		
Lithium	mg/L	0.013J	.1	.1	0.11	0.11	95	96	75-125	1	20		
Molybdenum	mg/L	0.0022J	.1	.1	0.11	0.11	108	104	75-125	4	20		
Selenium	mg/L	ND	.1	.1	0.10	0.10	104	102	75-125	2	20		
Thallium	mg/L	0.00077J	.1	.1	0.10	0.10	102	100	75-125	2	20		

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**QUALITY CONTROL DATA**

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267105

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QC Batch: 9855 Analysis Method: SM 2540C  
 QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids  
 Associated Lab Samples: 267105001, 267105002, 267105003

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LABORATORY CONTROL SAMPLE: 44724

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

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SAMPLE DUPLICATE: 44725

Parameter	Units	267056012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	485	495	2	10	

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SAMPLE DUPLICATE: 44726

Parameter	Units	267101003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	447	453	1	10	

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267105

QC Batch: 9904 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 267105001, 267105002, 267105003

METHOD BLANK: 44910 Matrix: Water  
Associated Lab Samples: 267105001, 267105002, 267105003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.064J	0.25	0.024	07/17/18 13:20	
Fluoride	mg/L	ND	0.30	0.029	07/17/18 13:20	
Sulfate	mg/L	ND	1.0	0.017	07/17/18 13:20	

LABORATORY CONTROL SAMPLE: 44911

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.6	96	90-110	
Fluoride	mg/L	10	10.3	103	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44912 44913

Parameter	Units	267060001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	72.6	10	10	67.0	67.1	-56	-55	90-110	0	15	E
Fluoride	mg/L	0.35	10	10	10.9	11.2	106	108	90-110	2	15	
Sulfate	mg/L	579	10	10	302	302	-2770	-2760	90-110	0	15	E

MATRIX SPIKE SAMPLE: 44914

Parameter	Units	267060002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	66.9	10	67.3	4	90-110	E
Fluoride	mg/L	0.62	10	10.9	102	90-110	
Sulfate	mg/L	598	10	304	-2940	90-110	E

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267105

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### 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.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267105

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267105001	FB-01	EPA 3005A	9923	EPA 6020B	10127
267105002	EB-02	EPA 3005A	9923	EPA 6020B	10127
267105003	PZ-16+QC	EPA 3005A	9923	EPA 6020B	10127
267105001	FB-01	EPA 7470A	9896	EPA 7470A	9944
267105002	EB-02	EPA 7470A	9896	EPA 7470A	9944
267105003	PZ-16+QC	EPA 7470A	9896	EPA 7470A	9944
267105001	FB-01	SM 2540C	9855		
267105002	EB-02	SM 2540C	9855		
267105003	PZ-16+QC	SM 2540C	9855		
267105001	FB-01	EPA 300.0	9904		
267105002	EB-02	EPA 300.0	9904		
267105003	PZ-16+QC	EPA 300.0	9904		

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**CHAIN OF CUSTODY RECORD**

CLIENT NAME: Georgia Power  
 CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE, Atlanta, GA 30308, 404-506-7239  
 REPORT TO: Joju Abraham, Health McCorkle  
 REQUESTED COMPLETION DATE: *Standard*, PO #: GPC10684198  
 PROJECT NAME/STATE: Plant Mitchell CER Phase II, GA  
 PROJECT #: 6122160170.04

Collection DATE	Collection TIME	MATRIX CODE	C O M P	G R A B	SAMPLE IDENTIFICATION
7/12/18	0855	W	X	X	FB-01
↓	0905	W	X	X	EB-02
	1115	GW	X	X	PZ-16+QC Temp Blank

CONTAINER TYPE	PRESERVATION	ANALYSIS REQUESTED										CONTAINER TYPE	PRESERVATION		
		P	P	P	P	P	P	P	P	P	P				
P - PLASTIC	1 - HCl, 56°C	3	7	7	3	3	7	7	3	3	7	7	3	P - PLASTIC	1 - HCl, 56°C
A - AMBER GLASS	2 - H <sub>2</sub> SO <sub>4</sub> , 56°C													A - AMBER GLASS	2 - H <sub>2</sub> SO <sub>4</sub> , 56°C
G - CLEAR GLASS	3 - HNO <sub>3</sub>													G - CLEAR GLASS	3 - HNO <sub>3</sub>
V - VOA VIAL	4 - NaOH, 56°C													V - VOA VIAL	4 - NaOH, 56°C
S - STERILE	5 - NaOH/ZnAc, 56°C													S - STERILE	5 - NaOH/ZnAc, 56°C
O - OTHER	6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C													O - OTHER	6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C
	7 - 56°C not frozen														7 - 56°C not frozen

CONTAINER TYPE	PRESERVATION	# of	Metal App III & IV	IC (Cl, F, SO <sub>4</sub> )	TDS	Radium 226 & 228
		4	X	X	X	X
		4	X	X	X	X
		6	X	X	X	X

DATE/TIME: 7/12/18 1745  
 RECEIVED BY: *Howard*  
 DATE/TIME: 7/12/18 1745  
 RECEIVED BY: *Howard*  
 DATE/TIME: 7/13/18 0920  
 RECEIVED BY: *Howard*  
 DATE/TIME: 7/13/18 1113  
 RECEIVED BY: *Howard*

LAB #: 267105  
 NO#: 267105  
 DATE/TIME: 7/12/18/1815  
 DATE/TIME: 7/12/18/1815  
 CLIENT: OTHER FS  
 COURIER: # of Coolers  
 SAMPLE SHIPPED VIA: USPS  
 CUSTODY SEAL: Intact, Broken, Not Present  
 RELINQUISHED BY: *Howard*  
 RELINQUISHED BY: *Howard*  
 TRACKING #: *113*  
 TEMPERATURE: Min: *11.3* Max: *11.3*

**Sample Condition Upon Receipt**

Face Analytical

Client Name: GIA Power

Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 812193944320

**WO#: 267105**

PM: BM

Due Date: 07/20/18

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

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 1.3

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 7/13/18 MR

Temp should be above freezing to 6°C

Comments:

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

**Client Notification/ Resolution:**

Field Data Required? 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).

August 09, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267106

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 13, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267106

---

### **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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267106

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
267106001	FB-01	Water	07/12/18 08:55	07/13/18 09:20
267106002	EB-02	Water	07/12/18 09:05	07/13/18 09:20
267106003	PZ-16+QC	Water	07/12/18 11:15	07/13/18 09:20

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267106

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
267106001	FB-01	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267106002	EB-02	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267106003	PZ-16+QC	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267106

**Sample: FB-01**      **Lab ID: 267106001**      Collected: 07/12/18 08:55      Received: 07/13/18 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.159 ± 0.156 (0.300)</b> C:91% T:NA	pCi/L	07/26/18 08:31	13982-63-3	
Radium-228	EPA 9320	<b>0.587 ± 0.460 (0.917)</b> C:71% T:77%	pCi/L	08/01/18 12:52	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.746 ± 0.616 (1.22)</b>	pCi/L	08/06/18 12:23	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267106

**Sample: EB-02**      **Lab ID: 267106002**      Collected: 07/12/18 09:05      Received: 07/13/18 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.178 ± 0.158 (0.279)</b> <b>C:81% T:NA</b>	pCi/L	07/26/18 08:31	13982-63-3	
Radium-228	EPA 9320	<b>0.502 ± 0.509 (1.05)</b> <b>C:64% T:68%</b>	pCi/L	08/01/18 12:52	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.680 ± 0.667 (1.33)</b>	pCi/L	08/06/18 12:23	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267106

Sample: <b>PZ-16+QC</b>		Lab ID: <b>267106003</b>	Collected: 07/12/18 11:15	Received: 07/13/18 09:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.252 ± 0.186 (0.327)</b>		pCi/L	07/26/18 08:31	13982-63-3	
		<b>C:101% T:NA</b>					
Radium-228	EPA 9320	<b>0.156 ± 0.369 (0.819)</b>		pCi/L	08/01/18 12:53	15262-20-1	
		<b>C:69% T:83%</b>					
Total Radium	Total Radium Calculation	<b>0.408 ± 0.555 (1.15)</b>		pCi/L	08/06/18 12:27	7440-14-4	

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267106

QC Batch: 306537

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 267106001, 267106002, 267106003

METHOD BLANK: 1498640

Matrix: Water

Associated Lab Samples: 267106001, 267106002, 267106003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.497 ± 0.336 (0.630) C:78% T:78%	pCi/L	08/01/18 12:53	

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 Mitchell Ash Ponds

Pace Project No.: 267106

QC Batch: 306538

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 267106001, 267106002, 267106003

METHOD BLANK: 1498641

Matrix: Water

Associated Lab Samples: 267106001, 267106002, 267106003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.177 ± 0.197 (0.406) C:83% T:NA	pCi/L	07/26/18 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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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267106

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### 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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

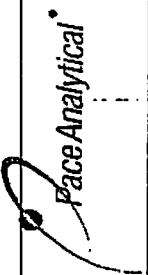
Project: Plant Mitchell Ash Ponds

Pace Project No.: 267106

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267106001	FB-01	EPA 9315	306538		
267106002	EB-02	EPA 9315	306538		
267106003	PZ-16+QC	EPA 9315	306538		
267106001	FB-01	EPA 9320	306537		
267106002	EB-02	EPA 9320	306537		
267106003	PZ-16+QC	EPA 9320	306537		
267106001	FB-01	Total Radium Calculation	308499		
267106002	EB-02	Total Radium Calculation	308499		
267106003	PZ-16+QC	Total Radium Calculation	308501		

### REPORT OF LABORATORY ANALYSIS

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**CHAIN OF CUSTODY RECORD**

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

PAGE: 1 OF 1

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239		<b>REPORT TO:</b> Joju Abraham Health McCorkle <b>PO #:</b> GPC10684198		<b>PROJECT NAME/STATE:</b> Plant Mitchell CCR Phase II, GA PROJECT #: 6122160170,04											
<b>Collection DATE</b> 7/12/18 ↓	<b>Collection TIME</b> 0855 0905 1115	<b>MATRIX CODE</b> W W GW	<b>Sample Identification</b> FB-01 EB-02 PZ-16+QC Temp Blank	<b>Collection</b> G A B	<b>ANALYSIS REQUESTED</b>	<b>CONTAINER TYPE</b> P P P	<b>CONTAINER TYPE</b> P P P	<b>ANALYSIS REQUESTED</b>	<b>CONTAINER TYPE</b> P P P	<b>CONTAINER TYPE</b> P P P	<b>ANALYSIS REQUESTED</b>	<b>CONTAINER TYPE</b> P P P	<b>CONTAINER TYPE</b> P P P	<b>ANALYSIS REQUESTED</b>	
															<b>Collection DATE</b> 7/12/18 ↓
<b>SAMPLED BY AND TIME:</b> D Howard 1745 <b>RECEIVED BY:</b> D Howard 1745		<b>DATE/TIME:</b> 7/12/18 1745		<b>RELINQUISHED BY:</b> D Howard		<b>DATE/TIME:</b> 7/12/18 1815		<b>LAB #:</b> 267106		<b>REMARKS/ADDITIONAL INFORMATION</b>		<b>NO# : 267106</b> 		<b>FOR LAB USE ONLY</b>	
<b>RECEIVED BY LAB:</b> J. Abraham <b>Temperature:</b> Min: 1.3 Max:		<b>DATE/TIME:</b> 7/12/18 0920		<b>USPS</b> Custody Seal Intact		<b>FED-EX</b> Broken		<b>USPS</b> Not Present		<b>CLIENT</b> Courier ID:		<b>OTHER</b> FS		<b>Tracking #:</b> Entered into LIMS:	



**Sample Condition Upon Receipt**

Client Name: GIA Power

Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 812193944320

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

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used 83 Type of Ice: Wet Blue None

Cooler Temperature 1.3 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

**WO#: 267106**

PM: BM

Due Date: 08/10/18

CLIENT: GAPower-CCR

Samples on ice, cooling process has begun

Date and Initials of person examining contents: 7/13/18 MR

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

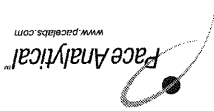
Field Data Required? Y N

**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

# Quality Control Sample Performance Assessment

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



Test: RA-228  
Analyst: VAL  
Date: 7/25/2018  
Worklist: 42802  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1498640
MB concentration	0.497
M/B Counting Uncertainty	0.324
MB MDC	0.630
MB Numerical Performance Indicator	3.01
MB Status vs Numerical Indicator	N/A
MB Status vs. MDC	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	N
LCS42802	LCS42802
Count Date:	8/1/2018
Spike I.D.:	18-026
Spike Concentration (pCi/mL):	40.475
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.803
Target Conc. (pCi/L, g, F):	5.043
Uncertainty (Calculated):	0.247
Result (pCi/L, g, F):	5.404
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.710
Numerical Performance Indicator:	0.94
Percent Recovery:	107.16%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.	
Sample MS I.D.	
Sample MSD I.D.	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Duplicate Sample Assessment	
Sample I.D.:	267109003
Duplicate Sample I.D.:	267109003DUP
Sample Result (pCi/L, g, F):	0.748
Sample Result Counting Uncertainty (pCi/L, g, F):	0.372
Sample Duplicate Result (pCi/L, g, F):	0.299
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.283
Are sample and/or duplicate results below MDC?	See Below: #
Duplicate Numerical Performance Indicator:	1.907
Duplicate RPD:	90.07%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
Enter Duplicate sample IDs if other than LCS/LCSD in the space below:	267109003DUP
267109003	
267109003DUP	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.	
Sample MS I.D.	
Sample MSD I.D.	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

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

Comments:

Results < 5x MDC, NT < 2 acceptable

\*\*\*Batch must be re-prepped due to unacceptable precision\*\*\*

8/26/18

8-6-18



# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: LAL  
Date: 7/24/2018  
Worklist: 42803  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1498641
MB concentration:	0.177
MB Counting Uncertainty:	0.195
MB MDC:	0.406
MB Numerical Performance Indicator:	1.77
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		Y
Count Date:	LCS42803	LCS42803
Spike I.D.:	7/26/2018	7/26/2018
Spike Concentration (pCi/mL):	17-030	17-030
Volume Used (mL):	80.163	80.163
Aliquot Volume (L, g, F):	0.10	0.10
Target Conc. (pCi/L, g, F):	0.520	0.508
Uncertainty (Calculated):	15.406	15.786
Result (pCi/L, g, F):	1.419	1.454
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	12.581	13.269
Numerical Performance Indicator:	0.987	1.046
Percent Recovery:	-3.20	-2.75%
Status vs Numerical Indicator:	81.67%	84.06%
Status vs Recovery:	N/A	N/A
	Pass	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS42803
Duplicate Sample I.D.:	LCS42803
Sample Result (pCi/L, g, F):	12.581
Sample Duplicate Result (pCi/L, g, F):	0.987
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	13.269
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	-0.938
Duplicate RPD:	5.32%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

*3/11/18*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

*LAM 7/26/18*

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: LAL  
Date: 7/24/2018  
Worklist: 42803  
Matrix: DW

**Method Blank Assessment**

MB Sample ID: 1498641  
MB concentration: 0.177  
MB Counting Uncertainty: 0.195  
MB MDC: 0.406  
MB Numerical Performance Indicator: 1.77  
MB Status vs Numerical Indicator: N/A  
MB Status vs. MDC: Pass

**Laboratory Control Sample Assessment**

LCS (Y or N)?	N	LCS D42803
Count Date:	7/26/2018	LCS D42803
Spike I.D.:	17-030	
Spike Concentration (pCi/mL):	80.163	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.520	
Target Conc. (pCi/L, g, F):	15.406	
Uncertainty (Calculated):	1.419	
Result (pCi/L, g, F):	12.581	
Numerical Performance Indicator:	0.987	
Percent Recovery:	-3.20	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:

Spike I.D.:  
MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
Spike Volume Used in MS (mL):  
Spike Volume Used in MSD (mL):  
MS Aliquot (L, g, F):  
MS Target Conc. (pCi/L, g, F):  
MSD Aliquot (L, g, F):  
MSD Target Conc. (pCi/L, g, F):  
Spike uncertainty (calculated):

Sample Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
MS Numerical Performance Indicator:  
MS Percent Recovery:  
MSD Percent Recovery:  
MS Status vs Numerical Indicator:  
MSD Status vs Numerical Indicator:  
MS Status vs Recovery:  
MSD Status vs Recovery:

**Duplicate Sample Assessment**

Sample I.D.: 267109003  
Duplicate Sample I.D.: 267109003DUP

Sample Result Counting Uncertainty (pCi/L, g, F): 0.674  
Sample Duplicate Result (pCi/L, g, F): 0.275  
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.474  
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.224

Are sample and/or duplicate results below MDC? See Below #  
Duplicate Numerical Performance Indicator: 1.104  
Duplicate RPD: 84.80%  
Duplicate Status vs Numerical Indicator: N/A  
Duplicate Status vs RPD: Fail\*\*\*

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
Duplicate Numerical Performance Indicator:  
MS/MSD Duplicate RPD:  
MS/MSD Duplicate Status vs Numerical Indicator:  
MS/MSD Duplicate Status vs RPD:

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

Comments:

*results = 50 ncc, NI = acceptable for all matrices*

*Batch must be re-prepped due to unacceptable precision.*

*Op 7/27/18*

*01/08/18*

*UAM 7/20/18*

July 21, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267107

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 13, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267107

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### 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

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267107

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
267107001	PZ-19	Water	07/12/18 16:30	07/13/18 09:20
267107002	Dup-1	Water	07/12/18 00:00	07/13/18 09:20
267107003	PZ-25+QC	Water	07/12/18 10:50	07/13/18 09:20

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267107

Lab ID	Sample ID	Method	Analysts	Analytes Reported
267107001	PZ-19	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267107002	Dup-1	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267107003	PZ-25+QC	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267107

Sample: PZ-19		Lab ID: 267107001		Collected: 07/12/18 16:30		Received: 07/13/18 09:20		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 19:45	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 19:45	7440-38-2	
Barium	<b>0.057</b>	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 19:45	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 19:45	7440-41-7	
Boron	<b>0.64</b>	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 19:45	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 19:50	7440-43-9	
Calcium	<b>140</b>	mg/L	25.0	0.69	50	07/17/18 11:31	07/19/18 19:50	7440-70-2	M6
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 19:45	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 19:45	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 19:45	7439-92-1	
Lithium	<b>0.013J</b>	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 19:45	7439-93-2	
Molybdenum	<b>0.0022J</b>	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 19:45	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 19:45	7782-49-2	
Thallium	<b>0.00077J</b>	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 19:45	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	07/18/18 10:37	07/18/18 17:16	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>523</b>	mg/L	25.0	10.0	1		07/17/18 12:13		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>6.3</b>	mg/L	0.25	0.024	1		07/17/18 19:34	16887-00-6	
Fluoride	<b>0.17J</b>	mg/L	0.30	0.029	1		07/17/18 19:34	16984-48-8	
Sulfate	<b>84.9</b>	mg/L	5.0	0.085	5		07/20/18 13:22	14808-79-8	M1

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267107

Sample: Dup-1		Lab ID: 267107002		Collected: 07/12/18 00:00		Received: 07/13/18 09:20		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	<b>0.0013J</b>	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 20:25	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 20:25	7440-38-2		
Barium	<b>0.058</b>	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 20:25	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 20:25	7440-41-7		
Boron	<b>0.65</b>	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 20:25	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 20:25	7440-43-9		
Calcium	<b>142</b>	mg/L	25.0	0.69	50	07/17/18 11:31	07/19/18 20:30	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 20:25	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 20:25	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 20:25	7439-92-1		
Lithium	<b>0.013J</b>	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 20:25	7439-93-2		
Molybdenum	<b>0.0022J</b>	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 20:25	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 20:25	7782-49-2		
Thallium	<b>0.00079J</b>	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 20:25	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<b>0.000038J</b>	mg/L	0.00050	0.000036	1	07/18/18 10:37	07/18/18 17:25	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>518</b>	mg/L	25.0	10.0	1		07/17/18 12:13			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>6.3</b>	mg/L	0.25	0.024	1		07/17/18 20:36	16887-00-6		
Fluoride	<b>0.18J</b>	mg/L	0.30	0.029	1		07/17/18 20:36	16984-48-8		
Sulfate	<b>86.0</b>	mg/L	5.0	0.085	5		07/20/18 13:42	14808-79-8	M1	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267107

Sample: PZ-25+QC		Lab ID: 267107003		Collected: 07/12/18 10:50		Received: 07/13/18 09:20		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 20:48	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 20:48	7440-38-2		
Barium	<b>0.10</b>	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 20:48	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 20:48	7440-41-7		
Boron	<b>0.22</b>	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 20:48	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 20:48	7440-43-9		
Calcium	<b>87.1</b>	mg/L	25.0	0.69	50	07/17/18 11:31	07/19/18 20:53	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 20:48	7440-47-3		
Cobalt	<b>0.00080J</b>	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 20:48	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 20:48	7439-92-1		
Lithium	<b>0.0063J</b>	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 20:48	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 20:48	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 20:48	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 20:48	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/18/18 10:37	07/18/18 17:27	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>310</b>	mg/L	25.0	10.0	1		07/17/18 12:13			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>2.6</b>	mg/L	0.25	0.024	1		07/17/18 20:57	16887-00-6		
Fluoride	<b>0.21J</b>	mg/L	0.30	0.029	1		07/17/18 20:57	16984-48-8		
Sulfate	<b>48.3</b>	mg/L	1.0	0.017	1		07/17/18 20:57	14808-79-8		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267107

QC Batch: 10002

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Associated Lab Samples: 267107001, 267107002, 267107003

METHOD BLANK: 45320

Matrix: Water

Associated Lab Samples: 267107001, 267107002, 267107003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	07/18/18 17:11	

LABORATORY CONTROL SAMPLE: 45321

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0025	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 45322

45323

Parameter	Units	267107001 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	.0025	.0025	0.0025	0.0025	97	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.

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267107

QC Batch: 9923 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 267107001, 267107002, 267107003

METHOD BLANK: 44985 Matrix: Water  
Associated Lab Samples: 267107001, 267107002, 267107003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	07/19/18 17:08	
Arsenic	mg/L	ND	0.0050	0.00057	07/19/18 17:08	
Barium	mg/L	ND	0.010	0.00078	07/19/18 17:08	
Beryllium	mg/L	ND	0.0030	0.000050	07/19/18 17:08	
Boron	mg/L	ND	0.040	0.0039	07/19/18 17:08	
Cadmium	mg/L	ND	0.0010	0.000093	07/19/18 17:08	
Calcium	mg/L	ND	0.50	0.014	07/19/18 17:08	
Chromium	mg/L	ND	0.010	0.0016	07/19/18 17:08	
Cobalt	mg/L	ND	0.010	0.00052	07/19/18 17:08	
Lead	mg/L	ND	0.0050	0.00027	07/19/18 17:08	
Lithium	mg/L	ND	0.050	0.00097	07/19/18 17:08	
Molybdenum	mg/L	ND	0.010	0.0019	07/19/18 17:08	
Selenium	mg/L	ND	0.010	0.0014	07/19/18 17:08	
Thallium	mg/L	ND	0.0010	0.00014	07/19/18 17:08	

LABORATORY CONTROL SAMPLE: 44986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.11	108	80-120	
Arsenic	mg/L	.1	0.10	104	80-120	
Barium	mg/L	.1	0.10	104	80-120	
Beryllium	mg/L	.1	0.11	113	80-120	
Boron	mg/L	1	1.1	106	80-120	
Cadmium	mg/L	.1	0.11	106	80-120	
Calcium	mg/L	1	1.1	108	80-120	
Chromium	mg/L	.1	0.11	107	80-120	
Cobalt	mg/L	.1	0.11	105	80-120	
Lead	mg/L	.1	0.11	107	80-120	
Lithium	mg/L	.1	0.11	110	80-120	
Molybdenum	mg/L	.1	0.11	105	80-120	
Selenium	mg/L	.1	0.11	107	80-120	
Thallium	mg/L	.1	0.11	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44987 44988

Parameter	Units	267107001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					
Antimony	mg/L	ND	.1	.1	0.11	0.11	109	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.

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267107

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44987		44988		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		267107001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	1	20		
Barium	mg/L	0.057	.1	.1	0.17	0.16	112	101	75-125	7	20		
Beryllium	mg/L	ND	.1	.1	0.094	0.096	94	96	75-125	3	20		
Boron	mg/L	0.64	1	1	1.4	1.5	79	82	75-125	2	20		
Cadmium	mg/L	ND	.1	.1	0.10	0.10	103	103	75-125	0	20		
Calcium	mg/L	140	1	1	141	138	122	-184	75-125	2	20	M6	
Chromium	mg/L	ND	.1	.1	0.10	0.10	101	100	75-125	1	20		
Cobalt	mg/L	ND	.1	.1	0.099	0.099	99	99	75-125	0	20		
Lead	mg/L	ND	.1	.1	0.10	0.099	100	99	75-125	1	20		
Lithium	mg/L	0.013J	.1	.1	0.11	0.11	95	96	75-125	1	20		
Molybdenum	mg/L	0.0022J	.1	.1	0.11	0.11	108	104	75-125	4	20		
Selenium	mg/L	ND	.1	.1	0.10	0.10	104	102	75-125	2	20		
Thallium	mg/L	0.00077J	.1	.1	0.10	0.10	102	100	75-125	2	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267107

QC Batch: 9943 Analysis Method: SM 2540C  
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids  
Associated Lab Samples: 267107001, 267107002, 267107003

LABORATORY CONTROL SAMPLE: 45065

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	415	104	84-108	

SAMPLE DUPLICATE: 45066

Parameter	Units	267107001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	523	522	0	10	

SAMPLE DUPLICATE: 45067

Parameter	Units	267122011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	432	437	1	10	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267107

QC Batch: 9906 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 267107001, 267107002, 267107003

METHOD BLANK: 44919 Matrix: Water  
Associated Lab Samples: 267107001, 267107002, 267107003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.095J	0.25	0.024	07/17/18 18:53	
Fluoride	mg/L	ND	0.30	0.029	07/17/18 18:53	
Sulfate	mg/L	ND	1.0	0.017	07/17/18 18:53	

LABORATORY CONTROL SAMPLE: 44920

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.2	102	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: 44921 44922

Parameter	Units	267107001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.3	10	10	15.8	15.8	95	95	90-110	0	15	
Fluoride	mg/L	0.17J	10	10	10.1	10.0	99	99	90-110	0	15	
Sulfate	mg/L	84.9	10	10	84.5	84.4	-4	-5	90-110	0	15	E,M1

MATRIX SPIKE SAMPLE: 44923

Parameter	Units	267107002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	6.3	10	15.7	94	90-110	
Fluoride	mg/L	0.18J	10	10.0	98	90-110	
Sulfate	mg/L	86.0	10	83.9	-21	90-110	E,M1

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267107

---

### 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

E Analyte concentration exceeded the calibration range. The reported result is estimated.

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

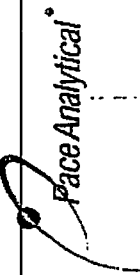
Pace Project No.: 267107

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267107001	PZ-19	EPA 3005A	9923	EPA 6020B	10127
267107002	Dup-1	EPA 3005A	9923	EPA 6020B	10127
267107003	PZ-25+QC	EPA 3005A	9923	EPA 6020B	10127
267107001	PZ-19	EPA 7470A	10002	EPA 7470A	10028
267107002	Dup-1	EPA 7470A	10002	EPA 7470A	10028
267107003	PZ-25+QC	EPA 7470A	10002	EPA 7470A	10028
267107001	PZ-19	SM 2540C	9943		
267107002	Dup-1	SM 2540C	9943		
267107003	PZ-25+QC	SM 2540C	9943		
267107001	PZ-19	EPA 300.0	9906		
267107002	Dup-1	EPA 300.0	9906		
267107003	PZ-25+QC	EPA 300.0	9906		

### REPORT OF LABORATORY ANALYSIS

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**CHAIN OF CUSTODY RECORD**

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

PAGE: 1 OF 1

CLIENT NAME: Georgia Power  
 CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239  
 REPORT TO: Joju Abraham Health McCorkle  
 REQUESTED COMPLETION DATE: *Standard*  
 PROJECT NAME/STATE: *Plant Mitchell/CCR Phase II, GA*  
 PROJECT #: *6122160170.04*  
 CC: Maria Padilla  
 PO #: GPC10684198

CONTAINER TYPE	ANALYSIS REQUESTED				CONTAINER TYPE	PRESERVATION
	P	P	P	P		
# of	3	7	7	3		
C O N T A I N E R S →						
4	Metals App. III & IV EPA 6020/7470	IC (Cl <sup>-</sup> SO <sub>4</sub> ) EPA 300.0	TDS SM 2540C	Radium EPA 846 9315/9320		
4						
6						

Collection DATE	Collection TIME	MATRIX CODE	C O R M A B	SAMPLE IDENTIFICATION
		GW	X	DUP-1
	1050	GW	X	PZ-25 + OC
				Temp Blank

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H <sub>2</sub> SO <sub>4</sub> , ≤6°C
G - CLEAR GLASS	3 - HNO <sub>3</sub>
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , ≤6°C
	7 - ≤6°C not frozen

MATRIX CODES:	REMARKS/ADDITIONAL INFORMATION
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

**NO#: 267107**

SAMPLED BY AND TITLE: *E. Swilley Tech 4* DATE/TIME: *7/12/18 / 1700*  
 RECEIVED BY: *Padilla* DATE/TIME: *7/12/18 / 1825*  
 RECEIVED BY LAB: *Padilla* DATE/TIME: *7/12/18 / 1825*  
 Temperature: Min: *1.7* Max: *1.7*

RELINQUISHED BY: *Deborah Howard* DATE/TIME: *7/12/18 / 1825*  
 RELINQUISHED BY: *Deborah Howard* DATE/TIME: *7/12/18 / 1825*  
 SAMPLE SHIPPED BY: *UPS* DATE/TIME: *7/12/18 / 1825*  
 CARRIER: *UPS* CLIENT: *FS* OTHER: *FS*  
 # of Coolers: *1* Cooler ID: *1*  
 Broken: *0* Not Present: *0*  
 Integrity Seal: *Intact*

**Sample Condition Upon Receipt**

Face Analytical

Client Name: GTA Power

Project #

**WO#: 267107**

PM: **BM**

Due Date: **07/20/18**

CLIENT: **GAPower-CCR**

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 812193944341

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

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

Date and Initials of person examining contents: 7/13/18 JR

Temp should be above freezing to 6°C

Comments:

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Field Data Required?

Y N

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.

August 09, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267109

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 13, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267109

---

### 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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267109

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
267109001	PZ-19	Water	07/12/18 16:30	07/13/18 09:20
267109002	Dup-1	Water	07/12/18 00:00	07/13/18 09:20
267109003	PZ-25+QC	Water	07/12/18 10:50	07/13/18 09:20

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267109

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
267109001	PZ-19	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267109002	Dup-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267109003	PZ-25+QC	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267109

**Sample: PZ-19**      **Lab ID: 267109001**      Collected: 07/12/18 16:30      Received: 07/13/18 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.500 ± 0.238 (0.280)</b> <b>C:84% T:NA</b>	pCi/L	07/26/18 08:31	13982-63-3	
Radium-228	EPA 9320	<b>0.778 ± 0.564 (1.11)</b> <b>C:67% T:70%</b>	pCi/L	08/01/18 12:53	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.28 ± 0.802 (1.39)</b>	pCi/L	08/06/18 12:27	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267109

**Sample: Dup-1**      **Lab ID: 267109002**      Collected: 07/12/18 00:00      Received: 07/13/18 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.526 ± 0.243 (0.311)</b> <b>C:94% T:NA</b>	pCi/L	07/26/18 08:31	13982-63-3	
Radium-228	EPA 9320	<b>0.702 ± 0.408 (0.752)</b> <b>C:71% T:88%</b>	pCi/L	08/01/18 12:53	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.23 ± 0.651 (1.06)</b>	pCi/L	08/06/18 12:27	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267109

Sample: <b>PZ-25+QC</b>		Lab ID: <b>267109003</b>	Collected: 07/12/18 10:50	Received: 07/13/18 09:20	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.674 ± 0.292 (0.346)</b>		pCi/L	07/26/18 08:31	13982-63-3	
		<b>C:77% T:NA</b>					
Radium-228	EPA 9320	<b>0.748 ± 0.395 (0.680)</b>		pCi/L	08/01/18 12:53	15262-20-1	
		<b>C:65% T:82%</b>					
Total Radium	Total Radium Calculation	<b>1.42 ± 0.687 (1.03)</b>		pCi/L	08/06/18 12:27	7440-14-4	

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267109

QC Batch: 306537

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 267109001, 267109002, 267109003

METHOD BLANK: 1498640

Matrix: Water

Associated Lab Samples: 267109001, 267109002, 267109003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.497 ± 0.336 (0.630) C:78% T:78%	pCi/L	08/01/18 12:53	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267109

QC Batch: 306538

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 267109001, 267109002, 267109003

METHOD BLANK: 1498641

Matrix: Water

Associated Lab Samples: 267109001, 267109002, 267109003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.177 ± 0.197 (0.406) C:83% T:NA	pCi/L	07/26/18 08:29	

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 267109

---

### 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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 267109

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267109001	PZ-19	EPA 9315	306538		
267109002	Dup-1	EPA 9315	306538		
267109003	PZ-25+QC	EPA 9315	306538		
267109001	PZ-19	EPA 9320	306537		
267109002	Dup-1	EPA 9320	306537		
267109003	PZ-25+QC	EPA 9320	306537		
267109001	PZ-19	Total Radium Calculation	308501		
267109002	Dup-1	Total Radium Calculation	308501		
267109003	PZ-25+QC	Total Radium Calculation	308501		

### REPORT OF LABORATORY ANALYSIS

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**CHAIN OF CUSTODY RECORD**

*Peace Analytical*

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

PAGE: 1 OF 1

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-508-7239 <b>REPORT TO:</b> Joju Abraham CC: Maria Padilla Health McCorkle <b>REQUESTED COMPLETION DATE:</b> 3/12/18 PO #: GPC10684198 <b>PROJECT NAME/STATE:</b> Plant Mitchell/CCR Phase II, GA PROJECT #: 6122160170.04		<b>CONTAINER TYPE:</b> P PRESERVATION: 3 # of CONTAINERS: 4		<b>ANALYSIS REQUESTED</b> Metals App. III & IV EPA 6020/7470 IC (Cl <sup>-</sup> , SO <sub>4</sub> ) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320		<b>CONTAINER TYPE</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER <b>PRESERVATION</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/NaAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C 7 - 56°C not frozen							
<b>COLLECTION DATE</b> 7/12/18 1630 - 1050 ↓		<b>COLLECTION TIME</b> 1630 - 1050		<b>MATRIX CODE*</b> GW GW GW		<b>GRAB</b> X X X		<b>SAMPLE IDENTIFICATION</b> PZ-19 DWP-1 PZ-25 + QC Temp Blank		<b>ANALYSIS REQUESTED</b> Metals App. III & IV EPA 6020/7470 IC (Cl <sup>-</sup> , SO <sub>4</sub> ) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320		<b>CONTAINER TYPE</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER <b>PRESERVATION</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/NaAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C 7 - 56°C not frozen	
<b>DATE</b> 7/12/18 1630 - 1050 ↓		<b>TIME</b> 1630 - 1050		<b>CODE*</b> GW GW GW		<b>GRAB</b> X X X		<b>IDENTIFICATION</b> PZ-19 DWP-1 PZ-25 + QC Temp Blank		<b>REQUESTED</b> Metals App. III & IV EPA 6020/7470 IC (Cl <sup>-</sup> , SO <sub>4</sub> ) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320		<b>TYPE</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER <b>PRESERVATION</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/NaAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C 7 - 56°C not frozen	
<b>DATE</b> 7/12/18 1630 - 1050 ↓		<b>TIME</b> 1630 - 1050		<b>CODE*</b> GW GW GW		<b>GRAB</b> X X X		<b>IDENTIFICATION</b> PZ-19 DWP-1 PZ-25 + QC Temp Blank		<b>REQUESTED</b> Metals App. III & IV EPA 6020/7470 IC (Cl <sup>-</sup> , SO <sub>4</sub> ) EPA 300.0 TDS SM 2540C Radium 226 & 228 SW-846 9315/9320		<b>TYPE</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER <b>PRESERVATION</b> 1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/NaAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C 7 - 56°C not frozen	

NO#: 267109  


<b>SAMPLED BY AND TITLE:</b> E. Williams Tech 4 <b>RECEIVED BY:</b> M. Padilla	<b>DATE/TIME:</b> 7/12/18 / 1700 <b>DATE/TIME:</b> 7/12/18 / 1815	<b>RELINQUISHED BY:</b> D. V. Howard <b>RELINQUISHED BY:</b> D. V. Howard	<b>DATE/TIME:</b> 7/12/18 / 1815 <b>DATE/TIME:</b> FOR LAB USE ONLY
<b>RECEIVED BY LAB:</b> M. Padilla Checked: Yes No NA Custody Seal: Intact Broken Not Present	<b>DATE/TIME:</b> 7/12/18 / 1815 <b>DATE/TIME:</b> Entered into LIMS:	<b>SAMPLE SHIPPED BY:</b> D. V. Howard UPS # of Coolers:	<b>LAB #:</b> 1815 Tracking #:

**Sample Condition Upon Receipt**

Face Analytical

Client Name: GIA Power

Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 812193944341

**WO#: 267109**

PM: BM

Due Date: 08/10/18

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

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

Date and Initials of person examining contents: 7/13/18 *AK*

Temp should be above freezing to 6°C

Comments:

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Field Data Required? Y N

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 time, incorrect containers

### Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: RA-228  
Analyst: VAL  
Date: 7/25/2018  
Worklist: 42802  
Matrix: DW

MB Sample ID	1498640
MB concentration:	0.497
M/B Counting Uncertainty:	0.324
MB MDC:	0.630
MB Numerical Performance Indicator:	3.01
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

<b>Laboratory Control Sample Assessment</b> LCSD (Y or N)? N	
Count Date:	8/1/2018
Spike I.D.:	18-026
Spike Concentration (pCi/mL):	40.475
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.803
Target Conc. (pCi/L, g, F):	5.043
Uncertainty (Calculated):	0.247
Result (pCi/L, g, F):	5.404
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.710
Numerical Performance Indicator:	0.94
Percent Recovery:	107.16%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

<b>Duplicate Sample Assessment</b> Sample I.D.: 267109003 Duplicate Sample I.D.: 267109003DUP Enter Duplicate sample I.D. if other than LCS/LCSD in the space below.	
Sample Result (pCi/L, g, F):	0.748
Sample Result Counting Uncertainty (pCi/L, g, F):	0.372
Sample Duplicate Result (pCi/L, g, F):	0.299
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.283
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	1.907
Duplicate RPD:	90.07%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

<b>Matrix Spike/Matrix Spike Duplicate Sample Assessment</b> Sample I.D.: Sample MS I.D.: Sample MSD I.D.: Sample Matrix Spike Result: Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): Duplicate Numerical Performance Indicator: Duplicate Status vs Numerical Indicator: Duplicate Status vs RPD:	
---	--

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

Comments:

Results < 5x MDC, NI = 2 acceptable

\*\*\*Batch must be re-prepped due to unacceptable precision\*\*\*

8-6-18

M/8/18

Check/18



# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: LAL  
Date: 7/24/2018  
Worklist: 42803  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1498641
MB concentration:	0.177
MB Counting Uncertainty:	0.195
MB MDC:	0.406
MB Numerical Performance Indicator:	1.77
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		Y
Count Date:	LCS42803	LCS42803
Spike I.D.:	7/26/2018	7/26/2018
Spike Concentration (pCi/mL):	17-030	17-030
Volume Used (mL):	80.163	80.163
Aliquot Volume (L, g, F):	0.10	0.10
Target Conc. (pCi/L, g, F):	0.520	0.508
Uncertainty (Calculated):	15.406	15.786
Result (pCi/L, g, F):	1.419	1.454
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	12.581	13.269
Numerical Performance Indicator:	0.987	1.046
Percent Recovery:	-3.20	-2.75%
Status vs Numerical Indicator:	81.67%	84.06%
Status vs Recovery:	N/A	N/A
	Pass	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS42803
Duplicate Sample I.D.:	LCS42803
Sample Result (pCi/L, g, F):	12.581
Sample Duplicate Result (pCi/L, g, F):	0.987
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	13.269
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	-0.938
Duplicate RPD:	5.32%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

*3/11/18*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

*LAM 7/26/18*

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: LAL  
Date: 7/24/2018  
Worklist: 42803  
Matrix: DW

**Method Blank Assessment**

MB Sample ID: 1498641  
MB concentration: 0.177  
MB Counting Uncertainty: 0.195  
MB MDC: 0.406  
MB Numerical Performance Indicator: 1.77  
MB Status vs Numerical Indicator: N/A  
MB Status vs. MDC: Pass

**Laboratory Control Sample Assessment**

LCS (Y or N)?	N	LCS D42803
Count Date:	7/26/2018	LCS D42803
Spike I.D.:	17-030	
Spike Concentration (pCi/mL):	80.163	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.520	
Target Conc. (pCi/L, g, F):	15.406	
Uncertainty (Calculated):	1.419	
Result (pCi/L, g, F):	12.581	
Numerical Performance Indicator:	0.987	
Percent Recovery:	-3.20	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:

Spike I.D.:  
MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
Spike Volume Used in MS (mL):  
Spike Volume Used in MSD (mL):  
MS Aliquot (L, g, F):  
MS Target Conc. (pCi/L, g, F):  
MSD Aliquot (L, g, F):  
MSD Target Conc. (pCi/L, g, F):  
Spike uncertainty (calculated):

Sample Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
MS Numerical Performance Indicator:  
MS Percent Recovery:  
MSD Percent Recovery:  
MS Status vs Numerical Indicator:  
MSD Status vs Numerical Indicator:  
MS Status vs Recovery:  
MSD Status vs Recovery:

**Duplicate Sample Assessment**

Sample I.D.: 267109003  
Duplicate Sample I.D.: 267109003DUP

Sample Result Counting Uncertainty (pCi/L, g, F): 0.674  
Sample Duplicate Result (pCi/L, g, F): 0.275  
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.474  
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.224  
Are sample and/or duplicate results below MDC? See Below #  
Duplicate Numerical Performance Indicator: 1.104  
Duplicate RPD: 84.80%  
Duplicate Status vs Numerical Indicator: N/A  
Duplicate Status vs RPD: Fail\*\*\*

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.  
267109003  
267109003DUP

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Sample Matrix Spike Result:  
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Duplicate Result:  
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
Duplicate Numerical Performance Indicator:  
MS/MSD Duplicate RPD:  
MS/MSD Duplicate Status vs Numerical Indicator:  
MS/MSD Duplicate Status vs RPD:

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

Comments:

*results = 50 ncc, NI = acceptable for all matrices*

*01/08/18*

\*\*\*Batch must be re-prepped due to unacceptable precision.

*Op 7/27/18*

*UAM 7/20/18*

August 27, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 268373

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on August 17, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268373

---

### 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

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268373

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
268373001	Field Blank	Water	08/15/18 13:55	08/17/18 17:30
268373002	Equipment Blank	Water	08/15/18 14:00	08/17/18 17:30
268373003	PZ 18	Water	08/15/18 16:15	08/17/18 17:30
268373004	PZ 17	Water	08/16/18 09:30	08/17/18 17:30
268373005	PZ 2D	Water	08/17/18 11:15	08/17/18 17:30
268373006	Dup	Water	08/17/18 12:00	08/17/18 17:30

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268373

Lab ID	Sample ID	Method	Analysts	Analytes Reported
268373001	Field Blank	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
268373002	Equipment Blank	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
268373003	PZ 18	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
268373004	PZ 17	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
268373005	PZ 2D	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
268373006	Dup	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268373

Sample: Field Blank		Lab ID: 268373001		Collected: 08/15/18 13:55		Received: 08/17/18 17:30		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	08/21/18 11:13	08/22/18 15:42	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	08/21/18 11:13	08/22/18 15:42	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	08/21/18 11:13	08/22/18 15:42	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	08/21/18 11:13	08/22/18 15:42	7440-41-7	
Boron	<b>0.0072J</b>	mg/L	0.040	0.0039	1	08/21/18 11:13	08/22/18 15:42	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	08/21/18 11:13	08/22/18 15:42	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	08/21/18 11:13	08/22/18 15:42	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	08/21/18 11:13	08/22/18 15:42	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	08/21/18 11:13	08/22/18 15:42	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	08/21/18 11:13	08/22/18 15:42	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	08/21/18 11:13	08/22/18 15:42	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	08/21/18 11:13	08/22/18 15:42	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	08/21/18 11:13	08/22/18 15:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/21/18 11:13	08/22/18 15:42	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	08/21/18 11:40	08/21/18 15:16	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>21.0J</b>	mg/L	25.0	10.0	1		08/20/18 18:41		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>0.57</b>	mg/L	0.25	0.024	1		08/22/18 13:37	16887-00-6	B
Fluoride	<b>0.39</b>	mg/L	0.30	0.029	1		08/22/18 13:37	16984-48-8	
Sulfate	<b>0.37J</b>	mg/L	1.0	0.017	1		08/22/18 13:37	14808-79-8	

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268373

**Sample: Equipment Blank**      **Lab ID: 268373002**      Collected: 08/15/18 14:00      Received: 08/17/18 17:30      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b> Analytical Method: EPA 6020B      Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.0030	0.00078	1	08/21/18 11:13	08/22/18 15:48	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	08/21/18 11:13	08/22/18 15:48	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	08/21/18 11:13	08/22/18 15:48	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	08/21/18 11:13	08/22/18 15:48	7440-41-7	
Boron	<b>0.0042J</b>	mg/L	0.040	0.0039	1	08/21/18 11:13	08/22/18 15:48	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	08/21/18 11:13	08/22/18 15:48	7440-43-9	
Calcium	<b>0.015J</b>	mg/L	0.50	0.014	1	08/21/18 11:13	08/22/18 15:48	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	08/21/18 11:13	08/22/18 15:48	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	08/21/18 11:13	08/22/18 15:48	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	08/21/18 11:13	08/22/18 15:48	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	08/21/18 11:13	08/22/18 15:48	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	08/21/18 11:13	08/22/18 15:48	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	08/21/18 11:13	08/22/18 15:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/21/18 11:13	08/22/18 15:48	7440-28-0	
<b>7470 Mercury</b> Analytical Method: EPA 7470A      Preparation Method: EPA 7470A									
Mercury	ND	mg/L	0.00050	0.000036	1	08/21/18 11:40	08/21/18 15:18	7439-97-6	
<b>2540C Total Dissolved Solids</b> Analytical Method: SM 2540C									
Total Dissolved Solids	<b>10.0J</b>	mg/L	25.0	10.0	1		08/20/18 18:41		
<b>300.0 IC Anions 28 Days</b> Analytical Method: EPA 300.0									
Chloride	<b>0.085J</b>	mg/L	0.25	0.024	1		08/22/18 13:57	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		08/22/18 13:57	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		08/22/18 13:57	14808-79-8	

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268373

**Sample: PZ 18**      **Lab ID: 268373003**      Collected: 08/15/18 16:15      Received: 08/17/18 17:30      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B    Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	08/21/18 11:13	08/22/18 15:54	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	08/21/18 11:13	08/22/18 15:54	7440-38-2	
Barium	<b>0.027</b>	mg/L	0.010	0.00078	1	08/21/18 11:13	08/22/18 15:54	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	08/21/18 11:13	08/22/18 15:54	7440-41-7	
Boron	<b>0.37</b>	mg/L	0.040	0.0039	1	08/21/18 11:13	08/22/18 15:54	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	08/21/18 11:13	08/22/18 15:54	7440-43-9	
Calcium	<b>123</b>	mg/L	25.0	0.69	50	08/21/18 11:13	08/22/18 15:59	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	08/21/18 11:13	08/22/18 15:54	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	08/21/18 11:13	08/22/18 15:54	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	08/21/18 11:13	08/22/18 15:54	7439-92-1	
Lithium	<b>0.0027J</b>	mg/L	0.050	0.00097	1	08/21/18 11:13	08/22/18 15:54	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	08/21/18 11:13	08/22/18 15:54	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	08/21/18 11:13	08/22/18 15:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/21/18 11:13	08/22/18 15:54	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A    Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	08/21/18 11:40	08/21/18 14:59	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>422</b>	mg/L	25.0	10.0	1		08/20/18 18:41		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>6.7</b>	mg/L	0.25	0.024	1		08/22/18 14:18	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		08/22/18 14:18	16984-48-8	
Sulfate	<b>101</b>	mg/L	10.0	0.17	10		08/27/18 13:09	14808-79-8	

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268373

Sample: PZ 17		Lab ID: 268373004		Collected: 08/16/18 09:30		Received: 08/17/18 17:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	08/21/18 11:13	08/22/18 16:05	7440-36-0	
Arsenic	<b>0.00070J</b>	mg/L	0.0050	0.00057	1	08/21/18 11:13	08/22/18 16:05	7440-38-2	
Barium	<b>0.081</b>	mg/L	0.010	0.00078	1	08/21/18 11:13	08/22/18 16:05	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	08/21/18 11:13	08/22/18 16:05	7440-41-7	
Boron	<b>0.33</b>	mg/L	0.040	0.0039	1	08/21/18 11:13	08/22/18 16:05	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	08/21/18 11:13	08/22/18 16:05	7440-43-9	
Calcium	<b>113</b>	mg/L	25.0	0.69	50	08/21/18 11:13	08/22/18 16:11	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	08/21/18 11:13	08/22/18 16:05	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	08/21/18 11:13	08/22/18 16:05	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	08/21/18 11:13	08/22/18 16:05	7439-92-1	
Lithium	<b>0.0027J</b>	mg/L	0.050	0.00097	1	08/21/18 11:13	08/22/18 16:05	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	08/21/18 11:13	08/22/18 16:05	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	08/21/18 11:13	08/22/18 16:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/21/18 11:13	08/22/18 16:05	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	08/21/18 11:40	08/21/18 15:20	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>415</b>	mg/L	25.0	10.0	1		08/20/18 18:41		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>7.5</b>	mg/L	0.25	0.024	1		08/22/18 15:20	16887-00-6	
Fluoride	<b>0.073J</b>	mg/L	0.30	0.029	1		08/22/18 15:20	16984-48-8	
Sulfate	<b>111</b>	mg/L	10.0	0.17	10		08/27/18 13:31	14808-79-8	

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268373

Sample: PZ 2D		Lab ID: 268373005		Collected: 08/17/18 11:15		Received: 08/17/18 17:30		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	<b>0.00082J</b>	mg/L	0.0030	0.00078	1	08/21/18 11:13	08/22/18 16:16	7440-36-0		
Arsenic	<b>0.00062J</b>	mg/L	0.0050	0.00057	1	08/21/18 11:13	08/22/18 16:16	7440-38-2		
Barium	<b>0.0069J</b>	mg/L	0.010	0.00078	1	08/21/18 11:13	08/22/18 16:16	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	08/21/18 11:13	08/22/18 16:16	7440-41-7		
Boron	<b>0.015J</b>	mg/L	0.040	0.0039	1	08/21/18 11:13	08/22/18 16:16	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	08/21/18 11:13	08/22/18 16:16	7440-43-9		
Calcium	<b>27.0</b>	mg/L	25.0	0.69	50	08/21/18 11:13	08/22/18 16:22	7440-70-2	M6	
Chromium	<b>0.0078J</b>	mg/L	0.010	0.0016	1	08/21/18 11:13	08/22/18 16:16	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	08/21/18 11:13	08/22/18 16:16	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	08/21/18 11:13	08/22/18 16:16	7439-92-1		
Lithium	<b>0.0024J</b>	mg/L	0.050	0.00097	1	08/21/18 11:13	08/22/18 16:16	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	08/21/18 11:13	08/22/18 16:16	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	08/21/18 11:13	08/22/18 16:16	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	08/21/18 11:13	08/22/18 16:16	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	08/21/18 11:40	08/21/18 15:23	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>115</b>	mg/L	25.0	10.0	1		08/20/18 18:41			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>2.6</b>	mg/L	0.25	0.024	1		08/22/18 15:40	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		08/22/18 15:40	16984-48-8		
Sulfate	<b>4.5</b>	mg/L	1.0	0.017	1		08/22/18 15:40	14808-79-8		

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268373

Sample: Dup		Lab ID: 268373006		Collected: 08/17/18 12:00		Received: 08/17/18 17:30		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	<b>0.0020J</b>	mg/L	0.0030	0.00078	1	08/21/18 11:13	08/22/18 17:34	7440-36-0	
Arsenic	<b>0.00060J</b>	mg/L	0.0050	0.00057	1	08/21/18 11:13	08/22/18 17:34	7440-38-2	
Barium	<b>0.0072J</b>	mg/L	0.010	0.00078	1	08/21/18 11:13	08/22/18 17:34	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	08/21/18 11:13	08/22/18 17:34	7440-41-7	
Boron	<b>0.018J</b>	mg/L	0.040	0.0039	1	08/21/18 11:13	08/22/18 17:34	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	08/21/18 11:13	08/22/18 17:34	7440-43-9	
Calcium	<b>28.8</b>	mg/L	25.0	0.69	50	08/21/18 11:13	08/22/18 17:39	7440-70-2	
Chromium	<b>0.0071J</b>	mg/L	0.010	0.0016	1	08/21/18 11:13	08/22/18 17:34	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	08/21/18 11:13	08/22/18 17:34	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	08/21/18 11:13	08/22/18 17:34	7439-92-1	
Lithium	<b>0.0023J</b>	mg/L	0.050	0.00097	1	08/21/18 11:13	08/22/18 17:34	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	08/21/18 11:13	08/22/18 17:34	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	08/21/18 11:13	08/22/18 17:34	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/21/18 11:13	08/22/18 17:34	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	08/21/18 11:40	08/21/18 15:25	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>86.0</b>	mg/L	25.0	10.0	1		08/20/18 18:41		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>2.5</b>	mg/L	0.25	0.024	1		08/22/18 16:01	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		08/22/18 16:01	16984-48-8	
Sulfate	<b>4.5</b>	mg/L	1.0	0.017	1		08/22/18 16:01	14808-79-8	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268373

QC Batch: 12115

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Associated Lab Samples: 268373001, 268373002, 268373003, 268373004, 268373005, 268373006

METHOD BLANK: 54177

Matrix: Water

Associated Lab Samples: 268373001, 268373002, 268373003, 268373004, 268373005, 268373006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	08/21/18 14:54	

LABORATORY CONTROL SAMPLE: 54178

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 54179 54180

Parameter	Units	268373003 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	.0025	.0025	0.0026	0.0026	103	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.

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 268373

QC Batch: 12103 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 268373001, 268373002, 268373003, 268373004, 268373005, 268373006

METHOD BLANK: 54132 Matrix: Water  
Associated Lab Samples: 268373001, 268373002, 268373003, 268373004, 268373005, 268373006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/22/18 15:31	
Arsenic	mg/L	ND	0.0050	0.00057	08/22/18 15:31	
Barium	mg/L	ND	0.010	0.00078	08/22/18 15:31	
Beryllium	mg/L	ND	0.0030	0.000050	08/22/18 15:31	
Boron	mg/L	ND	0.040	0.0039	08/22/18 15:31	
Cadmium	mg/L	ND	0.0010	0.000093	08/22/18 15:31	
Calcium	mg/L	ND	0.50	0.014	08/22/18 15:31	
Chromium	mg/L	ND	0.010	0.0016	08/22/18 15:31	
Cobalt	mg/L	ND	0.010	0.00052	08/22/18 15:31	
Lead	mg/L	ND	0.0050	0.00027	08/22/18 15:31	
Lithium	mg/L	ND	0.050	0.00097	08/22/18 15:31	
Molybdenum	mg/L	ND	0.010	0.0019	08/22/18 15:31	
Selenium	mg/L	ND	0.010	0.0014	08/22/18 15:31	
Thallium	mg/L	ND	0.0010	0.00014	08/22/18 15:31	

LABORATORY CONTROL SAMPLE: 54133

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.11	107	80-120	
Arsenic	mg/L	.1	0.097	97	80-120	
Barium	mg/L	.1	0.10	102	80-120	
Beryllium	mg/L	.1	0.11	108	80-120	
Boron	mg/L	1	1.1	106	80-120	
Cadmium	mg/L	.1	0.10	100	80-120	
Calcium	mg/L	1	1.0	100	80-120	
Chromium	mg/L	.1	0.10	103	80-120	
Cobalt	mg/L	.1	0.10	104	80-120	
Lead	mg/L	.1	0.10	100	80-120	
Lithium	mg/L	.1	0.10	103	80-120	
Molybdenum	mg/L	.1	0.10	104	80-120	
Selenium	mg/L	.1	0.098	98	80-120	
Thallium	mg/L	.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 54134 54135

Parameter	Units	268373005 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result	MSD Result					
Antimony	mg/L	0.00082J	.1	.1	0.11	0.11	104	109	75-125	5	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 Mitchell Ash Ponds

Pace Project No.: 268373

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 54134		54135		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		268373005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	mg/L	0.00062J	.1	.1	0.10	0.10	101	102	75-125	1	20		
Barium	mg/L	0.0069J	.1	.1	0.11	0.11	99	106	75-125	6	20		
Beryllium	mg/L	ND	.1	.1	0.097	0.094	97	94	75-125	3	20		
Boron	mg/L	0.015J	1	1	0.95	0.97	93	96	75-125	2	20		
Cadmium	mg/L	ND	.1	.1	0.10	0.10	102	102	75-125	1	20		
Calcium	mg/L	27.0	1	1	28.2	28.5	116	151	75-125	1	20	M6	
Chromium	mg/L	0.0078J	.1	.1	0.11	0.11	102	105	75-125	2	20		
Cobalt	mg/L	ND	.1	.1	0.10	0.11	103	107	75-125	3	20		
Lead	mg/L	ND	.1	.1	0.10	0.10	101	102	75-125	1	20		
Lithium	mg/L	0.0024J	.1	.1	0.097	0.099	95	97	75-125	2	20		
Molybdenum	mg/L	ND	.1	.1	0.10	0.11	104	110	75-125	6	20		
Selenium	mg/L	ND	.1	.1	0.10	0.10	100	100	75-125	0	20		
Thallium	mg/L	ND	.1	.1	0.10	0.10	101	104	75-125	2	20		

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268373

QC Batch: 12074

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 268373001, 268373002, 268373003, 268373004, 268373005, 268373006

LABORATORY CONTROL SAMPLE: 54036

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	426	106	84-108	

SAMPLE DUPLICATE: 54037

Parameter	Units	268373001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	21.0J	19.0J	10	10	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268373

QC Batch: 12182 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 268373001, 268373002, 268373003, 268373004, 268373005, 268373006

METHOD BLANK: 54431 Matrix: Water  
 Associated Lab Samples: 268373001, 268373002, 268373003, 268373004, 268373005, 268373006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.12J	0.25	0.024	08/22/18 12:55	
Fluoride	mg/L	ND	0.30	0.029	08/22/18 12:55	
Sulfate	mg/L	ND	1.0	0.017	08/22/18 12:55	

LABORATORY CONTROL SAMPLE: 54432

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.3	103	90-110	
Fluoride	mg/L	10	10.3	103	90-110	
Sulfate	mg/L	10	10.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 54444 54445

Parameter	Units	268373003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.7	10	10	16.8	16.9	102	102	90-110	0	15	
Fluoride	mg/L	ND	10	10	10.5	10.5	105	105	90-110	0	15	
Sulfate	mg/L	101	10	10	87.4	87.5	-139	-138	90-110	0	15 E	

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268373

---

### 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.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 268373

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
268373001	Field Blank	EPA 3005A	12103	EPA 6020B	12213
268373002	Equipment Blank	EPA 3005A	12103	EPA 6020B	12213
268373003	PZ 18	EPA 3005A	12103	EPA 6020B	12213
268373004	PZ 17	EPA 3005A	12103	EPA 6020B	12213
268373005	PZ 2D	EPA 3005A	12103	EPA 6020B	12213
268373006	Dup	EPA 3005A	12103	EPA 6020B	12213
268373001	Field Blank	EPA 7470A	12115	EPA 7470A	12131
268373002	Equipment Blank	EPA 7470A	12115	EPA 7470A	12131
268373003	PZ 18	EPA 7470A	12115	EPA 7470A	12131
268373004	PZ 17	EPA 7470A	12115	EPA 7470A	12131
268373005	PZ 2D	EPA 7470A	12115	EPA 7470A	12131
268373006	Dup	EPA 7470A	12115	EPA 7470A	12131
268373001	Field Blank	SM 2540C	12074		
268373002	Equipment Blank	SM 2540C	12074		
268373003	PZ 18	SM 2540C	12074		
268373004	PZ 17	SM 2540C	12074		
268373005	PZ 2D	SM 2540C	12074		
268373006	Dup	SM 2540C	12074		
268373001	Field Blank	EPA 300.0	12182		
268373002	Equipment Blank	EPA 300.0	12182		
268373003	PZ 18	EPA 300.0	12182		
268373004	PZ 17	EPA 300.0	12182		
268373005	PZ 2D	EPA 300.0	12182		
268373006	Dup	EPA 300.0	12182		

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**CHAIN-OF-CUSTODY / Analytical Request Document**

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Section A</b>		<b>Section B</b>		<b>Section C</b>	
Required Client Information:		Required Project Information:		Invoice Information:	
Company: Georgia Power - Coal Combustion Residuals	Report To: Joju Abraham	Report To: Joju Abraham	Copy To: Wood PLC	Company Name:	Attention: SCSInvoices@southernco.com
Address: 2480 Maner Road Atlanta, GA 30339		Purchase Order #: SCS10348606		Address:	Regulatory Agency
Email: j.abraham@southernco.com		Project Name: Plant Mitchell CCR		State / Location:	GA
Phone: (404)506-7239	Fax:	Project #:		Requested Analysis Filtered (Y/N)	
Requested Due Date:					

Page: \_\_\_\_\_ Of \_\_\_\_\_

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		DATE	TIME	DATE	TIME	# OF CONTAINERS	PRESERVATIVES								Analyses Test Y/N	Residual Chlorine (Y/N)		
			START DATE	END DATE						H2SO4	HNO3	HCl	NaOH	Na2SO3	Methanol	Other	Radium 226/228			App. III & App IV Metals	TDS, Cl, F, SO4
1	Field Bank	WTG	8/17/18	1855					4								X	X			
2	Field Bank	WTG	8/15/18	1400					4								X	X			
3	P218	WTG	8/15/18	1615					4								X	X			
4	P217	WTG	8/16/18	0930					4								X	X			
5	P221D	WTG	8/17/18	1115					4								X	X			
6	DUP	WTG	8/17/18	1200					4								X	X			
7																					
8																					
9																					
10																					
11																					
12																					

**NO# : 268373**



ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	RECEIVED ON	TEMP IN C	Received by	Custodial	Cooler	Samples
Field Bank	Mike Nguyen	8/17/18	1730	Mike Nguyen	8/17/18	1740						
	M. Dabman	08/17/18	1730	M. Dabman	08/17/18	1730						
							1.2	4				7

SAMPLER NAME AND SIGNATURE  
 PRINT Name of SAMPLER: Rayl Gawn  
 SIGNATURE of SAMPLER: *[Signature]*

**Sample Condition Upon Receipt**

Face Analytical

Client Name: GIA Power

Project # \_\_\_\_\_

**WO#: 268373**

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: \_\_\_\_\_

PM: BM

Due Date: **08/27/18**

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

CLIENT: **GAPower-CCR**

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 23 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 1.2 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 8/17/18 MR

Temp should be above freezing to 6°C

Comments: \_\_\_\_\_

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Field Data Required? Y N

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

September 17, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 268374

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on August 17, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 268374

---

### 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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268374

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
268374001	Field Blank	Water	08/15/18 13:55	08/17/18 17:30
268374002	Equipment Blank	Water	08/15/18 14:00	08/17/18 17:30
268374003	PZ 18	Water	08/15/18 16:15	08/17/18 17:30
268374004	PZ 17	Water	08/16/18 09:30	08/17/18 17:30
268374005	PZ 2D	Water	08/17/18 11:15	08/17/18 17:30
268374006	Dup	Water	08/17/18 12:00	08/17/18 17:30

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268374

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
268374001	Field Blank	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
268374002	Equipment Blank	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
268374003	PZ 18	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
268374004	PZ 17	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
268374005	PZ 2D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
268374006	Dup	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268374

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: Field Blank</b> <b>Lab ID: 268374001</b> Collected: 08/15/18 13:55      Received: 08/17/18 17:30      Matrix: Water PWS:      Site ID:      Sample Type:						
Radium-226	EPA 9315	<b>0.0793 ± 0.0754 (0.135)</b> C:93% T:NA	pCi/L	08/30/18 19:41	13982-63-3	
Radium-228	EPA 9320	<b>0.334 ± 0.434 (0.925)</b> C:64% T:77%	pCi/L	08/31/18 11:09	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.413 ± 0.509 (1.06)</b>	pCi/L	09/05/18 12:56	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268374

**Sample: Equipment Blank**      **Lab ID: 268374002**      Collected: 08/15/18 14:00      Received: 08/17/18 17:30      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.110 ± 0.0865 (0.150)</b> <b>C:90% T:NA</b>	pCi/L	08/30/18 19:41	13982-63-3	
Radium-228	EPA 9320	<b>0.858 ± 0.525 (0.971)</b> <b>C:66% T:72%</b>	pCi/L	08/31/18 11:09	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.968 ± 0.612 (1.12)</b>	pCi/L	09/05/18 12:56	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268374

**Sample: PZ 18**      **Lab ID: 268374003**      Collected: 08/15/18 16:15      Received: 08/17/18 17:30      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.266 ± 0.129 (0.203)</b> <b>C:89% T:NA</b>	pCi/L	08/30/18 19:41	13982-63-3	
Radium-228	EPA 9320	<b>0.758 ± 0.451 (0.829)</b> <b>C:70% T:76%</b>	pCi/L	08/31/18 11:09	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.02 ± 0.580 (1.03)</b>	pCi/L	09/05/18 12:56	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268374

**Sample: PZ 17**      **Lab ID: 268374004**      Collected: 08/16/18 09:30      Received: 08/17/18 17:30      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.396 ± 0.147 (0.201)</b> C:85% T:NA	pCi/L	08/30/18 19:41	13982-63-3	
Radium-228	EPA 9320	<b>0.229 ± 0.385 (0.839)</b> C:70% T:79%	pCi/L	08/31/18 11:09	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.625 ± 0.532 (1.04)</b>	pCi/L	09/05/18 12:56	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268374

**Sample: PZ 2D**      **Lab ID: 268374005**      Collected: 08/17/18 11:15      Received: 08/17/18 17:30      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.162 ± 0.108 (0.178)</b> <b>C:73% T:NA</b>	pCi/L	08/30/18 19:41	13982-63-3	
Radium-228	EPA 9320	<b>0.521 ± 0.384 (0.743)</b> <b>C:69% T:81%</b>	pCi/L	08/31/18 11:09	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.683 ± 0.492 (0.921)</b>	pCi/L	09/06/18 10:57	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268374

**Sample: Dup**                      **Lab ID: 268374006**      Collected: 08/17/18 12:00      Received: 08/17/18 17:30      Matrix: Water  
PWS:                                      Site ID:                                      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.252 ± 0.115 (0.164)</b> C:80% T:NA	pCi/L	08/30/18 19:41	13982-63-3	
Radium-228	EPA 9320	<b>0.207 ± 0.373 (0.816)</b> C:69% T:78%	pCi/L	08/31/18 11:09	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.459 ± 0.488 (0.980)</b>	pCi/L	09/06/18 10:57	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268374

QC Batch: 311287

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 268374001, 268374002, 268374003, 268374004, 268374005, 268374006

METHOD BLANK: 1520260

Matrix: Water

Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.123 ± 0.0892 (0.153) C:99% T:NA	pCi/L	08/30/18 18:43	

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 Mitchell Ash Ponds

Pace Project No.: 268374

QC Batch: 310657

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 268374001, 268374002, 268374003, 268374004, 268374005, 268374006

METHOD BLANK: 1517575

Matrix: Water

Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.429 ± 0.378 (0.762) C:76% T:76%	pCi/L	08/31/18 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.

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268374

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### 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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 268374

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
268374001	Field Blank	EPA 9315	311287		
268374002	Equipment Blank	EPA 9315	311287		
268374003	PZ 18	EPA 9315	311287		
268374004	PZ 17	EPA 9315	311287		
268374005	PZ 2D	EPA 9315	311287		
268374006	Dup	EPA 9315	311287		
268374001	Field Blank	EPA 9320	310657		
268374002	Equipment Blank	EPA 9320	310657		
268374003	PZ 18	EPA 9320	310657		
268374004	PZ 17	EPA 9320	310657		
268374005	PZ 2D	EPA 9320	310657		
268374006	Dup	EPA 9320	310657		
268374001	Field Blank	Total Radium Calculation	311947		
268374002	Equipment Blank	Total Radium Calculation	311947		
268374003	PZ 18	Total Radium Calculation	311947		
268374004	PZ 17	Total Radium Calculation	311947		
268374005	PZ 2D	Total Radium Calculation	312077		
268374006	Dup	Total Radium Calculation	312077		

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### CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Section A</b>	<b>Section B</b>	<b>Section C</b>
<b>Required Client Information:</b> Company: Georgia Power - Coal Combustion Residuals Address: 2480 Manor Road Atlanta, GA 30339 Email: jabraham@southernmco.com Phone: (404) 906-7239   Fax: Requested Due Date:	<b>Required Project Information:</b> Report To: Jaju Abraham Copy To: Wood PLC Purchase Order #: SCS10348606 Project Name: Plant Mitchell CCR Project #:	<b>Invoice Information:</b> Attention: SCSinvoicess@southernmco.com Company Name: Address: Pace Quote Pace Project Manager: betsy.mcdanielle@pacestabs.com Pace Profile #: 333 Regulatory Agency: State / Location: GA

#	ITEMS	MATRIX CODE <small>Drinking Water Water Process Sewage Oil Wine Air Other TS/MS</small>	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES										Y/N	Requested Analysis Filtered (Y/N)									
				START DATE TIME	END DATE TIME			Unpresrvd	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Radium 226/228	App III & App IV Metals		TDS, Cl, F, SO4	Residual Chlorine (Y/N)								
1			WTG	8/17/18	1559		4														X	X	X					
2	Field Bank		WTG	8/15/18	1400		4															X	X	X				
3	Food meat Bank		WTG	8/15/18	1615		4															X	X	X				
4	P218		WTG	8/16/18	0930		4															X	X	X				
5	P217		WTG	8/17/18	1115		4															X	X	X				
6	P22D		WTG	8/17/18	1200		4															X	X	X				
7	DUP																											

**NO# : 268374**



**268374**

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS						
		DATE	TIME		Received on	(Y/N)	Custody	Cooler	Samples Intact				
	<i>Payl Gazo</i>	8/17/18	1740	Miller Nguyen	8/17/18	1740							
				M. Adaman	08/17/18	1730							
							1.2	X	X	X			

**SAMPLER NAME AND SIGNATURE:**  
PRINT Name of SAMPLER: *Payl Gazo*  
SIGNATURE of SAMPLER: *[Signature]* **DATE:** 8/17/18

**Sample Condition Upon Receipt**



Client Name: GIA Power

Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

**WO#: 268374**

Tracking #: \_\_\_\_\_

PM: **BM** Due Date: **09/18/18**

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

**CLIENT: GAPower-CCR**

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 23 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 1.2 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 9/17/18 MR

Temp should be above freezing to 6°C

Comments: \_\_\_\_\_

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Field Data Required?  Y  N

**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 DEHMP Certification Office i.e. out of hold, incorrect preservative, out of temp, incorrect containers

September 20, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269231

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 13, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269231

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### 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

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269231

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
269231001	PZ-1D	Water	09/12/18 12:05	09/13/18 09:40
269231002	PZ-31	Water	09/12/18 14:00	09/13/18 09:40
269231003	PZ-14	Water	09/12/18 16:25	09/13/18 09:40

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269231

Lab ID	Sample ID	Method	Analysts	Analytes Reported
269231001	PZ-1D	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
269231002	PZ-31	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
269231003	PZ-14	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269231

Sample: PZ-1D		Lab ID: 269231001		Collected: 09/12/18 12:05		Received: 09/13/18 09:40		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	<b>0.0019J</b>	mg/L	0.0030	0.00078	1	09/17/18 15:38	09/18/18 12:24	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:38	09/18/18 12:24	7440-38-2		
Barium	<b>0.021</b>	mg/L	0.010	0.00078	1	09/17/18 15:38	09/18/18 12:24	7440-39-3		
Beryllium	<b>0.000061J</b>	mg/L	0.0030	0.000050	1	09/17/18 15:38	09/18/18 12:24	7440-41-7		
Boron	<b>0.012J</b>	mg/L	0.040	0.0039	1	09/17/18 15:38	09/18/18 12:24	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:38	09/18/18 12:24	7440-43-9		
Calcium	<b>46.6</b>	mg/L	25.0	0.69	50	09/17/18 15:38	09/18/18 12:30	7440-70-2		
Chromium	<b>0.0033J</b>	mg/L	0.010	0.0016	1	09/17/18 15:38	09/18/18 12:24	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:38	09/18/18 12:24	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:38	09/18/18 12:24	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	09/17/18 15:38	09/18/18 12:24	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:38	09/18/18 12:24	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:38	09/18/18 12:24	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/17/18 15:38	09/18/18 12:24	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 14:41	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>146</b>	mg/L	25.0	10.0	1		09/17/18 15:51			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>2.8</b>	mg/L	0.25	0.024	1		09/14/18 19:07	16887-00-6		
Fluoride	<b>0.034J</b>	mg/L	0.30	0.029	1		09/14/18 19:07	16984-48-8		
Sulfate	<b>2.0</b>	mg/L	1.0	0.017	1		09/14/18 19:07	14808-79-8		

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269231

Sample: PZ-31		Lab ID: 269231002		Collected: 09/12/18 14:00		Received: 09/13/18 09:40		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:38	09/18/18 12:36	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:38	09/18/18 12:36	7440-38-2		
Barium	<b>0.0087J</b>	mg/L	0.010	0.00078	1	09/17/18 15:38	09/18/18 12:36	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:38	09/18/18 12:36	7440-41-7		
Boron	<b>0.0098J</b>	mg/L	0.040	0.0039	1	09/17/18 15:38	09/18/18 12:36	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:38	09/18/18 12:36	7440-43-9		
Calcium	<b>86.0</b>	mg/L	25.0	0.69	50	09/17/18 15:38	09/18/18 12:41	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	09/17/18 15:38	09/18/18 12:36	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:38	09/18/18 12:36	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:38	09/18/18 12:36	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	09/17/18 15:38	09/18/18 12:36	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:38	09/18/18 12:36	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:38	09/18/18 12:36	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/17/18 15:38	09/18/18 12:36	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 14:50	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>252</b>	mg/L	25.0	10.0	1		09/17/18 15:51			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>3.7</b>	mg/L	0.25	0.024	1		09/14/18 19:28	16887-00-6		
Fluoride	<b>0.049J</b>	mg/L	0.30	0.029	1		09/14/18 19:28	16984-48-8		
Sulfate	<b>2.7</b>	mg/L	1.0	0.017	1		09/14/18 19:28	14808-79-8		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269231

Sample: PZ-14		Lab ID: 269231003		Collected: 09/12/18 16:25		Received: 09/13/18 09:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:38	09/18/18 12:47	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:38	09/18/18 12:47	7440-38-2	
Barium	<b>0.022</b>	mg/L	0.010	0.00078	1	09/17/18 15:38	09/18/18 12:47	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:38	09/18/18 12:47	7440-41-7	
Boron	<b>0.020J</b>	mg/L	0.040	0.0039	1	09/17/18 15:38	09/18/18 12:47	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:38	09/18/18 12:47	7440-43-9	
Calcium	<b>99.3</b>	mg/L	25.0	0.69	50	09/17/18 15:38	09/18/18 12:53	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	09/17/18 15:38	09/18/18 12:47	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:38	09/18/18 12:47	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:38	09/18/18 12:47	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	09/17/18 15:38	09/18/18 12:47	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:38	09/18/18 12:47	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:38	09/18/18 12:47	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/17/18 15:38	09/18/18 12:47	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 14:57	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>286</b>	mg/L	25.0	10.0	1		09/17/18 15:51		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>4.8</b>	mg/L	0.25	0.024	1		09/14/18 19:50	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		09/14/18 19:50	16984-48-8	
Sulfate	<b>4.3</b>	mg/L	1.0	0.017	1		09/14/18 19:50	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269231

QC Batch: 13618 Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury  
Associated Lab Samples: 269231001, 269231002, 269231003

METHOD BLANK: 60678 Matrix: Water  
Associated Lab Samples: 269231001, 269231002, 269231003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	09/18/18 14:36	

LABORATORY CONTROL SAMPLE: 60679

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60680 60681

Parameter	Units	269231001 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	.0025	.0025	0.0026	0.0026	103	103	75-125	0	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269231

QC Batch: 13596 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 269231001, 269231002, 269231003

METHOD BLANK: 60611 Matrix: Water  
Associated Lab Samples: 269231001, 269231002, 269231003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/18/18 12:13	
Arsenic	mg/L	ND	0.0050	0.00057	09/18/18 12:13	
Barium	mg/L	ND	0.010	0.00078	09/18/18 12:13	
Beryllium	mg/L	ND	0.0030	0.000050	09/18/18 12:13	
Boron	mg/L	ND	0.040	0.0039	09/18/18 12:13	
Cadmium	mg/L	ND	0.0010	0.000093	09/18/18 12:13	
Calcium	mg/L	ND	0.50	0.014	09/18/18 12:13	
Chromium	mg/L	ND	0.010	0.0016	09/18/18 12:13	
Cobalt	mg/L	ND	0.010	0.00052	09/18/18 12:13	
Lead	mg/L	ND	0.0050	0.00027	09/18/18 12:13	
Lithium	mg/L	ND	0.050	0.00097	09/18/18 12:13	
Molybdenum	mg/L	ND	0.010	0.0019	09/18/18 12:13	
Selenium	mg/L	ND	0.010	0.0014	09/18/18 12:13	
Thallium	mg/L	ND	0.0010	0.00014	09/18/18 12:13	

LABORATORY CONTROL SAMPLE: 60612

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	100	80-120	
Arsenic	mg/L	.1	0.097	97	80-120	
Barium	mg/L	.1	0.097	97	80-120	
Beryllium	mg/L	.1	0.10	101	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	.1	0.097	97	80-120	
Calcium	mg/L	1	0.98	98	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.10	100	80-120	
Lead	mg/L	.1	0.096	96	80-120	
Lithium	mg/L	.1	0.10	101	80-120	
Molybdenum	mg/L	.1	0.098	98	80-120	
Selenium	mg/L	.1	0.10	101	80-120	
Thallium	mg/L	.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60613 60614

Parameter	Units	269285002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	.1	.1	0.10	0.10	102	103	75-125	2	20	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269231

Parameter	Units	60613		60614		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Arsenic	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	1	20		
Barium	mg/L	0.038	.1	.1	0.14	0.15	106	108	75-125	2	20		
Beryllium	mg/L	ND	.1	.1	0.099	0.096	99	96	75-125	3	20		
Boron	mg/L	0.16	1	1	1.2	1.1	102	95	75-125	6	20		
Cadmium	mg/L	ND	.1	.1	0.10	0.096	100	96	75-125	4	20		
Calcium	mg/L	136	1	1	144	144	810	882	75-125	1	20	M6	
Chromium	mg/L	0.0022J	.1	.1	0.11	0.11	105	105	75-125	1	20		
Cobalt	mg/L	ND	.1	.1	0.10	0.10	101	101	75-125	0	20		
Lead	mg/L	ND	.1	.1	0.095	0.095	95	95	75-125	1	20		
Lithium	mg/L	ND	.1	.1	0.10	0.097	100	97	75-125	4	20		
Molybdenum	mg/L	ND	.1	.1	0.10	0.10	100	101	75-125	1	20		
Selenium	mg/L	ND	.1	.1	0.10	0.11	103	105	75-125	2	20		
Thallium	mg/L	ND	.1	.1	0.096	0.095	96	95	75-125	2	20		

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269231

QC Batch: 13622 Analysis Method: SM 2540C  
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids  
Associated Lab Samples: 269231001, 269231002, 269231003

LABORATORY CONTROL SAMPLE: 60712

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	386	96	84-108	

SAMPLE DUPLICATE: 60713

Parameter	Units	269335001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	317	325	2	10	

SAMPLE DUPLICATE: 60714

Parameter	Units	269231003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	286	284	1	10	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269231

QC Batch: 13508 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 269231001, 269231002, 269231003

METHOD BLANK: 60027 Matrix: Water  
Associated Lab Samples: 269231001, 269231002, 269231003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.092J	0.25	0.024	09/14/18 16:30	
Fluoride	mg/L	ND	0.30	0.029	09/14/18 16:30	
Sulfate	mg/L	ND	1.0	0.017	09/14/18 16:30	

LABORATORY CONTROL SAMPLE: 60028

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.5	95	90-110	
Fluoride	mg/L	10	9.9	99	90-110	
Sulfate	mg/L	10	9.5	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60029 60030

Parameter	Units	269088001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.1	10	10	11.6	11.6	95	94	90-110	0	15	
Fluoride	mg/L	ND	10	10	9.6	9.5	96	95	90-110	1	15	
Sulfate	mg/L	3.4	10	10	12.8	12.8	94	94	90-110	0	15	

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269231

---

### 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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269231

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
269231001	PZ-1D	EPA 3005A	13596	EPA 6020B	13645
269231002	PZ-31	EPA 3005A	13596	EPA 6020B	13645
269231003	PZ-14	EPA 3005A	13596	EPA 6020B	13645
269231001	PZ-1D	EPA 7470A	13618	EPA 7470A	13664
269231002	PZ-31	EPA 7470A	13618	EPA 7470A	13664
269231003	PZ-14	EPA 7470A	13618	EPA 7470A	13664
269231001	PZ-1D	SM 2540C	13622		
269231002	PZ-31	SM 2540C	13622		
269231003	PZ-14	SM 2540C	13622		
269231001	PZ-1D	EPA 300.0	13508		
269231002	PZ-31	EPA 300.0	13508		
269231003	PZ-14	EPA 300.0	13508		

### REPORT OF LABORATORY ANALYSIS

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A**  
**Required Client Information:**  
 Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Maner Road, Atlanta, GA 30339  
 Email: jabraham@southernco.com  
 Phone: (404)506-7239  
 Requested Due Date: standard

**Section B**  
**Required Project Information:**  
 Report To: Joui Abraham  
 Copy To: Wood PLC  
 Purchase Order #: SCS10348606  
 Project Name: Plant Mitchell CCR  
 Project #: 6122160170

**Section C**  
**Invoice Information:**  
 Attention: scsinvoices@southernco.com  
 Company Name: Pace Quade  
 Address: Pace Project Manager: betsy.mcdaniels@pacelabs.com  
 Pace Profile #: 333

**Regulatory Agency:** \_\_\_\_\_  
**State / Location:** GA

Page: 1 of 1

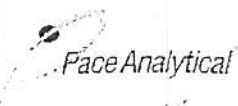
ITEM #	MATRIX	CODE	COLLECTED	SAMPLE TYPE (G-GRAB C-COMP)	MATRIX CODE (see valid codes to left)	START		END		# OF CONTAINERS	Preservatives	Y/N	Analytes Test	Requested Analysis Filtered (Y/N)																			
						DATE	TIME	DATE	TIME					H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Radium 226/228	App. III & App. IV Metals	TDS, Cl, F, SO4	Residual Chlorine (Y/N)									
1	Drinking Water	DW		WG		9/12/18	1205			4	X		X	X	X	X																	
2	Water	WT		WG		9/12/18	1400			4	X		X	X	X	X																	
3	Product	P		WG		9/12/18	1625			4	X		X	X	X	X																	
4	Sew/Solid	SS		WT																													
5	Oil	OL																															
6	Wipe	WP																															
7	Air	AR																															
8	Other	OT																															
9	Tissue	TS																															

WO#: 269231

269231

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Daniel Howard / Wood	9/12/18	1800	Mela Luman	09/19/18	0900	Received on Ice (Y/N) X X X X X
							TEMP in C 0.5 X X X X

**SAMPLER NAME AND SIGNATURE**  
 PRINT Name of SAMPLER: Daniel Howard  
 SIGNATURE of SAMPLER: *Daniel Howard*  
 DATE Signed: 9/12/18



### Sample Condition Upon Receipt

Client Name: GIA Power

Project # \_\_\_\_\_

**WO#: 269231**

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: \_\_\_\_\_

PM: BM

Due Date: 09/20/18

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

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 0.5

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 9/13/18 MK

Temp should be above freezing to 6°C

Comments:

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

#### Client Notification/ Resolution:

Field Data Required? 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 DEHNP Certification Office, in addition to, incorrect preservative, out of temp, incorrect containers

October 11, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269232

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 13, 2018. 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: Maria Padilla, Georgia Power  
Rhonda Quinn, Norfolk Southern\_Wood E&I Solutions, Inc.  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269232

---

### 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

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269232

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
269232001	PZ-1D	Water	09/12/18 12:05	09/13/18 09:40
269232002	PZ-31	Water	09/12/18 14:00	09/13/18 09:40
269232003	PZ-14	Water	09/12/18 16:25	09/13/18 09:40

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269232

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
269232001	PZ-1D	EPA 9315	JJY	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269232002	PZ-31	EPA 9315	JJY	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269232003	PZ-14	EPA 9315	JJY	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 Mitchell Ash Ponds

Pace Project No.: 269232

**Sample: PZ-1D**      **Lab ID: 269232001**      Collected: 09/12/18 12:05      Received: 09/13/18 09:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.149 ± 0.165 (0.317)</b> <b>C:101% T:NA</b>	pCi/L	09/26/18 08:30	13982-63-3	
Radium-228	EPA 9320	<b>0.168 ± 0.350 (0.773)</b> <b>C:76% T:79%</b>	pCi/L	09/25/18 10:52	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.317 ± 0.515 (1.09)</b>	pCi/L	09/28/18 13:42	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269232

**Sample: PZ-31**      **Lab ID: 269232002**      Collected: 09/12/18 14:00      Received: 09/13/18 09:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.00880 ± 0.139 (0.378)</b> C:98% T:NA	pCi/L	09/26/18 08:30	13982-63-3	
Radium-228	EPA 9320	<b>0.191 ± 0.304 (0.658)</b> C:79% T:90%	pCi/L	09/25/18 10:53	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.200 ± 0.443 (1.04)</b>	pCi/L	09/28/18 13:42	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269232

**Sample: PZ-14**      **Lab ID: 269232003**      Collected: 09/12/18 16:25      Received: 09/13/18 09:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.148 ± 0.206 (0.444)</b> <b>C:99% T:NA</b>	pCi/L	09/26/18 08:30	13982-63-3	
Radium-228	EPA 9320	<b>0.384 ± 0.371 (0.763)</b> <b>C:73% T:84%</b>	pCi/L	09/25/18 10:53	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.532 ± 0.577 (1.21)</b>	pCi/L	09/28/18 13:42	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269232

QC Batch: 313328

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 269232001, 269232002, 269232003

METHOD BLANK: 1529951

Matrix: Water

Associated Lab Samples: 269232001, 269232002, 269232003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0952 ± 0.306 (0.689) C:78% T:83%	pCi/L	09/25/18 10:52	

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 Mitchell Ash Ponds

Pace Project No.: 269232

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QC Batch:	313720	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	269232001, 269232002, 269232003		

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METHOD BLANK:	1531650	Matrix:	Water
Associated Lab Samples:	269232001, 269232002, 269232003		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0636 ± 0.153 (0.367) C:99% T:NA	pCi/L	09/26/18 08:20	

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269232

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### 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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269232

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
269232001	PZ-1D	EPA 9315	313720		
269232002	PZ-31	EPA 9315	313720		
269232003	PZ-14	EPA 9315	313720		
269232001	PZ-1D	EPA 9320	313328		
269232002	PZ-31	EPA 9320	313328		
269232003	PZ-14	EPA 9320	313328		
269232001	PZ-1D	Total Radium Calculation	314785		
269232002	PZ-31	Total Radium Calculation	314785		
269232003	PZ-14	Total Radium Calculation	314785		

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Juju Abraham	Attention:	SCSinvoices@southernco.com
Address:	2480 Maner Road	Copy To:	Wood PLC	Company Name:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Address:	
Phone:	(404)506-7239	Project Name:	Plant Mitchell CCR	Pace Quote:	
Requested Due Date:	Standard	Project #:	6122160170	Pace Project Manager:	betsy.mcdaniel@pacelabs.com
				Pace Profile #:	333

Page: 1 Of 1

Regulatory Agency: \_\_\_\_\_  
State / Location: GA

ITEM #	MATRIX	CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES		ANALYSES TEST Y/N	Requested Analysis Filtered (Y/N)	
			START DATE TIME	END DATE TIME				H2SO4	HNO3			
1	Drinking Water	DW	9/12/18 1205		WG		4	Unpreserved	X	X	X	
2	Waste Water	WT	9/12/18 1400		WG		4	Unpreserved	X	X	X	
3	Waste Water	WW	9/12/18 1625		WG		4	Unpreserved	X	X	X	
4	Blank											
5												
6												
7												
8												
9												
10												
11												
12												

WO#: 269232  
269232

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP in C	Received on	Ice (Y/N)	Custody Sealed (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)
Denard Howard / Wood	Denard Howard / Wood	9/12/18	1800	Ada Howard	09/13/18	0900	0.5		X	X	X	X

SAMPLER NAME AND SIGNATURE: \_\_\_\_\_  
 PRINT Name of SAMPLER: Daniel Howard  
 SIGNATURE of SAMPLER: *Daniel Howard*  
 DATE Signed: 9/12/18

**Sample Condition Upon Receipt**



Client Name: GIA Power

Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other  
 Tracking #: \_\_\_\_\_

**WO#: 269232**

PM: BM Due Date: 10/11/18

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

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 0.5 Biological Tissue is Frozen: Yes No  
 Temp should be above freezing to 6°C

Date and Initials of person examining contents: 9/13/18 RR

Comments:

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

**Client Notification/ Resolution:**

Field Data Required? 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 DEHNP Certification Office (out of hold, incorrect preservative, out of temp, incorrect containers)

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JJY  
Date: 9/25/2018  
Worklist: 43874  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531650
MB Concentration:	0.064
MB Counting Uncertainty:	0.152
MB MDC:	0.367
MB Numerical Performance Indicator:	0.82
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS43874	LCS43874
Count Date:	9/26/2018
Spike I.D.:	18-029
Spike Concentration (pCi/mL):	80.337
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.501
Target Conc. (pCi/L, g, F):	15.765
Uncertainty (Calculated):	1.452
Result (pCi/L, g, F):	13.224
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.183
Numerical Performance Indicator:	-2.66
Percent Recovery:	83.88%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS43874
Duplicate Sample I.D.:	LCS43874
Sample Result (pCi/L, g, F):	13.224
Sample Duplicate Result (pCi/L, g, F):	1.183
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	12.079
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.085
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	1.392
Duplicate RPD:	9.05%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc.(pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

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

Comments:

*August*

*Umm 9/26/18*

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JJY  
Date: 9/25/2018  
Worklist: 43874  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531650
MB concentration:	0.064
M/B Counting Uncertainty:	0.152
MB MDC:	0.367
MB Numerical Performance Indicator:	0.82
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSD43874	LCSD43874
Count Date:	9/26/2018
Spike I.D.:	18-029
Spike Concentration (pCi/mL):	80.337
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.510
Target Conc. (pCi/L, g, F):	15.765
Uncertainty (Calculated):	1.452
Result (pCi/L, g, F):	13.224
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	1.183
Numerical Performance Indicator:	-2.66
Percent Recovery:	83.88%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	269286003
Duplicate Sample I.D.:	269286003DUP
Sample Result (pCi/L, g, F):	0.328
Sample Duplicate Result (pCi/L, g, F):	0.230
Sample Result Counting Uncertainty (pCi/L, g, F):	0.240
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.183
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	0.588
Duplicate RPD:	30.98%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

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

Comments:

result is 5x mdc, not < 2 acceptable

\*\*\*Btch must be re-prepped due to unacceptable precision

Jan 9/26/18

Jan 9/26/18

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: JLW  
Date: 9/20/2018  
Worklist: 43792  
Matrix: DW

**Method Blank Assessment**

MB Sample ID: 1529951  
MB Concentration: 0.095  
M/B Counting Uncertainty: 0.306  
MB MDC: 0.689  
MB Numerical Performance Indicator: 0.61  
MB Status vs Numerical Indicator: N/A  
MB Status vs. MDC: Pass

**Laboratory Control Sample Assessment**

LCS (Y or N)? N  
LCS ID: LCS43792

Count Date: 9/25/2018  
Spike I.D.: 18-026  
Spike Concentration (pCi/mL): 39.748  
Volume Used (mL): 0.10  
Aliquot Volume (L, g, F): 0.806  
Target Conc. (pCi/L, g, F): 4.932  
Uncertainty (Calculated): 0.242  
Result (pCi/L, g, F): 4.653  
LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.667  
Numerical Performance Indicator: -0.77  
Percent Recovery: 94.34%  
Status vs Numerical Indicator: N/A  
Status vs Recovery: Pass

**Duplicate Sample Assessment**

Sample I.D.: 7064736002  
Duplicate Sample I.D.: 7064736002DUP  
Sample Result (pCi/L, g, F): 1.072  
Sample Result Counting Uncertainty (pCi/L, g, F): 0.354  
Sample Duplicate Result (pCi/L, g, F): 0.823  
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.423  
Are sample and/or duplicate results below MDC? See Below ##  
Duplicate Numerical Performance Indicator: 0.885  
Duplicate RPD: 26.29%  
Duplicate Status vs Numerical Indicator: N/A  
Duplicate Status vs RPD: Pass

Enter Duplicate sample IDs if other than LCS/LCSD in the space below:  
7064736002  
7064736002DUP

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

Comments:

**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Spike I.D.:

MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
Spike Volume Used in MS (mL):  
Spike Volume Used in MSD (mL):  
MS Aliquot (L, g, F):  
MS Target Conc. (pCi/L, g, F):  
MSD Aliquot (L, g, F):  
MSD Target Conc. (pCi/L, g, F):  
Spike uncertainty (calculated):

Sample Result:  
Sample Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Result:  
Sample Matrix Spike Duplicate Result:  
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
MS Numerical Performance Indicator:  
MS Percent Recovery:  
MSD Percent Recovery:  
MS Status vs Numerical Indicator:  
MSD Status vs Numerical Indicator:  
MS Status vs Recovery:  
MSD Status vs Recovery:

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:

Sample Matrix Spike Result:  
Sample Matrix Spike Duplicate Result:  
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
Duplicate Numerical Performance Indicator:  
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:  
MS/MSD Duplicate Status vs Numerical Indicator:  
MS/MSD Duplicate Status vs RPD:

September 20, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269234

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 13, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269234

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### 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

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269234

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
269234001	FB-01	Water	09/11/18 15:40	09/13/18 09:40
269234002	EB-01	Water	09/11/18 15:50	09/13/18 09:40
269234003	PZ-2S	Water	09/12/18 14:27	09/13/18 09:40
269234004	PZ-2D	Water	09/12/18 15:47	09/13/18 09:40

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269234

Lab ID	Sample ID	Method	Analysts	Analytes Reported
269234001	FB-01	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
269234002	EB-01	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
269234003	PZ-2S	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
269234004	PZ-2D	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB	3

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269234

Sample: <b>FB-01</b>		Lab ID: <b>269234001</b>		Collected: 09/11/18 15:40		Received: 09/13/18 09:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:38	09/18/18 12:58	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:38	09/18/18 12:58	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	09/17/18 15:38	09/18/18 12:58	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:38	09/18/18 12:58	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	09/17/18 15:38	09/18/18 12:58	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:38	09/18/18 12:58	7440-43-9	
Calcium	<b>0.015J</b>	mg/L	0.50	0.014	1	09/17/18 15:38	09/18/18 12:58	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	09/17/18 15:38	09/18/18 12:58	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:38	09/18/18 12:58	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:38	09/18/18 12:58	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	09/17/18 15:38	09/18/18 12:58	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:38	09/18/18 12:58	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:38	09/18/18 12:58	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/17/18 15:38	09/18/18 12:58	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 15:00	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>17.0J</b>	mg/L	25.0	10.0	1		09/14/18 17:35		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>0.089J</b>	mg/L	0.25	0.024	1		09/14/18 20:12	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		09/14/18 20:12	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		09/14/18 20:12	14808-79-8	

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269234

Sample: EB-01		Lab ID: 269234002		Collected: 09/11/18 15:50		Received: 09/13/18 09:40		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:38	09/18/18 13:04	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:38	09/18/18 13:04	7440-38-2		
Barium	ND	mg/L	0.010	0.00078	1	09/17/18 15:38	09/18/18 13:04	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:38	09/18/18 13:04	7440-41-7		
Boron	ND	mg/L	0.040	0.0039	1	09/17/18 15:38	09/18/18 13:04	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:38	09/18/18 13:04	7440-43-9		
Calcium	<b>0.031J</b>	mg/L	0.50	0.014	1	09/17/18 15:38	09/18/18 13:04	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	09/17/18 15:38	09/18/18 13:04	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:38	09/18/18 13:04	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:38	09/18/18 13:04	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	09/17/18 15:38	09/18/18 13:04	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:38	09/18/18 13:04	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:38	09/18/18 13:04	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/17/18 15:38	09/18/18 13:04	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 15:02	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>13.0J</b>	mg/L	25.0	10.0	1		09/14/18 17:35			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>0.096J</b>	mg/L	0.25	0.024	1		09/14/18 20:34	16887-00-6	B	
Fluoride	ND	mg/L	0.30	0.029	1		09/14/18 20:34	16984-48-8		
Sulfate	ND	mg/L	1.0	0.017	1		09/14/18 20:34	14808-79-8		

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269234

Sample: PZ-2S		Lab ID: 269234003		Collected: 09/12/18 14:27		Received: 09/13/18 09:40		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:38	09/18/18 13:21	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:38	09/18/18 13:21	7440-38-2	
Barium	<b>0.0079J</b>	mg/L	0.010	0.00078	1	09/17/18 15:38	09/18/18 13:21	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:38	09/18/18 13:21	7440-41-7	
Boron	<b>0.012J</b>	mg/L	0.040	0.0039	1	09/17/18 15:38	09/18/18 13:21	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:38	09/18/18 13:21	7440-43-9	
Calcium	<b>46.6</b>	mg/L	25.0	0.69	50	09/17/18 15:38	09/18/18 13:27	7440-70-2	
Chromium	<b>0.0029J</b>	mg/L	0.010	0.0016	1	09/17/18 15:38	09/18/18 13:21	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:38	09/18/18 13:21	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:38	09/18/18 13:21	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	09/17/18 15:38	09/18/18 13:21	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:38	09/18/18 13:21	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:38	09/18/18 13:21	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/17/18 15:38	09/18/18 13:21	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 15:04	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>154</b>	mg/L	25.0	10.0	1		09/17/18 15:52		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>2.4</b>	mg/L	0.25	0.024	1		09/14/18 22:21	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		09/14/18 22:21	16984-48-8	
Sulfate	<b>1.9</b>	mg/L	1.0	0.017	1		09/14/18 22:21	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269234

Sample: PZ-2D		Lab ID: 269234004		Collected: 09/12/18 15:47		Received: 09/13/18 09:40		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:38	09/18/18 13:33	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:38	09/18/18 13:33	7440-38-2		
Barium	<b>0.011</b>	mg/L	0.010	0.00078	1	09/17/18 15:38	09/18/18 13:33	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:38	09/18/18 13:33	7440-41-7		
Boron	<b>0.013J</b>	mg/L	0.040	0.0039	1	09/17/18 15:38	09/18/18 13:33	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:38	09/18/18 13:33	7440-43-9		
Calcium	<b>26.9</b>	mg/L	25.0	0.69	50	09/17/18 15:38	09/18/18 13:38	7440-70-2		
Chromium	<b>0.0056J</b>	mg/L	0.010	0.0016	1	09/17/18 15:38	09/18/18 13:33	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:38	09/18/18 13:33	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:38	09/18/18 13:33	7439-92-1		
Lithium	<b>0.0025J</b>	mg/L	0.050	0.00097	1	09/17/18 15:38	09/18/18 13:33	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:38	09/18/18 13:33	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:38	09/18/18 13:33	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/17/18 15:38	09/18/18 13:33	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 15:07	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>97.0</b>	mg/L	25.0	10.0	1		09/17/18 15:52			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>2.3</b>	mg/L	0.25	0.024	1		09/14/18 22:42	16887-00-6		
Fluoride	<b>0.093J</b>	mg/L	0.30	0.029	1		09/14/18 22:42	16984-48-8		
Sulfate	<b>4.4</b>	mg/L	1.0	0.017	1		09/14/18 22:42	14808-79-8		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269234

QC Batch: 13618

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Associated Lab Samples: 269234001, 269234002, 269234003, 269234004

METHOD BLANK: 60678

Matrix: Water

Associated Lab Samples: 269234001, 269234002, 269234003, 269234004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	09/18/18 14:36	

LABORATORY CONTROL SAMPLE: 60679

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60680

60681

Parameter	Units	269231001 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	.0025	.0025	0.0026	0.0026	103	103	75-125	0	20	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269234

QC Batch: 13596 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 269234001, 269234002, 269234003, 269234004

METHOD BLANK: 60611 Matrix: Water  
Associated Lab Samples: 269234001, 269234002, 269234003, 269234004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/18/18 12:13	
Arsenic	mg/L	ND	0.0050	0.00057	09/18/18 12:13	
Barium	mg/L	ND	0.010	0.00078	09/18/18 12:13	
Beryllium	mg/L	ND	0.0030	0.000050	09/18/18 12:13	
Boron	mg/L	ND	0.040	0.0039	09/18/18 12:13	
Cadmium	mg/L	ND	0.0010	0.000093	09/18/18 12:13	
Calcium	mg/L	ND	0.50	0.014	09/18/18 12:13	
Chromium	mg/L	ND	0.010	0.0016	09/18/18 12:13	
Cobalt	mg/L	ND	0.010	0.00052	09/18/18 12:13	
Lead	mg/L	ND	0.0050	0.00027	09/18/18 12:13	
Lithium	mg/L	ND	0.050	0.00097	09/18/18 12:13	
Molybdenum	mg/L	ND	0.010	0.0019	09/18/18 12:13	
Selenium	mg/L	ND	0.010	0.0014	09/18/18 12:13	
Thallium	mg/L	ND	0.0010	0.00014	09/18/18 12:13	

LABORATORY CONTROL SAMPLE: 60612

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	100	80-120	
Arsenic	mg/L	.1	0.097	97	80-120	
Barium	mg/L	.1	0.097	97	80-120	
Beryllium	mg/L	.1	0.10	101	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	.1	0.097	97	80-120	
Calcium	mg/L	1	0.98	98	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.10	100	80-120	
Lead	mg/L	.1	0.096	96	80-120	
Lithium	mg/L	.1	0.10	101	80-120	
Molybdenum	mg/L	.1	0.098	98	80-120	
Selenium	mg/L	.1	0.10	101	80-120	
Thallium	mg/L	.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60613 60614

Parameter	Units	269285002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					
Antimony	mg/L	ND	.1	.1	0.10	0.10	102	103	75-125	2	20

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269234

Parameter	Units	60613		60614		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Arsenic	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	1	20		
Barium	mg/L	0.038	.1	.1	0.14	0.15	106	108	75-125	2	20		
Beryllium	mg/L	ND	.1	.1	0.099	0.096	99	96	75-125	3	20		
Boron	mg/L	0.16	1	1	1.2	1.1	102	95	75-125	6	20		
Cadmium	mg/L	ND	.1	.1	0.10	0.096	100	96	75-125	4	20		
Calcium	mg/L	136	1	1	144	144	810	882	75-125	1	20	M6	
Chromium	mg/L	0.0022J	.1	.1	0.11	0.11	105	105	75-125	1	20		
Cobalt	mg/L	ND	.1	.1	0.10	0.10	101	101	75-125	0	20		
Lead	mg/L	ND	.1	.1	0.095	0.095	95	95	75-125	1	20		
Lithium	mg/L	ND	.1	.1	0.10	0.097	100	97	75-125	4	20		
Molybdenum	mg/L	ND	.1	.1	0.10	0.10	100	101	75-125	1	20		
Selenium	mg/L	ND	.1	.1	0.10	0.11	103	105	75-125	2	20		
Thallium	mg/L	ND	.1	.1	0.096	0.095	96	95	75-125	2	20		

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269234

QC Batch: 13539

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 269234001, 269234002

LABORATORY CONTROL SAMPLE: 60154

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	424	106	84-108	

SAMPLE DUPLICATE: 60155

Parameter	Units	269197008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1180	1170	1	10	

SAMPLE DUPLICATE: 60156

Parameter	Units	269220001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	83.0	76.0	9	10	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269234

QC Batch: 13622

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 269234003, 269234004

LABORATORY CONTROL SAMPLE: 60712

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	386	96	84-108	

SAMPLE DUPLICATE: 60713

Parameter	Units	269335001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	317	325	2	10	

SAMPLE DUPLICATE: 60714

Parameter	Units	269231003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	286	284	1	10	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269234

QC Batch: 13508 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 269234001, 269234002, 269234003, 269234004

METHOD BLANK: 60027 Matrix: Water  
 Associated Lab Samples: 269234001, 269234002, 269234003, 269234004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.092J	0.25	0.024	09/14/18 16:30	
Fluoride	mg/L	ND	0.30	0.029	09/14/18 16:30	
Sulfate	mg/L	ND	1.0	0.017	09/14/18 16:30	

LABORATORY CONTROL SAMPLE: 60028

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.5	95	90-110	
Fluoride	mg/L	10	9.9	99	90-110	
Sulfate	mg/L	10	9.5	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60029 60030

Parameter	Units	269088001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.1	10	10	11.6	11.6	95	94	90-110	0	15	
Fluoride	mg/L	ND	10	10	9.6	9.5	96	95	90-110	1	15	
Sulfate	mg/L	3.4	10	10	12.8	12.8	94	94	90-110	0	15	

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269234

---

### 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.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269234

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
269234001	FB-01	EPA 3005A	13596	EPA 6020B	13645
269234002	EB-01	EPA 3005A	13596	EPA 6020B	13645
269234003	PZ-2S	EPA 3005A	13596	EPA 6020B	13645
269234004	PZ-2D	EPA 3005A	13596	EPA 6020B	13645
269234001	FB-01	EPA 7470A	13618	EPA 7470A	13664
269234002	EB-01	EPA 7470A	13618	EPA 7470A	13664
269234003	PZ-2S	EPA 7470A	13618	EPA 7470A	13664
269234004	PZ-2D	EPA 7470A	13618	EPA 7470A	13664
269234001	FB-01	SM 2540C	13539		
269234002	EB-01	SM 2540C	13539		
269234003	PZ-2S	SM 2540C	13622		
269234004	PZ-2D	SM 2540C	13622		
269234001	FB-01	EPA 300.0	13508		
269234002	EB-01	EPA 300.0	13508		
269234003	PZ-2S	EPA 300.0	13508		
269234004	PZ-2D	EPA 300.0	13508		

### REPORT OF LABORATORY ANALYSIS

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A		Section B		Section C	
Required Client Information:		Required Project Information:		Invoice Information:	
Company: Georgia Power - Coal Combustion Residuals	Report To: Joju Abraham	Copy To: Wood PLC	Attention: SCSINVOICES@southernco.com	Page: 1 of 1	
Address: 2480 Maner Road	Atlanta, GA 30339	Purchase Order #: SCS10348606	Company Name	Regulatory Agency	
Email: j.abraham@southernco.com	Project Name: Plant Mitchell CCR	Project #: 6122160170	Pace Quote	State / Location	
Phone: (404)506-7239	Requested Due Date: Standard		Pace Project Manager: betsy.mcdaniel@paceelabs.com	GA	
			Pace Profile #: 333		

ITEM #	MATRIX	CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	# OF CONTAINERS	PRESERVATIVES							ANALYSES TEST Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)
			START DATE	END DATE			H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other			
1	Drinking Water	DW	9/11/18 15:46		WG	4	X									
2	Waste Water	WW	9/11/18 15:50		WG	4	X									
3	Product	P	9/12/18 14:27		WG	4	X									
4	Soil/Solid	SL	9/12/18 15:47		WG	4	X									
5	Oil	OL														
6	Wipe	WP														
7	Air	AR														
8	Other	OT														
9	Tissue	TS														
10																
11																
12																

WO#: 269234



269234

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	TEMP in C	Received on	Ice (Y/N)	Custody (Y/N)	Sealed Cooler (Y/N)	Samples Intact (Y/N)				
David Howard/Wood	David Howard/Wood	9/12/18	1800	David Howard	9/12/18	0940	0.5			

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Daniel Howard

SIGNATURE of SAMPLER: *Daniel Howard*

DATE Signed: 9/12/18

**Sample Condition Upon Receipt**



Client Name: GIA Power

Project # \_\_\_\_\_

**WO#: 269234**

PM: BM

Due Date: 09/20/18

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

Cooler Temperature 0.5 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 9/13/18 MK

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Field Data Required? Y N

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)

October 11, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269235

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 13, 2018. 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: Maria Padilla, Georgia Power  
Rhonda Quinn, Norfolk Southern\_Wood E&I Solutions, Inc.  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269235

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### 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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269235

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
269235001	FB-01	Water	09/11/18 15:40	09/13/18 09:40
269235002	EB-01	Water	09/11/18 15:50	09/13/18 09:40
269235003	PZ-2S	Water	09/12/18 14:27	09/13/18 09:40
269235004	PZ-2D	Water	09/12/18 15:47	09/13/18 09:40

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269235

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
269235001	FB-01	EPA 9315	JJY	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269235002	EB-01	EPA 9315	JJY	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269235003	PZ-2S	EPA 9315	JJY	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269235004	PZ-2D	EPA 9315	JJY	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269235

**Sample: FB-01**      **Lab ID: 269235001**      Collected: 09/11/18 15:40      Received: 09/13/18 09:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.125 ± 0.172 (0.360)</b> <b>C:91% T:NA</b>	pCi/L	09/26/18 08:30	13982-63-3	
Radium-228	EPA 9320	<b>0.0863 ± 0.347 (0.786)</b> <b>C:77% T:78%</b>	pCi/L	09/25/18 10:52	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.211 ± 0.519 (1.15)</b>	pCi/L	09/28/18 12:19	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269235

**Sample: EB-01**      **Lab ID: 269235002**      Collected: 09/11/18 15:50      Received: 09/13/18 09:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.295 ± 0.230 (0.399)</b> <b>C:95% T:NA</b>	pCi/L	09/26/18 08:30	13982-63-3	
Radium-228	EPA 9320	<b>0.389 ± 0.386 (0.795)</b> <b>C:76% T:79%</b>	pCi/L	09/25/18 10:52	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.684 ± 0.616 (1.19)</b>	pCi/L	09/28/18 12:19	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269235

**Sample: PZ-2S**      **Lab ID: 269235003**      Collected: 09/12/18 14:27      Received: 09/13/18 09:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.337 ± 0.223 (0.344)</b> <b>C:101% T:NA</b>	pCi/L	09/26/18 08:30	13982-63-3	
Radium-228	EPA 9320	<b>0.363 ± 0.353 (0.728)</b> <b>C:79% T:82%</b>	pCi/L	09/25/18 10:52	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.700 ± 0.576 (1.07)</b>	pCi/L	09/28/18 13:42	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269235

**Sample: PZ-2D**      **Lab ID: 269235004**      Collected: 09/12/18 15:47      Received: 09/13/18 09:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.178 ± 0.193 (0.382)</b> <b>C:97% T:NA</b>	pCi/L	09/26/18 08:30	13982-63-3	
Radium-228	EPA 9320	<b>0.0390 ± 0.412 (0.940)</b> <b>C:80% T:78%</b>	pCi/L	09/25/18 10:52	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.217 ± 0.605 (1.32)</b>	pCi/L	09/28/18 13:42	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269235

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QC Batch:	313720	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	269235001, 269235002, 269235003, 269235004		

---

METHOD BLANK:	1531650	Matrix:	Water
Associated Lab Samples:	269235001, 269235002, 269235003, 269235004		

---

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0636 ± 0.153 (0.367) C:99% T:NA	pCi/L	09/26/18 08:20	

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.

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269235

QC Batch: 313328

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 269235001, 269235002, 269235003, 269235004

METHOD BLANK: 1529951

Matrix: Water

Associated Lab Samples: 269235001, 269235002, 269235003, 269235004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0952 ± 0.306 (0.689) C:78% T:83%	pCi/L	09/25/18 10:52	

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 Mitchell Ash Ponds  
Pace Project No.: 269235

---

### 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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269235

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
269235001	FB-01	EPA 9315	313720		
269235002	EB-01	EPA 9315	313720		
269235003	PZ-2S	EPA 9315	313720		
269235004	PZ-2D	EPA 9315	313720		
269235001	FB-01	EPA 9320	313328		
269235002	EB-01	EPA 9320	313328		
269235003	PZ-2S	EPA 9320	313328		
269235004	PZ-2D	EPA 9320	313328		
269235001	FB-01	Total Radium Calculation	314760		
269235002	EB-01	Total Radium Calculation	314760		
269235003	PZ-2S	Total Radium Calculation	314785		
269235004	PZ-2D	Total Radium Calculation	314785		

### REPORT OF LABORATORY ANALYSIS

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Johu Abraham	Attention:	scsinvoices@southernco.com
Address:	2480 Maner Road Atlanta, GA 30339	Copy To:	Wood PLC	Company Name:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Address:	
Phone:	(404)506-7239	Project Name:	Plant Mitchell CCR	Pace Quote:	
Requested Due Date:	Standard	Project #:	6122160170	Pace Project Manager:	betsy.mcdaniel@pacelabs.com
				Pace Profile #:	333
				Regulatory Agency:	
				State / Location:	GA

ITEM #	MATRIX CODE Drinking Water: DW Water: WT Waste Water: WW Product: P Soil/Solid: SL Oil: OL Wipe: WP Air: AR Other: OT Issue: TS	SAMPLE ID One Character per box. (A-Z, 0-9, /, -) Sample ids must be unique	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES						Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)
			START DATE TIME	END DATE TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2SO3			
1	WT	FB-01	9/11/18 1546	9/11/18 1546	H	X						X	X	X	
2	WT	EB-01	9/11/18 1550	9/11/18 1550	4	X						X	X	X	
3	WT	PZ-2S	9/12/18 1427	9/12/18 1427	4	X						X	X	X	
4	WT	PZ-2D	9/12/18 1547	9/12/18 1547	4	X						X	X	X	
5		Temp Blank													
6															
7															
8															
9															
10															
11															
12															

WO#: 269235



ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Daniel Howard / Wood	9/12/18	1800	Mcdaniel	9/12/18	0910	Received on (Y/N) Temp in C Ice (Y/N) Custody Sealed (Y/N) Cooler (Y/N) Samples Intact (Y/N)
							0.5

SAMPLER NAME AND SIGNATURE  
 PRINT Name of SAMPLER: Daniel Howard  
 SIGNATURE OF SAMPLER: *Daniel Howard*  
 DATE Signed: 9/12/18

**Sample Condition Upon Receipt**



Client Name: GIA Power

Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other  
 Tracking #: \_\_\_\_\_

**WO#: 269235**

PM: BM Due Date: 10/11/18

CLIENT: GAPower-CCR

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

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: 9/13/18 MR

Temp should be above freezing to 6°C

Comments:

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Field Data Required? Y N

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)

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JJY  
Date: 9/25/2018  
Worklist: 43874  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531650
MB Concentration:	0.064
MB Counting Uncertainty:	0.152
MB MDC:	0.367
MB Numerical Performance Indicator:	0.82
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS43874	LCS43874
Count Date:	9/26/2018
Spike I.D.:	18-029
Spike Concentration (pCi/mL):	80.337
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.501
Target Conc. (pCi/L, g, F):	15.765
Uncertainty (Calculated):	1.452
Result (pCi/L, g, F):	13.224
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.183
Numerical Performance Indicator:	-2.66
Percent Recovery:	83.88%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS43874
Duplicate Sample I.D.:	LCS43874
Sample Result (pCi/L, g, F):	13.224
Sample Duplicate Result (pCi/L, g, F):	1.183
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	12.079
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.095
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	1.392
Duplicate RPD:	9.05%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc.(pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

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

Comments:

*August*

*Umm 9/26/18*

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JJY  
Date: 9/25/2018  
Worklist: 43874  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531650
MB concentration:	0.064
M/B Counting Uncertainty:	0.152
MB MDC:	0.367
MB Numerical Performance Indicator:	0.82
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSD43874	LCSD43874
Count Date:	9/26/2018
Spike I.D.:	18-029
Spike Concentration (pCi/mL):	80.337
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.510
Target Conc. (pCi/L, g, F):	15.765
Uncertainty (Calculated):	1.452
Result (pCi/L, g, F):	13.224
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	1.183
Numerical Performance Indicator:	-2.66
Percent Recovery:	83.88%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	269286003
Duplicate Sample I.D.:	269286003DUP
Sample Result (pCi/L, g, F):	0.328
Sample Duplicate Result (pCi/L, g, F):	0.230
Sample Result Counting Uncertainty (pCi/L, g, F):	0.240
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.183
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	0.588
Duplicate RPD:	30.98%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

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

Comments:

result is 5x mdc, not < 2 acceptable

\*\*\*Btch must be re-prepped due to unacceptable precision.

Jan 9/26/18

Jan 9/26/18

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: JLW  
Date: 9/20/2018  
Worklist: 43792  
Matrix: DW

**Method Blank Assessment**

MB Sample ID: 1529951  
MB Concentration: 0.095  
M/B Counting Uncertainty: 0.306  
MB MDC: 0.689  
MB Numerical Performance Indicator: 0.61  
MB Status vs Numerical Indicator: N/A  
MB Status vs. MDC: Pass

**Laboratory Control Sample Assessment**

LCS (Y or N)? N  
LCS ID: LCS43792

Count Date: 9/25/2018  
Spike I.D.: 18-026  
Spike Concentration (pCi/mL): 39.748  
Volume Used (mL): 0.10  
Aliquot Volume (L, g, F): 0.806  
Target Conc. (pCi/L, g, F): 4.932  
Uncertainty (Calculated): 0.242  
Result (pCi/L, g, F): 4.653  
LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.667  
Numerical Performance Indicator: -0.77  
Percent Recovery: 94.34%  
Status vs Numerical Indicator: N/A  
Status vs Recovery: Pass

**Duplicate Sample Assessment**

Sample I.D.: 7064736002  
Duplicate Sample I.D.: 7064736002DUP

Sample Result (pCi/L, g, F): 1.072  
Sample Duplicate Result (pCi/L, g, F): 0.354  
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.823  
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.423  
Are sample and/or duplicate results below MDC? See Below ##  
Duplicate Numerical Performance Indicator: 0.885  
Duplicate RPD: 26.29%  
Duplicate Status vs Numerical Indicator: N/A  
Duplicate Status vs RPD: Pass

Enter Duplicate sample IDs if other than LCS/LCSD in the space below:  
7064736002  
7064736002DUP

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

Comments:

**Sample Matrix Spike Control Assessment**

Sample Collection Date:  
Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:  
Spike I.D.:

MS/MSD Decay Corrected Spike Concentration (pCi/mL):  
Spike Volume Used in MS (mL):  
Spike Volume Used in MSD (mL):  
MS Aliquot (L, g, F):  
MS Target Conc. (pCi/L, g, F):  
MSD Aliquot (L, g, F):  
MSD Target Conc. (pCi/L, g, F):  
Spike uncertainty (calculated):  
Sample Result:  
Sample Result Counting Uncertainty (pCi/L, g, F):  
Sample Matrix Spike Result:  
Sample Matrix Spike Duplicate Result:  
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
MS Numerical Performance Indicator:  
MS Percent Recovery:  
MSD Percent Recovery:  
MS Status vs Numerical Indicator:  
MSD Status vs Numerical Indicator:  
MS Status vs Recovery:  
MSD Status vs Recovery:

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.:  
Sample MS I.D.:  
Sample MSD I.D.:

Sample Matrix Spike Result:  
Sample Matrix Spike Duplicate Result:  
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):  
Duplicate Numerical Performance Indicator:  
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:  
MS/MSD Duplicate Status vs Numerical Indicator:  
MS/MSD Duplicate Status vs RPD:



September 20, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269285

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 14, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269285

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### 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

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269285

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
269285001	EB-02	Water	09/13/18 08:40	09/14/18 09:50
269285002	PZ-23	Water	09/13/18 10:20	09/14/18 09:50
269285003	PZ-16	Water	09/13/18 12:25	09/14/18 09:50
269285004	PZ-15	Water	09/13/18 16:10	09/14/18 09:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269285

Lab ID	Sample ID	Method	Analysts	Analytes Reported
269285001	EB-02	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
269285002	PZ-23	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
269285003	PZ-16	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
269285004	PZ-15	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269285

Sample: EB-02		Lab ID: 269285001		Collected: 09/13/18 08:40		Received: 09/14/18 09:50		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:38	09/18/18 13:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:38	09/18/18 13:44	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	09/17/18 15:38	09/18/18 13:44	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:38	09/18/18 13:44	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	09/17/18 15:38	09/18/18 13:44	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:38	09/18/18 13:44	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	09/17/18 15:38	09/18/18 13:44	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	09/17/18 15:38	09/18/18 13:44	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:38	09/18/18 13:44	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:38	09/18/18 13:44	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	09/17/18 15:38	09/18/18 13:44	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:38	09/18/18 13:44	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:38	09/18/18 13:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/17/18 15:38	09/18/18 13:44	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 15:09	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>15.0J</b>	mg/L	25.0	10.0	1		09/17/18 16:05		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>0.11J</b>	mg/L	0.25	0.024	1		09/17/18 23:08	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		09/17/18 23:08	16984-48-8	
Sulfate	<b>0.63J</b>	mg/L	1.0	0.017	1		09/17/18 23:08	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269285

Sample: PZ-23		Lab ID: 269285002		Collected: 09/13/18 10:20		Received: 09/14/18 09:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:38	09/18/18 13:50	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:38	09/18/18 13:50	7440-38-2	
Barium	<b>0.038</b>	mg/L	0.010	0.00078	1	09/17/18 15:38	09/18/18 13:50	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:38	09/18/18 13:50	7440-41-7	
Boron	<b>0.16</b>	mg/L	0.040	0.0039	1	09/17/18 15:38	09/18/18 13:50	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:38	09/18/18 13:50	7440-43-9	
Calcium	<b>136</b>	mg/L	25.0	0.69	50	09/17/18 15:38	09/18/18 13:56	7440-70-2	M6
Chromium	<b>0.0022J</b>	mg/L	0.010	0.0016	1	09/17/18 15:38	09/18/18 13:50	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:38	09/18/18 13:50	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:38	09/18/18 13:50	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	09/17/18 15:38	09/18/18 13:50	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:38	09/18/18 13:50	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:38	09/18/18 13:50	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/17/18 15:38	09/18/18 13:50	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 15:11	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>448</b>	mg/L	25.0	10.0	1		09/17/18 16:05		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>5.0</b>	mg/L	0.25	0.024	1		09/17/18 23:28	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		09/17/18 23:28	16984-48-8	
Sulfate	<b>37.4</b>	mg/L	1.0	0.017	1		09/17/18 23:28	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269285

Sample: PZ-16		Lab ID: 269285003		Collected: 09/13/18 12:25		Received: 09/14/18 09:50		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:38	09/18/18 14:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:38	09/18/18 14:56	7440-38-2	
Barium	<b>0.038</b>	mg/L	0.010	0.00078	1	09/17/18 15:38	09/18/18 14:56	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:38	09/18/18 14:56	7440-41-7	
Boron	<b>0.21</b>	mg/L	0.040	0.0039	1	09/17/18 15:38	09/18/18 14:56	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:38	09/18/18 14:56	7440-43-9	
Calcium	<b>80.2</b>	mg/L	25.0	0.69	50	09/17/18 15:38	09/18/18 15:01	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	09/17/18 15:38	09/18/18 14:56	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:38	09/18/18 14:56	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:38	09/18/18 14:56	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	09/17/18 15:38	09/18/18 14:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:38	09/18/18 14:56	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:38	09/18/18 14:56	7782-49-2	
Thallium	<b>0.00017J</b>	mg/L	0.0010	0.00014	1	09/17/18 15:38	09/18/18 14:56	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 15:14	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>291</b>	mg/L	25.0	10.0	1		09/17/18 16:05		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>7.3</b>	mg/L	0.25	0.024	1		09/17/18 23:49	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		09/17/18 23:49	16984-48-8	
Sulfate	<b>48.7</b>	mg/L	1.0	0.017	1		09/17/18 23:49	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269285

Sample: PZ-15		Lab ID: 269285004		Collected: 09/13/18 16:10		Received: 09/14/18 09:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:38	09/18/18 15:07	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:38	09/18/18 15:07	7440-38-2	
Barium	<b>0.048</b>	mg/L	0.010	0.00078	1	09/17/18 15:38	09/18/18 15:07	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:38	09/18/18 15:07	7440-41-7	
Boron	<b>0.22</b>	mg/L	0.040	0.0039	1	09/17/18 15:38	09/18/18 15:07	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:38	09/18/18 15:07	7440-43-9	
Calcium	<b>90.8</b>	mg/L	25.0	0.69	50	09/17/18 15:38	09/18/18 15:13	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	09/17/18 15:38	09/18/18 15:07	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:38	09/18/18 15:07	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:38	09/18/18 15:07	7439-92-1	
Lithium	<b>0.0013J</b>	mg/L	0.050	0.00097	1	09/17/18 15:38	09/18/18 15:07	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:38	09/18/18 15:07	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:38	09/18/18 15:07	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/17/18 15:38	09/18/18 15:07	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 15:16	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>336</b>	mg/L	25.0	10.0	1		09/17/18 16:05		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>6.8</b>	mg/L	0.25	0.024	1		09/18/18 00:10	16887-00-6	
Fluoride	<b>0.15J</b>	mg/L	0.30	0.029	1		09/18/18 00:10	16984-48-8	
Sulfate	<b>84.4</b>	mg/L	5.0	0.085	5		09/19/18 00:23	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269285

QC Batch: 13618 Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury  
Associated Lab Samples: 269285001, 269285002, 269285003, 269285004

METHOD BLANK: 60678 Matrix: Water  
Associated Lab Samples: 269285001, 269285002, 269285003, 269285004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	09/18/18 14:36	

LABORATORY CONTROL SAMPLE: 60679

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60680 60681

Parameter	Units	269231001 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	.0025	.0025	0.0026	0.0026	103	103	75-125	0	20	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269285

QC Batch: 13596 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 269285001, 269285002, 269285003, 269285004

METHOD BLANK: 60611 Matrix: Water  
Associated Lab Samples: 269285001, 269285002, 269285003, 269285004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/18/18 12:13	
Arsenic	mg/L	ND	0.0050	0.00057	09/18/18 12:13	
Barium	mg/L	ND	0.010	0.00078	09/18/18 12:13	
Beryllium	mg/L	ND	0.0030	0.000050	09/18/18 12:13	
Boron	mg/L	ND	0.040	0.0039	09/18/18 12:13	
Cadmium	mg/L	ND	0.0010	0.000093	09/18/18 12:13	
Calcium	mg/L	ND	0.50	0.014	09/18/18 12:13	
Chromium	mg/L	ND	0.010	0.0016	09/18/18 12:13	
Cobalt	mg/L	ND	0.010	0.00052	09/18/18 12:13	
Lead	mg/L	ND	0.0050	0.00027	09/18/18 12:13	
Lithium	mg/L	ND	0.050	0.00097	09/18/18 12:13	
Molybdenum	mg/L	ND	0.010	0.0019	09/18/18 12:13	
Selenium	mg/L	ND	0.010	0.0014	09/18/18 12:13	
Thallium	mg/L	ND	0.0010	0.00014	09/18/18 12:13	

LABORATORY CONTROL SAMPLE: 60612

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	100	80-120	
Arsenic	mg/L	.1	0.097	97	80-120	
Barium	mg/L	.1	0.097	97	80-120	
Beryllium	mg/L	.1	0.10	101	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	.1	0.097	97	80-120	
Calcium	mg/L	1	0.98	98	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.10	100	80-120	
Lead	mg/L	.1	0.096	96	80-120	
Lithium	mg/L	.1	0.10	101	80-120	
Molybdenum	mg/L	.1	0.098	98	80-120	
Selenium	mg/L	.1	0.10	101	80-120	
Thallium	mg/L	.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60613 60614

Parameter	Units	269285002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	.1	.1	0.10	0.10	102	103	75-125	2	20	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269285

Parameter	Units	60613		60614		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Arsenic	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	1	20		
Barium	mg/L	0.038	.1	.1	0.14	0.15	106	108	75-125	2	20		
Beryllium	mg/L	ND	.1	.1	0.099	0.096	99	96	75-125	3	20		
Boron	mg/L	0.16	1	1	1.2	1.1	102	95	75-125	6	20		
Cadmium	mg/L	ND	.1	.1	0.10	0.096	100	96	75-125	4	20		
Calcium	mg/L	136	1	1	144	144	810	882	75-125	1	20	M6	
Chromium	mg/L	0.0022J	.1	.1	0.11	0.11	105	105	75-125	1	20		
Cobalt	mg/L	ND	.1	.1	0.10	0.10	101	101	75-125	0	20		
Lead	mg/L	ND	.1	.1	0.095	0.095	95	95	75-125	1	20		
Lithium	mg/L	ND	.1	.1	0.10	0.097	100	97	75-125	4	20		
Molybdenum	mg/L	ND	.1	.1	0.10	0.10	100	101	75-125	1	20		
Selenium	mg/L	ND	.1	.1	0.10	0.11	103	105	75-125	2	20		
Thallium	mg/L	ND	.1	.1	0.096	0.095	96	95	75-125	2	20		

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**QUALITY CONTROL DATA**

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269285

QC Batch: 13623 Analysis Method: SM 2540C

QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 269285001, 269285002, 269285003, 269285004

LABORATORY CONTROL SAMPLE: 60715

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

SAMPLE DUPLICATE: 60716

Parameter	Units	269334006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	151	148	2	10	

SAMPLE DUPLICATE: 60717

Parameter	Units	269333004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	144	130	10	10	

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269285

QC Batch: 13631 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 269285001, 269285002, 269285003, 269285004

METHOD BLANK: 60740 Matrix: Water  
Associated Lab Samples: 269285001, 269285002, 269285003, 269285004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	09/17/18 20:22	
Fluoride	mg/L	ND	0.30	0.029	09/17/18 20:22	
Sulfate	mg/L	ND	1.0	0.017	09/17/18 20:22	

LABORATORY CONTROL SAMPLE: 60741

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.5	95	90-110	
Fluoride	mg/L	10	9.5	95	90-110	
Sulfate	mg/L	10	9.4	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60742 60743

Parameter	Units	268708001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	9.2	20	20	23.0	22.9	69	68	90-110	1	15	M1
Fluoride	mg/L	1.8	20	20	21.0	21.3	96	98	90-110	1	15	
Sulfate	mg/L	1370	20	20	1290	1290	-370	-367	90-110	0	15	E,M1

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269285

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### 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

E Analyte concentration exceeded the calibration range. The reported result is estimated.

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.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269285

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
269285001	EB-02	EPA 3005A	13596	EPA 6020B	13645
269285002	PZ-23	EPA 3005A	13596	EPA 6020B	13645
269285003	PZ-16	EPA 3005A	13596	EPA 6020B	13645
269285004	PZ-15	EPA 3005A	13596	EPA 6020B	13645
269285001	EB-02	EPA 7470A	13618	EPA 7470A	13664
269285002	PZ-23	EPA 7470A	13618	EPA 7470A	13664
269285003	PZ-16	EPA 7470A	13618	EPA 7470A	13664
269285004	PZ-15	EPA 7470A	13618	EPA 7470A	13664
269285001	EB-02	SM 2540C	13623		
269285002	PZ-23	SM 2540C	13623		
269285003	PZ-16	SM 2540C	13623		
269285004	PZ-15	SM 2540C	13623		
269285001	EB-02	EPA 300.0	13631		
269285002	PZ-23	EPA 300.0	13631		
269285003	PZ-16	EPA 300.0	13631		
269285004	PZ-15	EPA 300.0	13631		

**REPORT OF LABORATORY ANALYSIS**

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A		Section B		Section C		Page: 1 Of 1	
<b>Required Client Information:</b>		<b>Required Project Information:</b>		<b>Invoice Information:</b>			
Company: Georgia Power - Coal Combustion Residuals		Report To: Jolu Abraham		Attention: SCSinvoices@southernco.com			
Address: 2480 Manier Road Atlanta, GA 30339		Copy To: Wood PLC		Company Name:			
Email: jabraham@southernco.com		Purchase Order # SCS10348606		Address:			
Phone: (404)566-7239		Project Name: Plant Mitchell CCR		Pace Project Manager: beisy mcDaniel@pancelabs.com			
Requested Due Date: Standard		Project #: 6132160170		Pace Profile #: 333		State / Location: GA	
<p><b>SAMPLE ID</b> One Character per box. (A-Z, 0-9 / -)</p> <p>Sample ids must be unique</p>		MATRIX		COLLECTED		Request Analysis Filtered (Y/N)	
#	ITEM	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	START DATE	END DATE	TIME	
		DW Drinking Water WT Waste Water P Product SL Soil/Solid OL Oil WP Waste Product AR Air OT Other TS Tissue		DATE	DATE	TIME	
1	EB-02		WG	9/13/18	0840	4X	
2	PZ-23		WG	1020		4X	
3	PZ-16		WG	1225		6X	
4	PZ-15		WG	1610		4X	
5	Temp Blank						
6							
7							
8							
9							
10							
11							
12							
		RELINQUISHED BY / AFFILIATION		DATE		TIME	
		ACCEPTED BY / AFFILIATION		DATE		TIME	
EXTRA VAL. COLLECTED FOR PZ-16		Daniel Howard/Wood		9/13/18		1800	
FOR LAB QC FOR RADIUM 226+228							
TEMP IN C		RECEIVED ON		CUSTOMY SEALED		COOLER	
2.8		9/14/18		9/14/18		0950	
SAMPLE CONDITIONS		SAMPLER NAME AND SIGNATURE		PRINT Name of SAMPLER:		DATE Signed:	
		Daniel Howard/Ever Guillen		Daniel Howard		9/13/18	
		SIGNATURE OF SAMPLER:		DATE Signed:			
		Ever Guillen		9/13/18			

WO#: 269285



269285



**Sample Condition Upon Receipt**

Face Analytical

Client Name: GAPower

Project # \_\_\_\_\_

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 83      Type of Ice: Wet Blue None

Cooler Temperature 2.8      Biological Tissue is Frozen: Yes No  Samples on ice, cooling process has begun

**WO#: 269285**

PM: BM

Due Date: 09/21/18

CLIENT: GAPower-CCR

Date and Initials of person examining contents: 9/14/18 [Signature]

Comments:

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Field Data Required?      Y      N

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)

October 09, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269286

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 14, 2018. 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: Maria Padilla, Georgia Power  
Rhonda Quinn, Norfolk Southern\_Wood E&I Solutions, Inc.  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269286

---

### 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

---

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269286

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
269286001	EB-02	Water	09/13/18 08:40	09/14/18 09:50
269286002	PZ-23	Water	09/13/18 10:20	09/14/18 09:50
269286003	PZ-16	Water	09/13/18 12:25	09/14/18 09:50
269286004	PZ-15	Water	09/13/18 16:10	09/14/18 09:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269286

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
269286001	EB-02	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269286002	PZ-23	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269286003	PZ-16	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269286004	PZ-15	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269286

**Sample: EB-02**      **Lab ID: 269286001**      Collected: 09/13/18 08:40      Received: 09/14/18 09:50      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.112 ± 0.212 (0.485)</b> C:93% T:NA	pCi/L	09/26/18 08:21	13982-63-3	
Radium-228	EPA 9320	<b>0.142 ± 0.361 (0.805)</b> C:78% T:77%	pCi/L	09/27/18 15:05	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.254 ± 0.573 (1.29)</b>	pCi/L	09/28/18 12:19	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269286

**Sample: PZ-23**      **Lab ID: 269286002**      Collected: 09/13/18 10:20      Received: 09/14/18 09:50      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.610 ± 0.307 (0.400)</b> <b>C:93% T:NA</b>	pCi/L	09/26/18 08:21	13982-63-3	
Radium-228	EPA 9320	<b>0.155 ± 0.345 (0.765)</b> <b>C:77% T:83%</b>	pCi/L	09/27/18 15:05	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.765 ± 0.652 (1.17)</b>	pCi/L	09/28/18 12:19	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269286

**Sample: PZ-16**      **Lab ID: 269286003**      Collected: 09/13/18 12:25      Received: 09/14/18 09:50      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.328 ± 0.235 (0.382)</b> <b>C:95% T:NA</b>	pCi/L	09/26/18 08:21	13982-63-3	
Radium-228	EPA 9320	<b>0.144 ± 0.352 (0.783)</b> <b>C:76% T:81%</b>	pCi/L	09/27/18 15:05	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.472 ± 0.587 (1.17)</b>	pCi/L	09/28/18 12:19	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269286

**Sample: PZ-15**      **Lab ID: 269286004**      Collected: 09/13/18 16:10      Received: 09/14/18 09:50      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.271 ± 0.240 (0.444)</b> <b>C:93% T:NA</b>	pCi/L	09/26/18 08:21	13982-63-3	
Radium-228	EPA 9320	<b>0.391 ± 0.441 (0.931)</b> <b>C:81% T:82%</b>	pCi/L	09/27/18 15:05	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.662 ± 0.681 (1.38)</b>	pCi/L	09/28/18 12:19	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269286

---

QC Batch:	313703	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	269286001, 269286002, 269286003, 269286004		

---

METHOD BLANK:	1531593	Matrix:	Water
Associated Lab Samples:	269286001, 269286002, 269286003, 269286004		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0882 ± 0.339 (0.768) C:78% T:77%	pCi/L	09/27/18 15:05	

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 Mitchell Ash Ponds

Pace Project No.: 269286

---

QC Batch:	313720	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	269286001, 269286002, 269286003, 269286004		

---

METHOD BLANK:	1531650	Matrix:	Water
Associated Lab Samples:	269286001, 269286002, 269286003, 269286004		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0636 ± 0.153 (0.367) C:99% T:NA	pCi/L	09/26/18 08:20	

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269286

---

### 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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269286

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
269286001	EB-02	EPA 9315	313720		
269286002	PZ-23	EPA 9315	313720		
269286003	PZ-16	EPA 9315	313720		
269286004	PZ-15	EPA 9315	313720		
269286001	EB-02	EPA 9320	313703		
269286002	PZ-23	EPA 9320	313703		
269286003	PZ-16	EPA 9320	313703		
269286004	PZ-15	EPA 9320	313703		
269286001	EB-02	Total Radium Calculation	314760		
269286002	PZ-23	Total Radium Calculation	314760		
269286003	PZ-16	Total Radium Calculation	314760		
269286004	PZ-15	Total Radium Calculation	314760		

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

Face Analytical

Client Name: GAPower

Project # \_\_\_\_\_

**WO# : 269286**

PM: BM

Due Date: 10/12/18

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 2.8    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: 9/14/18 MR

Comments: \_\_\_\_\_

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Field Data Required?

Y    N

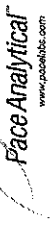
Comments/ Resolution: \_\_\_\_\_

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)

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JJY  
Date: 9/25/2018  
Worklist: 43874  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531650
MB Concentration:	0.064
MB Counting Uncertainty:	0.152
MB MDC:	0.367
MB Numerical Performance Indicator:	0.82
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS43874	LCS43874
Count Date:	9/26/2018
Spike I.D.:	18-029
Spike Concentration (pCi/mL):	80.337
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.501
Target Conc. (pCi/L, g, F):	15.765
Uncertainty (Calculated):	1.452
Result (pCi/L, g, F):	13.224
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.183
Numerical Performance Indicator:	-2.66
Percent Recovery:	83.88%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS43874
Duplicate Sample I.D.:	LCS43874
Sample Result (pCi/L, g, F):	13.224
Sample Duplicate Result (pCi/L, g, F):	1.183
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	12.079
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.095
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	1.392
Duplicate RPD:	9.05%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc.(pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

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

Comments:

*August*

*Umm 9/26/18*



# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JJY  
Date: 9/25/2018  
Worklist: 43874  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531650
MB concentration:	0.064
M/B Counting Uncertainty:	0.152
MB MDC:	0.367
MB Numerical Performance Indicator:	0.82
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSD43874	LCSD43874
Count Date:	9/26/2018
Spike I.D.:	18-029
Spike Concentration (pCi/mL):	80.337
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.510
Target Conc. (pCi/L, g, F):	15.765
Uncertainty (Calculated):	1.452
Result (pCi/L, g, F):	13.224
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	1.183
Numerical Performance Indicator:	-2.66
Percent Recovery:	83.88%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	269286003
Duplicate Sample I.D.:	269286003DUP
Sample Result (pCi/L, g, F):	0.328
Sample Duplicate Result (pCi/L, g, F):	0.230
Sample Result Counting Uncertainty (pCi/L, g, F):	0.240
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.183
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	0.588
Duplicate RPD:	30.98%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

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

Comments:

result is 5x mdc, not < 2 acceptable

\*\*\*Btch must be re-prepped due to unacceptable precision\*\*\*

Jan 9/26/18

Jan 9/26/18

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: VAL  
Date: 9/25/2018  
Worklist: 43868  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531593
MB concentration:	0.088
M/B Counting Uncertainty:	0.338
MB MDC:	0.768
MB Numerical Performance Indicator:	0.51
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		Y
LCS43868	LCS43868	
Count Date:	9/27/2018	
Spike I.D.:	18-026	
Spike Concentration (pCi/mL):	39.719	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.802	
Target Conc. (pCi/L, g, F):	4.951	
Uncertainty (Calculated):	0.243	
Result (pCi/L, g, F):	4.112	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.633	
Numerical Performance Indicator:	-2.43	
Percent Recovery:	83.05%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Duplicate Sample Assessment	
Sample I.D.:	LCS43868
Duplicate Sample I.D.:	LCS43868
Sample Result (pCi/L, g, F):	4.112
Sample Duplicate Result (pCi/L, g, F):	0.633
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	2.995
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.633
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	2.444
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	31.47%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

Sample Matrix Spike Control Assessment	
Sample Collection Date:	Sample I.D.
Sample MS I.D.:	Sample MS I.D.
Sample MSD I.D.:	Sample MSD I.D.
Spike I.D.:	Spike I.D.:
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike Volume Used in MS (mL):
Spike Volume Used in MS (mL):	MS Aliquot (L, g, F):
MS Target Conc. (pCi/L, g, F):	MSD Aliquot (L, g, F):
MSD Target Conc. (pCi/L, g, F):	Spike uncertainty (calculated):
Sample Result:	Sample Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Result:	Sample Matrix Spike Result:
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:
MS Numerical Performance Indicator:	MS Numerical Performance Indicator:
MSD Numerical Performance Indicator:	MSD Numerical Performance Indicator:
MS Percent Recovery:	MS Status vs Numerical Indicator:
MS Status vs Numerical Indicator:	MS Status vs Recovery:
MS Status vs Recovery:	MSD Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample I.D.
Sample MS I.D.:	Sample MS I.D.
Sample MSD I.D.:	Sample MSD I.D.
Sample Matrix Spike Result:	Sample Matrix Spike Result:
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Duplicate Numerical Performance Indicator:	Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs RPD:

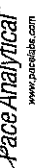
## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*Handwritten: 8/11/2018 MD*

*Handwritten: 50-850*

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: VAL  
Date: 9/25/2018  
Worklist: 43869  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531594
MB concentration:	0.088
M/B Counting Uncertainty:	0.338
MB MDC:	0.768
MB Numerical Performance Indicator:	0.51
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		Y
Count Date:	9/27/2018	LCSD43869
Spike I.D.:	18-026	9/27/2018
Spike Concentration (pCi/mL):	39.719	18-026
Volume Used (mL):	0.10	39.719
Aliquot Volume (L, g, F):	0.802	0.10
Target Conc. (pCi/L, g, F):	4.951	4.953
Uncertainty (Calculated):	0.243	0.243
Result (pCi/L, g, F):	4.112	2.995
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.633	0.633
Numerical Performance Indicator:	-2.43	-5.66
Percent Recovery:	83.05%	60.47%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS43869
Duplicate Sample I.D.:	LCSD43869
Sample Result (pCi/L, g, F):	4.112
Sample Duplicate Result (pCi/L, g, F):	0.633
Sample Result Counting Uncertainty (pCi/L, g, F):	2.995
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.633
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	2.444
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	31.47%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

*Handwritten signature: S. J. B. / B. M. M.*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	9/17/2018
Sample I.D.:	30265483001
Sample MS I.D.:	30265483001MS
Sample MSD I.D.:	18-026
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	39.850
Spike Volume Used in MS (mL):	0.20
Spike Volume Used in MSD (mL):	0.812
MS Aliquot (L, g, F):	9.815
MSD Aliquot (L, g, F):	0.481
MSD Target Conc. (pCi/L, g, F):	0.671
Spike uncertainty (calculated):	0.401
Sample Result:	7.801
Sample Result Counting Uncertainty (pCi/L, g, F):	0.766
Sample Matrix Spike Result:	-5.318
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	72.64%
Sample Matrix Spike Duplicate Result:	N/A
MS Numerical Performance Indicator:	Pass
MSD Numerical Performance Indicator:	Pass
MS Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Percent Recovery:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample I.D.
Sample MS I.D.:	Sample MS I.D.
Sample MSD I.D.:	Sample MSD I.D.
Sample Matrix Spike Result:	Sample Matrix Spike Result:
Sample Result Counting Uncertainty (pCi/L, g, F):	Sample Result Counting Uncertainty (pCi/L, g, F):
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):
Are sample and/or duplicate results below MDC?	Duplicate Numerical Performance Indicator:
Duplicate Numerical Performance Indicator:	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	MS/MSD Duplicate Status vs Numerical Indicator:
Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs RPD:
Duplicate Status vs RPD:	

September 21, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269287

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 14, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269287

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### 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

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269287

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
269287001	PZ-32	Water	09/13/18 10:26	09/14/18 09:50
269287002	PZ-25	Water	09/13/18 12:07	09/14/18 09:50
269287003	PZ-18	Water	09/13/18 14:00	09/14/18 09:50
269287004	PZ-7D	Water	09/13/18 15:17	09/14/18 09:50

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269287

Lab ID	Sample ID	Method	Analysts	Analytes Reported
269287001	PZ-32	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
269287002	PZ-25	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
269287003	PZ-18	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
269287004	PZ-7D	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269287

Sample: PZ-32		Lab ID: 269287001		Collected: 09/13/18 10:26		Received: 09/14/18 09:50		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:38	09/18/18 15:18	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:38	09/18/18 15:18	7440-38-2	
Barium	<b>0.014</b>	mg/L	0.010	0.00078	1	09/17/18 15:38	09/18/18 15:18	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:38	09/18/18 15:18	7440-41-7	
Boron	<b>0.013J</b>	mg/L	0.040	0.0039	1	09/17/18 15:38	09/18/18 15:18	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:38	09/18/18 15:18	7440-43-9	
Calcium	<b>58.7</b>	mg/L	25.0	0.69	50	09/17/18 15:38	09/18/18 15:24	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	09/17/18 15:38	09/18/18 15:18	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:38	09/18/18 15:18	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:38	09/18/18 15:18	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	09/17/18 15:38	09/18/18 15:18	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:38	09/18/18 15:18	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:38	09/18/18 15:18	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/17/18 15:38	09/18/18 15:18	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 15:19	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>192</b>	mg/L	25.0	10.0	1		09/17/18 16:05		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>2.2</b>	mg/L	0.25	0.024	1		09/18/18 01:53	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		09/18/18 01:53	16984-48-8	
Sulfate	<b>2.1</b>	mg/L	1.0	0.017	1		09/18/18 01:53	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269287

Sample: PZ-25		Lab ID: 269287002		Collected: 09/13/18 12:07		Received: 09/14/18 09:50		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:38	09/18/18 16:04	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:38	09/18/18 16:04	7440-38-2		
Barium	<b>0.10</b>	mg/L	0.010	0.00078	1	09/17/18 15:38	09/18/18 16:04	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:38	09/18/18 16:04	7440-41-7		
Boron	<b>0.20</b>	mg/L	0.040	0.0039	1	09/17/18 15:38	09/18/18 16:04	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:38	09/18/18 16:04	7440-43-9		
Calcium	<b>85.8</b>	mg/L	25.0	0.69	50	09/17/18 15:38	09/18/18 16:09	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	09/17/18 15:38	09/18/18 16:04	7440-47-3		
Cobalt	<b>0.0010J</b>	mg/L	0.010	0.00052	1	09/17/18 15:38	09/18/18 16:04	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:38	09/18/18 16:04	7439-92-1		
Lithium	<b>0.0061J</b>	mg/L	0.050	0.00097	1	09/17/18 15:38	09/18/18 16:04	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:38	09/18/18 16:04	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:38	09/18/18 16:04	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/17/18 15:38	09/18/18 16:04	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 15:26	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>307</b>	mg/L	25.0	10.0	1		09/17/18 16:05			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>2.3</b>	mg/L	0.25	0.024	1		09/18/18 02:14	16887-00-6		
Fluoride	<b>0.22J</b>	mg/L	0.30	0.029	1		09/18/18 02:14	16984-48-8		
Sulfate	<b>42.0</b>	mg/L	1.0	0.017	1		09/18/18 02:14	14808-79-8		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269287

Sample: PZ-18		Lab ID: 269287003		Collected: 09/13/18 14:00		Received: 09/14/18 09:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:38	09/18/18 16:15	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:38	09/18/18 16:15	7440-38-2	
Barium	<b>0.023</b>	mg/L	0.010	0.00078	1	09/17/18 15:38	09/18/18 16:15	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:38	09/18/18 16:15	7440-41-7	
Boron	<b>0.37</b>	mg/L	0.040	0.0039	1	09/17/18 15:38	09/18/18 16:15	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:38	09/18/18 16:15	7440-43-9	
Calcium	<b>123</b>	mg/L	25.0	0.69	50	09/17/18 15:38	09/18/18 16:21	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	09/17/18 15:38	09/18/18 16:15	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:38	09/18/18 16:15	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:38	09/18/18 16:15	7439-92-1	
Lithium	<b>0.0029J</b>	mg/L	0.050	0.00097	1	09/17/18 15:38	09/18/18 16:15	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:38	09/18/18 16:15	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:38	09/18/18 16:15	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/17/18 15:38	09/18/18 16:15	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 15:28	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>438</b>	mg/L	25.0	10.0	1		09/17/18 16:05		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>6.7</b>	mg/L	0.25	0.024	1		09/18/18 02:55	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		09/18/18 02:55	16984-48-8	
Sulfate	<b>106</b>	mg/L	10.0	0.17	10		09/20/18 17:03	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269287

Sample: PZ-7D		Lab ID: 269287004		Collected: 09/13/18 15:17		Received: 09/14/18 09:50		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:38	09/18/18 16:27	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:38	09/18/18 16:27	7440-38-2	
Barium	<b>0.0078J</b>	mg/L	0.010	0.00078	1	09/17/18 15:38	09/18/18 16:27	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:38	09/18/18 16:27	7440-41-7	
Boron	<b>0.31</b>	mg/L	0.040	0.0039	1	09/17/18 15:38	09/18/18 16:27	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:38	09/18/18 16:27	7440-43-9	
Calcium	<b>116</b>	mg/L	25.0	0.69	50	09/17/18 15:38	09/18/18 16:32	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	09/17/18 15:38	09/18/18 16:27	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:38	09/18/18 16:27	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:38	09/18/18 16:27	7439-92-1	
Lithium	<b>0.0026J</b>	mg/L	0.050	0.00097	1	09/17/18 15:38	09/18/18 16:27	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:38	09/18/18 16:27	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:38	09/18/18 16:27	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/17/18 15:38	09/18/18 16:27	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 15:30	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>394</b>	mg/L	25.0	10.0	1		09/17/18 16:05		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>6.6</b>	mg/L	0.25	0.024	1		09/18/18 03:16	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		09/18/18 03:16	16984-48-8	
Sulfate	<b>67.5</b>	mg/L	5.0	0.085	5		09/19/18 01:09	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269287

QC Batch: 13618

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Associated Lab Samples: 269287001, 269287002, 269287003, 269287004

METHOD BLANK: 60678

Matrix: Water

Associated Lab Samples: 269287001, 269287002, 269287003, 269287004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	09/18/18 14:36	

LABORATORY CONTROL SAMPLE: 60679

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60680

60681

Parameter	Units	269231001 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	.0025	.0025	0.0026	0.0026	103	103	75-125	0	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269287

QC Batch: 13596 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 269287001, 269287002, 269287003, 269287004

METHOD BLANK: 60611 Matrix: Water  
Associated Lab Samples: 269287001, 269287002, 269287003, 269287004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/18/18 12:13	
Arsenic	mg/L	ND	0.0050	0.00057	09/18/18 12:13	
Barium	mg/L	ND	0.010	0.00078	09/18/18 12:13	
Beryllium	mg/L	ND	0.0030	0.000050	09/18/18 12:13	
Boron	mg/L	ND	0.040	0.0039	09/18/18 12:13	
Cadmium	mg/L	ND	0.0010	0.000093	09/18/18 12:13	
Calcium	mg/L	ND	0.50	0.014	09/18/18 12:13	
Chromium	mg/L	ND	0.010	0.0016	09/18/18 12:13	
Cobalt	mg/L	ND	0.010	0.00052	09/18/18 12:13	
Lead	mg/L	ND	0.0050	0.00027	09/18/18 12:13	
Lithium	mg/L	ND	0.050	0.00097	09/18/18 12:13	
Molybdenum	mg/L	ND	0.010	0.0019	09/18/18 12:13	
Selenium	mg/L	ND	0.010	0.0014	09/18/18 12:13	
Thallium	mg/L	ND	0.0010	0.00014	09/18/18 12:13	

LABORATORY CONTROL SAMPLE: 60612

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	100	80-120	
Arsenic	mg/L	.1	0.097	97	80-120	
Barium	mg/L	.1	0.097	97	80-120	
Beryllium	mg/L	.1	0.10	101	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	.1	0.097	97	80-120	
Calcium	mg/L	1	0.98	98	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.10	100	80-120	
Lead	mg/L	.1	0.096	96	80-120	
Lithium	mg/L	.1	0.10	101	80-120	
Molybdenum	mg/L	.1	0.098	98	80-120	
Selenium	mg/L	.1	0.10	101	80-120	
Thallium	mg/L	.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60613 60614

Parameter	Units	269285002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					
Antimony	mg/L	ND	.1	.1	0.10	0.10	102	103	75-125	2	20

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269287

Parameter	Units	60613		60614		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Arsenic	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	1	20		
Barium	mg/L	0.038	.1	.1	0.14	0.15	106	108	75-125	2	20		
Beryllium	mg/L	ND	.1	.1	0.099	0.096	99	96	75-125	3	20		
Boron	mg/L	0.16	1	1	1.2	1.1	102	95	75-125	6	20		
Cadmium	mg/L	ND	.1	.1	0.10	0.096	100	96	75-125	4	20		
Calcium	mg/L	136	1	1	144	144	810	882	75-125	1	20	M6	
Chromium	mg/L	0.0022J	.1	.1	0.11	0.11	105	105	75-125	1	20		
Cobalt	mg/L	ND	.1	.1	0.10	0.10	101	101	75-125	0	20		
Lead	mg/L	ND	.1	.1	0.095	0.095	95	95	75-125	1	20		
Lithium	mg/L	ND	.1	.1	0.10	0.097	100	97	75-125	4	20		
Molybdenum	mg/L	ND	.1	.1	0.10	0.10	100	101	75-125	1	20		
Selenium	mg/L	ND	.1	.1	0.10	0.11	103	105	75-125	2	20		
Thallium	mg/L	ND	.1	.1	0.096	0.095	96	95	75-125	2	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269287

QC Batch: 13623

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 269287001, 269287002, 269287003, 269287004

LABORATORY CONTROL SAMPLE: 60715

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

SAMPLE DUPLICATE: 60716

Parameter	Units	269334006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	151	148	2	10	

SAMPLE DUPLICATE: 60717

Parameter	Units	269333004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	144	130	10	10	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269287

QC Batch: 13631 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 269287001, 269287002, 269287003, 269287004

METHOD BLANK: 60740 Matrix: Water  
Associated Lab Samples: 269287001, 269287002, 269287003, 269287004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	09/17/18 20:22	
Fluoride	mg/L	ND	0.30	0.029	09/17/18 20:22	
Sulfate	mg/L	ND	1.0	0.017	09/17/18 20:22	

LABORATORY CONTROL SAMPLE: 60741

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.5	95	90-110	
Fluoride	mg/L	10	9.5	95	90-110	
Sulfate	mg/L	10	9.4	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60742 60743

Parameter	Units	268708001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	9.2	20	20	23.0	22.9	69	68	90-110	1	15	M1
Fluoride	mg/L	1.8	20	20	21.0	21.3	96	98	90-110	1	15	
Sulfate	mg/L	1370	20	20	1290	1290	-370	-367	90-110	0	15	E,M1

MATRIX SPIKE SAMPLE: 60744

Parameter	Units	269314001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	304	10	180	-1240	90-110	E,M1
Fluoride	mg/L	0.21	10	9.2	90	90-110	
Sulfate	mg/L	2480	10	674	-18000	90-110	E,M1

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269287

---

### 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

E Analyte concentration exceeded the calibration range. The reported result is estimated.

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269287

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
269287001	PZ-32	EPA 3005A	13596	EPA 6020B	13645
269287002	PZ-25	EPA 3005A	13596	EPA 6020B	13645
269287003	PZ-18	EPA 3005A	13596	EPA 6020B	13645
269287004	PZ-7D	EPA 3005A	13596	EPA 6020B	13645
269287001	PZ-32	EPA 7470A	13618	EPA 7470A	13664
269287002	PZ-25	EPA 7470A	13618	EPA 7470A	13664
269287003	PZ-18	EPA 7470A	13618	EPA 7470A	13664
269287004	PZ-7D	EPA 7470A	13618	EPA 7470A	13664
269287001	PZ-32	SM 2540C	13623		
269287002	PZ-25	SM 2540C	13623		
269287003	PZ-18	SM 2540C	13623		
269287004	PZ-7D	SM 2540C	13623		
269287001	PZ-32	EPA 300.0	13631		
269287002	PZ-25	EPA 300.0	13631		
269287003	PZ-18	EPA 300.0	13631		
269287004	PZ-7D	EPA 300.0	13631		

### REPORT OF LABORATORY ANALYSIS

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Section A</b>	<b>Section B</b>	<b>Section C</b>
<b>Required Client Information:</b> Company: Georgia Power - Coal Combustion Residuals Address: 2480 Maner Road, Atlanta, GA 30339 Email: jabraham@southernco.com Phone: (404) 506-7239 Requested Due Date: <u>Standard</u>	<b>Required Project Information:</b> Report To: Jolu Abraham Copy To: Wood PLC Purchase Order #: SCS10348606 Project Name: Plant Mitchell CCR Project #: <u>6122160170</u>	<b>Invoice Information:</b> Attention: scsinvoices@southernco.com Company Name: Southern Company Address: Pace Project Manager Pace Quote: beisy.mcdaniel@pacelabs.com Pace Profile #: 333
		Regulatory Agency: _____ State / Location: GA

Page: 1 Of 1

ITEM #	MATRIX	CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	# OF CONTAINERS	PRESERVATIVES						ANALYSES TEST	Requested Analysis Filtered (Y/N)	
			START DATE TIME	END DATE TIME			H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol			Other
1	Drinking Water	DW	9/13/18	1026	WTG	4	X							X	
2	Waste Water	WW		1207	WTG	6	X							X	
3	Waste Water Product	P		1400	WTG	4	X							X	
4	Waste Water	WW		1517	WTG	4	X							X	
5	Oil	OL													
6	Wipe	WP													
7	Air	AR													
8	Other	OT													
9	Tissue	TS													
10															
11															
12															

WO#: 269287



269287

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Extra vol. collected for PZ-2.5 For Lab QC For Radium 226/228	Daniel Howard / Wood	9/13/18	1800	M. Dalman	9/14/18	0950	Received on Ice (Y/N) Custody Sealed (Y/N) Cooler (Y/N) Samples Intact (Y/N)
							TEMP in C 21.8 X Y X

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: Daniel Howard / Ever Guillem

SIGNATURE of SAMPLER: *Daniel Howard* DATE Signed: 9/13/18

**Sample Condition Upon Receipt**

Pace Analytical

Client Name: GAPower

Project # \_\_\_\_\_

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 83      Type of Ice: Wet Blue None

Cooler Temperature 2.8      Biological Tissue is Frozen: Yes No  
 Temp should be above freezing to 6°C

**WO#: 269287**

PM: BM

Due Date: 09/21/18

CLIENT: GAPower-CCR

Samples on ice, cooling process has begun

Date and Initials of person examining contents: 9/14/18 ml

Comments: \_\_\_\_\_

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Field Data Required?

Y N

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)

October 09, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269288

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 14, 2018. 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: Maria Padilla, Georgia Power  
Rhonda Quinn, Norfolk Southern\_Wood E&I Solutions, Inc.  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269288

---

### 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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269288

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
269288001	PZ-32	Water	09/13/18 10:26	09/14/18 09:50
269288002	PZ-25	Water	09/13/18 12:07	09/14/18 09:50
269288003	PZ-18	Water	09/13/18 14:00	09/14/18 09:50
269288004	PZ-7D	Water	09/13/18 15:17	09/14/18 09:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269288

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
269288001	PZ-32	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269288002	PZ-25	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269288003	PZ-18	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269288004	PZ-7D	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269288

**Sample: PZ-32**      **Lab ID: 269288001**      Collected: 09/13/18 10:26      Received: 09/14/18 09:50      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.0743 ± 0.143 (0.329)</b> C:94% T:NA	pCi/L	09/26/18 08:21	13982-63-3	
Radium-228	EPA 9320	<b>0.239 ± 0.352 (0.758)</b> C:74% T:86%	pCi/L	09/27/18 15:05	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.313 ± 0.495 (1.09)</b>	pCi/L	09/28/18 12:19	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269288

**Sample: PZ-25**      **Lab ID: 269288002**      Collected: 09/13/18 12:07      Received: 09/14/18 09:50      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.439 ± 0.275 (0.450)</b> <b>C:95% T:NA</b>	pCi/L	09/26/18 08:21	13982-63-3	
Radium-228	EPA 9320	<b>0.327 ± 0.366 (0.767)</b> <b>C:76% T:83%</b>	pCi/L	09/27/18 15:05	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.766 ± 0.641 (1.22)</b>	pCi/L	09/28/18 12:19	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269288

**Sample: PZ-18**      **Lab ID: 269288003**      Collected: 09/13/18 14:00      Received: 09/14/18 09:50      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.454 ± 0.272 (0.428)</b> C:97% T:NA	pCi/L	09/26/18 08:21	13982-63-3	
Radium-228	EPA 9320	<b>0.254 ± 0.391 (0.847)</b> C:72% T:80%	pCi/L	09/27/18 15:05	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.708 ± 0.663 (1.28)</b>	pCi/L	09/28/18 12:19	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269288

**Sample: PZ-7D**      **Lab ID: 269288004**      Collected: 09/13/18 15:17      Received: 09/14/18 09:50      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>-0.0229 ± 0.162 (0.461)</b> <b>C:92% T:NA</b>	pCi/L	09/26/18 08:21	13982-63-3	
Radium-228	EPA 9320	<b>0.0542 ± 0.318 (0.727)</b> <b>C:74% T:86%</b>	pCi/L	09/27/18 15:06	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.0542 ± 0.480 (1.19)</b>	pCi/L	09/28/18 12:19	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269288

QC Batch: 313703

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 269288001, 269288002, 269288003, 269288004

METHOD BLANK: 1531593

Matrix: Water

Associated Lab Samples: 269288001, 269288002, 269288003, 269288004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0882 ± 0.339 (0.768) C:78% T:77%	pCi/L	09/27/18 15:05	

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 Mitchell Ash Ponds

Pace Project No.: 269288

QC Batch: 313720

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 269288001, 269288002, 269288003, 269288004

METHOD BLANK: 1531650

Matrix: Water

Associated Lab Samples: 269288001, 269288002, 269288003, 269288004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0636 ± 0.153 (0.367) C:99% T:NA	pCi/L	09/26/18 08:20	

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.

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269288

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### 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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269288

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
269288001	PZ-32	EPA 9315	313720		
269288002	PZ-25	EPA 9315	313720		
269288003	PZ-18	EPA 9315	313720		
269288004	PZ-7D	EPA 9315	313720		
269288001	PZ-32	EPA 9320	313703		
269288002	PZ-25	EPA 9320	313703		
269288003	PZ-18	EPA 9320	313703		
269288004	PZ-7D	EPA 9320	313703		
269288001	PZ-32	Total Radium Calculation	314760		
269288002	PZ-25	Total Radium Calculation	314760		
269288003	PZ-18	Total Radium Calculation	314760		
269288004	PZ-7D	Total Radium Calculation	314760		

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Jouj Abraham	Attention:	scsinvoices@southernco.com
Address:	2480 Mainer Road Atlanta, GA 30339	Copy To:	Wood PLC	Company Name:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Address:	
Phone:	(404)506-7239	Project Name:	Plant Mitchell CCR	Pace Quote:	
Requested Due Date:	Standard	Project #:	6122160170	Pace Project Manager:	belsy.mcdaniel@parcelabs.com
				Pace Profile #:	333
				Regulatory Agency:	GA
				State / Location:	GA

Page: 1 Of 1

ITEM #	MATRIX	CODE	COLLECTED		DATE	TIME	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS	Received on	Ice	Custody	Sealed	Cooler	Samples	Intact	
			START	END																DATE
1	Drinking Water	DW	9/13/18	1026	9/13/18	1800	9/13/18	1800	MDA Berman	09/14/18	0950									
2	Water	WT																		
3	Waste Water	WW																		
4	Product	P																		
5	Soil/Solid	SL																		
6	Oil	OL																		
7	Wipe	WP																		
8	Air	AR																		
9	Other	OT																		
10	Tissue	TS																		
11																				
12																				

WO#: 269288



ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Extra vol. collected for PZ-25	Daniel Howard/Wood	9/13/18	1800	MDA Berman	09/14/18	0950	
For Lab QC For Radium 226/228							

SAMPLER NAME AND SIGNATURE  
 PRINT Name of SAMPLER: Daniel Howard / Ever Guillem  
 SIGNATURE of SAMPLER: Daniel Howard  
 DATE Signed: 9/13/18

**Sample Condition Upon Receipt**



Client Name: GIA Power

Project # \_\_\_\_\_

**WO# : 269288**

PM: BM Due Date: 10/12/18  
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 83 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 2.8 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 9/14/18 MR

Comments:

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Field Data Required? Y N

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)

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JJY  
Date: 9/25/2018  
Worklist: 43874  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531650
MB Concentration:	0.064
MB Counting Uncertainty:	0.152
MB MDC:	0.367
MB Numerical Performance Indicator:	0.82
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS43874	LCS43874
Count Date:	9/26/2018
Spike I.D.:	18-029
Spike Concentration (pCi/mL):	80.337
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.501
Target Conc. (pCi/L, g, F):	15.765
Uncertainty (Calculated):	1.452
Result (pCi/L, g, F):	13.224
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.183
Numerical Performance Indicator:	-2.66
Percent Recovery:	83.88%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS43874
Duplicate Sample I.D.:	LCS43874
Sample Result (pCi/L, g, F):	13.224
Sample Duplicate Result (pCi/L, g, F):	1.183
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	12.079
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.095
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	1.392
Duplicate RPD:	9.05%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc.(pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

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

Comments:

*August*

*Umm 9/26/18*

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JJY  
Date: 9/25/2018  
Worklist: 43874  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531650
MB concentration:	0.064
M/B Counting Uncertainty:	0.152
MB MDC:	0.367
MB Numerical Performance Indicator:	0.82
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	9/26/2018
Spike I.D.:	18-029
Spike Concentration (pCi/mL):	80.337
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.510
Target Conc. (pCi/L, g, F):	15.765
Uncertainty (Calculated):	1.452
Result (pCi/L, g, F):	13.224
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.183
Numerical Performance Indicator:	-2.66
Percent Recovery:	83.88%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	269286003
Duplicate Sample I.D.:	269286003DUP
Sample Result (pCi/L, g, F):	0.328
Sample Duplicate Result (pCi/L, g, F):	0.230
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.240
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.183
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	0.588
Duplicate RPD:	30.98%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

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

Comments:

result is 5x mdc, not < 2 acceptable

\*\*\*Btch must be re-prepped due to unacceptable precision\*\*\*

Jan 9/26/18

Jan 9/26/18

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: VAL  
Date: 9/25/2018  
Worklist: 43868  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531593
MB concentration:	0.088
M/B Counting Uncertainty:	0.338
MB MDC:	0.768
MB Numerical Performance Indicator:	0.51
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS43868	
Count Date:	9/27/2018
Spike I.D.:	18-026
Spike Concentration (pCi/mL):	39.719
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.802
Target Conc. (pCi/L, g, F):	4.951
Uncertainty (Calculated):	0.243
Result (pCi/L, g, F):	4.112
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.633
Numerical Performance Indicator:	-2.43
Percent Recovery:	83.05%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS43868
Duplicate Sample I.D.:	LCS43868
Sample Result (pCi/L, g, F):	4.112
Sample Duplicate Result (pCi/L, g, F):	0.633
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	2.995
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.633
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	2.444
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	31.47%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

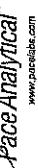
*Handwritten: 8/11/2018 MD*

*Handwritten: 50-850*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	Sample I.D.
Sample MS I.D.:	Sample MS I.D.
Sample MSD I.D.:	Spike I.D.:
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike Volume Used in MS (mL):
Spike Volume Used in MSD (mL):	MS Aliquot (L, g, F):
MS Target Conc. (pCi/L, g, F):	MSD Aliquot (L, g, F):
MSD Target Conc. (pCi/L, g, F):	Spike uncertainty (calculated):
Sample Result:	Sample Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Result:	Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
MS Numerical Performance Indicator:	MS Numerical Performance Indicator:
MSD Numerical Performance Indicator:	MSD Numerical Performance Indicator:
MS Percent Recovery:	MS Percent Recovery:
MS Status vs Numerical Indicator:	MS Status vs Numerical Indicator:
MSD Status vs Recovery:	MSD Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample I.D.
Sample MS I.D.:	Sample MS I.D.
Sample MSD I.D.:	Sample Matrix Spike Result:
Sample Matrix Spike Result:	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	Duplicate Numerical Performance Indicator:
Duplicate Numerical Performance Indicator:	Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs RPD:

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: VAL  
Date: 9/25/2018  
Worklist: 43869  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531594
MB concentration:	0.088
M/B Counting Uncertainty:	0.338
MB MDC:	0.768
MB Numerical Performance Indicator:	0.51
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		Y
Count Date:	9/27/2018	LCSD43869
Spike I.D.:	18-026	9/27/2018
Spike Concentration (pCi/mL):	39.719	18-026
Volume Used (mL):	0.10	39.719
Aliquot Volume (L, g, F):	0.802	0.10
Target Conc. (pCi/L, g, F):	4.951	4.953
Uncertainty (Calculated):	0.243	0.243
Result (pCi/L, g, F):	4.112	2.995
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.633	0.633
Numerical Performance Indicator:	-2.43	-5.66
Percent Recovery:	83.05%	60.47%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCSD43869
Duplicate Sample I.D.:	LCSD43869
Sample Result (pCi/L, g, F):	4.112
Sample Duplicate Result (pCi/L, g, F):	0.633
Sample Result Counting Uncertainty (pCi/L, g, F):	2.995
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.633
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	2.444
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	31.47%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

*Handwritten signature: S. J. B. / B. M. M.*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	9/17/2018
Sample I.D.:	30265483001
Sample MS I.D.:	30265483001MS
Sample MSD I.D.:	18-026
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	39.850
Spike Volume Used in MS (mL):	0.20
Spike Volume Used in MSD (mL):	0.812
MS Aliquot (L, g, F):	9.815
MSD Aliquot (L, g, F):	0.481
MSD Target Conc. (pCi/L, g, F):	0.671
Spike uncertainty (calculated):	0.401
Sample Result:	7.801
Sample Result Counting Uncertainty (pCi/L, g, F):	0.766
Sample Matrix Spike Result:	-5.318
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	72.64%
Sample Matrix Spike Duplicate Result:	N/A
MS Numerical Performance Indicator:	Pass
MSD Numerical Performance Indicator:	Pass
MS Status vs Numerical Indicator:	Pass
MSD Status vs Numerical Indicator:	Pass
MS Status vs Recovery:	Pass
MSD Status vs Recovery:	Pass

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample I.D.
Sample MS I.D.:	Sample MS I.D.
Sample MSD I.D.:	Sample MSD I.D.
Sample Matrix Spike Result:	Sample Matrix Spike Result:
Sample Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Duplicate Numerical Performance Indicator:	Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:	MS/MSD Duplicate Status vs RPD:

September 21, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269327

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 14, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269327

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### 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

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269327

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
269327001	PZ-19	Water	09/14/18 10:12	09/14/18 17:35
269327002	Dup-01	Water	09/14/18 00:00	09/14/18 17:35

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269327

Lab ID	Sample ID	Method	Analysts	Analytes Reported
269327001	PZ-19	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
269327002	Dup-01	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269327

Sample: PZ-19		Lab ID: 269327001		Collected: 09/14/18 10:12		Received: 09/14/18 17:35		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:38	09/18/18 16:38	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:38	09/18/18 16:38	7440-38-2		
Barium	<b>0.058</b>	mg/L	0.010	0.00078	1	09/17/18 15:38	09/18/18 16:38	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:38	09/18/18 16:38	7440-41-7		
Boron	<b>0.57</b>	mg/L	0.040	0.0039	1	09/17/18 15:38	09/18/18 16:38	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:38	09/18/18 16:38	7440-43-9		
Calcium	<b>124</b>	mg/L	25.0	0.69	50	09/17/18 15:38	09/18/18 16:44	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	09/17/18 15:38	09/18/18 16:38	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:38	09/18/18 16:38	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:38	09/18/18 16:38	7439-92-1		
Lithium	<b>0.018J</b>	mg/L	0.050	0.00097	1	09/17/18 15:38	09/18/18 16:38	7439-93-2		
Molybdenum	<b>0.0023J</b>	mg/L	0.010	0.0019	1	09/17/18 15:38	09/18/18 16:38	7439-98-7		
Selenium	<b>0.0015J</b>	mg/L	0.010	0.0014	1	09/17/18 15:38	09/18/18 16:38	7782-49-2		
Thallium	<b>0.00076J</b>	mg/L	0.0010	0.00014	1	09/17/18 15:38	09/18/18 16:38	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 15:24	09/18/18 11:24	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>486</b>	mg/L	25.0	10.0	1		09/18/18 16:57			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>6.1</b>	mg/L	0.25	0.024	1		09/19/18 11:10	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		09/19/18 11:10	16984-48-8		
Sulfate	<b>89.5</b>	mg/L	10.0	0.17	10		09/19/18 14:48	14808-79-8		

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269327

Sample: Dup-01		Lab ID: 269327002		Collected: 09/14/18 00:00		Received: 09/14/18 17:35		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:38	09/18/18 16:49	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:38	09/18/18 16:49	7440-38-2		
Barium	<b>0.060</b>	mg/L	0.010	0.00078	1	09/17/18 15:38	09/18/18 16:49	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:38	09/18/18 16:49	7440-41-7		
Boron	<b>0.62</b>	mg/L	0.040	0.0039	1	09/17/18 15:38	09/18/18 16:49	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:38	09/18/18 16:49	7440-43-9		
Calcium	<b>132</b>	mg/L	25.0	0.69	50	09/17/18 15:38	09/18/18 16:55	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	09/17/18 15:38	09/18/18 16:49	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:38	09/18/18 16:49	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:38	09/18/18 16:49	7439-92-1		
Lithium	<b>0.019J</b>	mg/L	0.050	0.00097	1	09/17/18 15:38	09/18/18 16:49	7439-93-2		
Molybdenum	<b>0.0024J</b>	mg/L	0.010	0.0019	1	09/17/18 15:38	09/18/18 16:49	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:38	09/18/18 16:49	7782-49-2		
Thallium	<b>0.00080J</b>	mg/L	0.0010	0.00014	1	09/17/18 15:38	09/18/18 16:49	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 15:24	09/18/18 11:27	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>486</b>	mg/L	25.0	10.0	1		09/18/18 16:57			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>6.3</b>	mg/L	0.25	0.024	1		09/19/18 11:32	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		09/19/18 11:32	16984-48-8		
Sulfate	<b>84.5</b>	mg/L	10.0	0.17	10		09/19/18 15:10	14808-79-8		

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269327

QC Batch: 13620

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Associated Lab Samples: 269327001, 269327002

METHOD BLANK: 60706

Matrix: Water

Associated Lab Samples: 269327001, 269327002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	09/18/18 10:23	

LABORATORY CONTROL SAMPLE: 60707

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0025	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60708

60709

Parameter	Units	269331003 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	.0025	.0025	0.0027	0.0026	107	103	75-125	4	20	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269327

QC Batch: 13596 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 269327001, 269327002

METHOD BLANK: 60611 Matrix: Water  
Associated Lab Samples: 269327001, 269327002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/18/18 12:13	
Arsenic	mg/L	ND	0.0050	0.00057	09/18/18 12:13	
Barium	mg/L	ND	0.010	0.00078	09/18/18 12:13	
Beryllium	mg/L	ND	0.0030	0.000050	09/18/18 12:13	
Boron	mg/L	ND	0.040	0.0039	09/18/18 12:13	
Cadmium	mg/L	ND	0.0010	0.000093	09/18/18 12:13	
Calcium	mg/L	ND	0.50	0.014	09/18/18 12:13	
Chromium	mg/L	ND	0.010	0.0016	09/18/18 12:13	
Cobalt	mg/L	ND	0.010	0.00052	09/18/18 12:13	
Lead	mg/L	ND	0.0050	0.00027	09/18/18 12:13	
Lithium	mg/L	ND	0.050	0.00097	09/18/18 12:13	
Molybdenum	mg/L	ND	0.010	0.0019	09/18/18 12:13	
Selenium	mg/L	ND	0.010	0.0014	09/18/18 12:13	
Thallium	mg/L	ND	0.0010	0.00014	09/18/18 12:13	

LABORATORY CONTROL SAMPLE: 60612

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	100	80-120	
Arsenic	mg/L	.1	0.097	97	80-120	
Barium	mg/L	.1	0.097	97	80-120	
Beryllium	mg/L	.1	0.10	101	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	.1	0.097	97	80-120	
Calcium	mg/L	1	0.98	98	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.10	100	80-120	
Lead	mg/L	.1	0.096	96	80-120	
Lithium	mg/L	.1	0.10	101	80-120	
Molybdenum	mg/L	.1	0.098	98	80-120	
Selenium	mg/L	.1	0.10	101	80-120	
Thallium	mg/L	.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60613 60614

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		269285002 Result	Spike Conc.	Spike Conc.	MS Result						
Antimony	mg/L	ND	.1	.1	0.10	0.10	102	103	75-125	2	20

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269327

Parameter	Units	60613		60614		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		269285002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	1	20		
Barium	mg/L	0.038	.1	.1	0.14	0.15	106	108	75-125	2	20		
Beryllium	mg/L	ND	.1	.1	0.099	0.096	99	96	75-125	3	20		
Boron	mg/L	0.16	1	1	1.2	1.1	102	95	75-125	6	20		
Cadmium	mg/L	ND	.1	.1	0.10	0.096	100	96	75-125	4	20		
Calcium	mg/L	136	1	1	144	144	810	882	75-125	1	20	M6	
Chromium	mg/L	0.0022J	.1	.1	0.11	0.11	105	105	75-125	1	20		
Cobalt	mg/L	ND	.1	.1	0.10	0.10	101	101	75-125	0	20		
Lead	mg/L	ND	.1	.1	0.095	0.095	95	95	75-125	1	20		
Lithium	mg/L	ND	.1	.1	0.10	0.097	100	97	75-125	4	20		
Molybdenum	mg/L	ND	.1	.1	0.10	0.10	100	101	75-125	1	20		
Selenium	mg/L	ND	.1	.1	0.10	0.11	103	105	75-125	2	20		
Thallium	mg/L	ND	.1	.1	0.096	0.095	96	95	75-125	2	20		

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**QUALITY CONTROL DATA**

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269327

QC Batch: 13708	Analysis Method: SM 2540C
QC Batch Method: SM 2540C	Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 269327001, 269327002	

LABORATORY CONTROL SAMPLE: 61096

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	406	102	84-108	

SAMPLE DUPLICATE: 61097

Parameter	Units	269331005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

SAMPLE DUPLICATE: 61098

Parameter	Units	269329001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	403	426	6	10	

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**QUALITY CONTROL DATA**

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269327

QC Batch: 13668 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 269327001, 269327002

METHOD BLANK: 60888 Matrix: Water

Associated Lab Samples: 269327001, 269327002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.058J	0.25	0.024	09/19/18 03:45	
Fluoride	mg/L	ND	0.30	0.029	09/19/18 03:45	
Sulfate	mg/L	ND	1.0	0.017	09/19/18 03:45	

LABORATORY CONTROL SAMPLE: 60889

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.3	103	90-110	
Fluoride	mg/L	10	10.2	102	90-110	
Sulfate	mg/L	10	10.1	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60890 60891

Parameter	Units	269334009 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Chloride	mg/L	0.076J	10	10	10.2	10.2	102	101	90-110	0	15	
Fluoride	mg/L	ND	10	10	10.1	10.2	101	102	90-110	0	15	
Sulfate	mg/L	ND	10	10	10.0	10.1	100	101	90-110	0	15	

MATRIX SPIKE SAMPLE: 60892

Parameter	Units	269334010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L		1.4	10	11.6	90-110	
Fluoride	mg/L		ND	10	10.5	90-110	
Sulfate	mg/L		1.8	10	12.0	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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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269327

---

### 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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269327

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
269327001	PZ-19	EPA 3005A	13596	EPA 6020B	13645
269327002	Dup-01	EPA 3005A	13596	EPA 6020B	13645
269327001	PZ-19	EPA 7470A	13620	EPA 7470A	13670
269327002	Dup-01	EPA 7470A	13620	EPA 7470A	13670
269327001	PZ-19	SM 2540C	13708		
269327002	Dup-01	SM 2540C	13708		
269327001	PZ-19	EPA 300.0	13668		
269327002	Dup-01	EPA 300.0	13668		

### REPORT OF LABORATORY ANALYSIS

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Johu Abraham	Attention:	scsinvoices@southernco.com
Address:	2480 Maner Road Atlanta, GA 30339	Copy To:	Wood PLC	Company Name:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Address:	
Phone:	(404)506-7239	Project Name:	Plant Mitchell CCR	Pace Quote:	
Requested Due Date:	Standard	Project #:	6122160170	Pace Project Manager:	betsy.mcdaniel@pacelabs.com
				Pace Profile #:	333
Regulatory Agency			Regulatory Agency		
State / Location			State / Location		
GA			GA		

Page : 1 Of 1

ITEM #	MATRIX	CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	# OF CONTAINERS	PRESERVATIVES		ANALYSES TEST	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)
			START DATE	END DATE			UNPRESERVED	H2SO4			
1	Drinking Water	DW	9/14/18	1012	G	4	X	X	X		
2	Waste Water	WW	9/14/18	--	G	4	X	X	X		
3	Product	P									
4	Solid	SL									
5	Oil	OL									
6	Wipe	WP									
7	Air	AR									
8	Other	OT									
9	Tissue	TS									
10											
11											
12											

WO#: 269327



ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	RECEIVED ON	TEMP IN C	Ice (Y/N)	Custody Sealed (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)
	Daniel Howard / Wood	9/14/18	1735	Mr. E	9/14/18	1750				X	N	Y

SAMPLER NAME AND SIGNATURE  
 PRINT Name of SAMPLER: Daniel Howard / Eric Swillen  
 SIGNATURE of SAMPLER: Daniel Howard

DATE Signed: 9/14/18

**Sample Condition Upon Receipt**

Face Analytical

Client Name: GIA Power

Project # \_\_\_\_\_

**WO#: 269327**

PM: BM

Due Date: 09/24/18

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

Cooler Temperature 0.1 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 9/14/18 MK

Comments:

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Field Data Required?  Y  N

**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 DE-HNR Certification Office, but of hold, incorrect preservative, out of temp, incorrect containers

October 09, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269328

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 14, 2018. 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: Maria Padilla, Georgia Power  
Rhonda Quinn, Norfolk Southern\_Wood E&I Solutions, Inc.  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269328

---

### 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

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269328

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
269328001	PZ-19	Water	09/14/18 10:12	09/14/18 17:35
269328002	Dup-01	Water	09/14/18 00:00	09/14/18 17:35

### REPORT OF LABORATORY ANALYSIS

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**SAMPLE ANALYTE COUNT**

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269328

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
269328001	PZ-19	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269328002	Dup-01	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

**REPORT OF LABORATORY ANALYSIS**

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269328

**Sample: PZ-19**      **Lab ID: 269328001**      Collected: 09/14/18 10:12      Received: 09/14/18 17:35      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.740 ± 0.374 (0.571)</b> C:93% T:NA	pCi/L	09/26/18 08:22	13982-63-3	
Radium-228	EPA 9320	<b>-0.0661 ± 0.320 (0.759)</b> C:72% T:88%	pCi/L	09/27/18 15:06	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.740 ± 0.694 (1.33)</b>	pCi/L	09/28/18 12:19	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269328

**Sample: Dup-01**      **Lab ID: 269328002**      Collected: 09/14/18 00:00      Received: 09/14/18 17:35      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.569 ± 0.301 (0.416)</b> C:90% T:NA	pCi/L	09/26/18 08:20	13982-63-3	
Radium-228	EPA 9320	<b>0.733 ± 0.413 (0.740)</b> C:71% T:79%	pCi/L	09/27/18 15:06	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.30 ± 0.714 (1.16)</b>	pCi/L	09/28/18 12:19	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269328

QC Batch: 313703

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 269328001, 269328002

METHOD BLANK: 1531593

Matrix: Water

Associated Lab Samples: 269328001, 269328002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0882 ± 0.339 (0.768) C:78% T:77%	pCi/L	09/27/18 15:05	

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 Mitchell Ash Ponds

Pace Project No.: 269328

QC Batch: 313720

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 269328001, 269328002

METHOD BLANK: 1531650

Matrix: Water

Associated Lab Samples: 269328001, 269328002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0636 ± 0.153 (0.367) C:99% T:NA	pCi/L	09/26/18 08:20	

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269328

---

### 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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269328

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
269328001	PZ-19	EPA 9315	313720		
269328002	Dup-01	EPA 9315	313720		
269328001	PZ-19	EPA 9320	313703		
269328002	Dup-01	EPA 9320	313703		
269328001	PZ-19	Total Radium Calculation	314760		
269328002	Dup-01	Total Radium Calculation	314760		

### REPORT OF LABORATORY ANALYSIS

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# 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: jbraham@southernco.com  
 Phone: (404)506-7239  
 Requested Due Date: *Standard*

**Section B**  
**Required Project Information:**  
 Report To: Jojo Abraham  
 Copy To: Wood PLC  
 Purchase Order #: SCS10348606  
 Project Name: Plant Mitchell CCR  
 Project #: *6122160170*

**Section C**  
**Invoice Information:**  
 Attention: SCSInvoices@southernco.com  
 Company Name:  
 Address:  
 Pace Quote:  
 Pace Project Manager: betsy.mcdaniel@pacelabs.com  
 Pace Profile #: 333  
 Regulatory Agency:  
 State / Location: GA

ITEM #	MATRIX	COLLECTED	SAMPLE TYPE (G=GRAB C=COMP)	START		END		# OF CONTAINERS	Preservatives	Analyses Test	Requested Analysis Filtered (Y/N)
				DATE	TIME	DATE	TIME				
1	DW		WTG	9/14/18	1012			4	H2SO4 HNO3 HCl NaOH Na2SO3 Methanol Other	Radium 226/228 App III & App IV Metals TDS, Cl, F, SO4	
2	WT		WTG	9/14/18	--			4	Unpreserved	X X X X X X	
3	WT										
4											
5											
6											
7											
8											
9											
10											
11											
12											

WO#: 269328

269328

**ADDITIONAL COMMENTS:**  
*Daniel Howard / Wood 9/14/18 1735*

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP in C	Received on	Sealed	Cooler	Samples Intact
<i>Daniel Howard / Wood</i>	<i>9/14/18</i>	<i>1735</i>	<i>Mr. E</i>	<i>9/14/18</i>	<i>1755</i>	<i>0.1</i>		<i>X</i>	<i>N</i>	<i>Y</i>

**SAMPLER NAME AND SIGNATURE**  
 PRINT Name of SAMPLER: *Daniel Howard / Erer Guillen*  
 SIGNATURE of SAMPLER: *Daniel Howard*  
 DATE Signed: *9/14/18*





**Sample Condition Upon Receipt**

Client Name: GIA Power

Project # \_\_\_\_\_

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 83

Type of Ice: Wet Blue None

Cooler Temperature 011

Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

**WO#: 269328**

PM: BM

Due Date: 10/15/18

CLIENT: GAPower-CCR

Samples on ice, cooling process has begun  
Date and Initials of person examining contents: 9/14/18 MK

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Field Data Required?  Y  N

**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)

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JJY  
Date: 9/25/2018  
Worklist: 43874  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531650
MB Concentration:	0.064
MB Counting Uncertainty:	0.152
MB MDC:	0.367
MB Numerical Performance Indicator:	0.82
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS43874	LCS43874
Count Date:	9/26/2018
Spike I.D.:	18-029
Spike Concentration (pCi/mL):	80.337
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.501
Target Conc. (pCi/L, g, F):	15.765
Uncertainty (Calculated):	1.452
Result (pCi/L, g, F):	13.224
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.183
Numerical Performance Indicator:	-2.66
Percent Recovery:	83.88%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS43874
Duplicate Sample I.D.:	LCS43874
Sample Result (pCi/L, g, F):	13.224
Sample Duplicate Result (pCi/L, g, F):	1.183
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	12.079
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.095
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	1.392
Duplicate RPD:	9.05%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

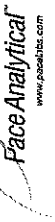
# Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*August*

*Umm 9/26/18*

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JJY  
Date: 9/25/2018  
Worklist: 43874  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531650
MB concentration:	0.064
M/B Counting Uncertainty:	0.152
MB MDC:	0.367
MB Numerical Performance Indicator:	0.82
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	9/26/2018
Spike I.D.:	18-029
Spike Concentration (pCi/mL):	80.337
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.510
Target Conc. (pCi/L, g, F):	15.765
Uncertainty (Calculated):	1.452
Result (pCi/L, g, F):	13.224
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.183
Numerical Performance Indicator:	-2.66
Percent Recovery:	83.88%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	269286003
Duplicate Sample I.D.:	269286003DUP
Sample Result (pCi/L, g, F):	0.328
Sample Duplicate Result (pCi/L, g, F):	0.230
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.240
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.183
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	0.588
Duplicate RPD:	30.98%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

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

Comments:

result is 5x mdc, not < 2 acceptable

\*\*\*Btch must be re-prepped due to unacceptable precision

Jan 9/26/18

Jan 9/26/18

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: VAL  
Date: 9/25/2018  
Worklist: 43868  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531593
MB concentration:	0.088
M/B Counting Uncertainty:	0.338
MB MDC:	0.768
MB Numerical Performance Indicator:	0.51
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS43868	
Count Date:	9/27/2018
Spike I.D.:	18-026
Spike Concentration (pCi/mL):	39.719
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.802
Target Conc. (pCi/L, g, F):	4.951
Uncertainty (Calculated):	0.243
Result (pCi/L, g, F):	4.112
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.633
Numerical Performance Indicator:	-2.43
Percent Recovery:	83.05%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS43868
Duplicate Sample I.D.:	LCS43868
Sample Result (pCi/L, g, F):	4.112
Sample Duplicate Result (pCi/L, g, F):	0.633
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	2.995
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.633
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	2.444
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	31.47%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

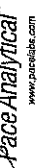
*Handwritten note: 8/11/2018 MD*

*Handwritten initials: JD-RS*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	Sample I.D.:
Sample MS I.D.:	Sample MS I.D.:
Sample MSD I.D.:	Sample MSD I.D.:
Spike I.D.:	Spike I.D.:
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike Volume Used in MS (mL):
Spike Volume Used in MS (mL):	MS Aliquot (L, g, F):
MS Target Conc. (pCi/L, g, F):	MSD Aliquot (L, g, F):
MSD Target Conc. (pCi/L, g, F):	MSD Target Conc. (pCi/L, g, F):
Spike uncertainty (calculated):	Spike Result:
Sample Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Result:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	MS Numerical Performance Indicator:
MS Numerical Performance Indicator:	MSD Numerical Performance Indicator:
MS Percent Recovery:	MS Percent Recovery:
MS Status vs Numerical Indicator:	MS Status vs Numerical Indicator:
MSD Status vs Numerical Indicator:	MS Status vs Recovery:
MSD Status vs Recovery:	MSD Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample I.D.:
Sample MS I.D.:	Sample MS I.D.:
Sample MSD I.D.:	Sample MSD I.D.:
Sample Matrix Spike Result:	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	Duplicate Numerical Performance Indicator:
MS Numerical Performance Indicator:	Duplicate Numerical Performance Indicator:
MSD Numerical Performance Indicator:	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
MS Percent Recovery:	MS/MSD Duplicate Status vs Numerical Indicator:
MS Status vs Numerical Indicator:	MS/MSD Duplicate Status vs RPD:
MSD Status vs Numerical Indicator:	
MSD Status vs Recovery:	

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: VAL  
Date: 9/25/2018  
Worklist: 43869  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531594
MB concentration:	0.088
M/B Counting Uncertainty:	0.338
MB MDC:	0.768
MB Numerical Performance Indicator:	0.51
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		Y
LCS43869		LCSD43869
Count Date:	9/27/2018	9/27/2018
Spike I.D.:	18-026	18-026
Spike Concentration (pCi/mL):	39.719	39.719
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.802	0.802
Target Conc. (pCi/L, g, F):	4.951	4.953
Uncertainty (Calculated):	0.243	0.243
Result (pCi/L, g, F):	4.112	2.995
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.633	0.633
Numerical Performance Indicator:	-2.43	-5.66
Percent Recovery:	83.05%	60.47%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS43869
Duplicate Sample I.D.:	LCSD43869
Sample Result (pCi/L, g, F):	4.112
Sample Duplicate Result (pCi/L, g, F):	0.633
Sample Result Counting Uncertainty (pCi/L, g, F):	2.995
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.633
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	2.444
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	31.47%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

*Handwritten signature: S. J. B. / B. M. M.*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	9/17/2018
Sample I.D.:	30265483001
Sample MS I.D.:	30265483001MS
Sample MSD I.D.:	
Spike I.D.:	18-026
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	39.850
Spike Volume Used in MS (mL):	0.20
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	0.812
MS Target Conc. (pCi/L, g, F):	9.815
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	0.481
Sample Result:	0.671
Sample Result Counting Uncertainty (pCi/L, g, F):	0.401
Sample Matrix Spike Result:	7.801
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	0.766
Sample Matrix Spike Duplicate Result:	
MS Numerical Performance Indicator:	-5.318
MSD Numerical Performance Indicator:	72.64%
MS Percent Recovery:	
MS Status vs Numerical Indicator:	N/A
MSD Status vs Numerical Indicator:	Pass
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

September 21, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269329

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 14, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269329

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### 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

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269329

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
269329001	PZ-17	Water	09/14/18 10:10	09/14/18 17:35
269329002	PZ-33	Water	09/14/18 11:25	09/14/18 17:35
269329003	Dup-02	Water	09/14/18 00:00	09/14/18 17:35

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269329

Lab ID	Sample ID	Method	Analysts	Analytes Reported
269329001	PZ-17	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
269329002	PZ-33	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
269329003	Dup-02	EPA 6020B	KLH	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269329

Sample: PZ-17		Lab ID: 269329001		Collected: 09/14/18 10:10		Received: 09/14/18 17:35		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:42	09/18/18 17:55	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:42	09/18/18 17:55	7440-38-2	
Barium	<b>0.081</b>	mg/L	0.010	0.00078	1	09/17/18 15:42	09/18/18 17:55	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:42	09/18/18 17:55	7440-41-7	
Boron	<b>0.31</b>	mg/L	0.040	0.0039	1	09/17/18 15:42	09/18/18 17:55	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:42	09/18/18 17:55	7440-43-9	
Calcium	<b>108</b>	mg/L	25.0	0.69	50	09/17/18 15:42	09/18/18 18:01	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	09/17/18 15:42	09/18/18 17:55	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:42	09/18/18 17:55	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:42	09/18/18 17:55	7439-92-1	
Lithium	<b>0.0025J</b>	mg/L	0.050	0.00097	1	09/17/18 15:42	09/18/18 17:55	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:42	09/18/18 17:55	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:42	09/18/18 17:55	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/17/18 15:42	09/18/18 17:55	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 15:37	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>403</b>	mg/L	25.0	10.0	1		09/18/18 16:57		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>7.7</b>	mg/L	0.25	0.024	1		09/19/18 11:54	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		09/19/18 11:54	16984-48-8	
Sulfate	<b>102</b>	mg/L	10.0	0.17	10		09/19/18 15:31	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269329

Sample: PZ-33		Lab ID: 269329002		Collected: 09/14/18 11:25		Received: 09/14/18 17:35		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:42	09/18/18 18:32	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:42	09/18/18 18:32	7440-38-2		
Barium	<b>0.071</b>	mg/L	0.010	0.00078	1	09/17/18 15:42	09/18/18 18:32	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:42	09/18/18 18:32	7440-41-7		
Boron	<b>0.38</b>	mg/L	0.040	0.0039	1	09/17/18 15:42	09/18/18 18:32	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:42	09/18/18 18:38	7440-43-9		
Calcium	<b>123</b>	mg/L	25.0	0.69	50	09/17/18 15:42	09/18/18 18:38	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	09/17/18 15:42	09/18/18 18:32	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:42	09/18/18 18:32	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:42	09/18/18 18:32	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	09/17/18 15:42	09/18/18 18:32	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:42	09/18/18 18:32	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:42	09/18/18 18:32	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/17/18 15:42	09/18/18 18:32	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<b>0.000041J</b>	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 15:40	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>447</b>	mg/L	25.0	10.0	1		09/18/18 16:57			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>7.3</b>	mg/L	0.25	0.024	1		09/19/18 12:15	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		09/19/18 12:15	16984-48-8		
Sulfate	<b>88.9</b>	mg/L	10.0	0.17	10		09/19/18 15:53	14808-79-8		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269329

Sample: Dup-02		Lab ID: 269329003		Collected: 09/14/18 00:00		Received: 09/14/18 17:35		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	09/17/18 15:42	09/18/18 18:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	09/17/18 15:42	09/18/18 18:44	7440-38-2	
Barium	<b>0.069</b>	mg/L	0.010	0.00078	1	09/17/18 15:42	09/18/18 18:44	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	09/17/18 15:42	09/18/18 18:44	7440-41-7	
Boron	<b>0.37</b>	mg/L	0.040	0.0039	1	09/17/18 15:42	09/18/18 18:44	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	09/17/18 15:42	09/18/18 18:44	7440-43-9	
Calcium	<b>120</b>	mg/L	25.0	0.69	50	09/17/18 15:42	09/18/18 18:49	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	09/17/18 15:42	09/18/18 18:44	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	09/17/18 15:42	09/18/18 18:44	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	09/17/18 15:42	09/18/18 18:44	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	09/17/18 15:42	09/18/18 18:44	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	09/17/18 15:42	09/18/18 18:44	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	09/17/18 15:42	09/18/18 18:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/17/18 15:42	09/18/18 18:44	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	<b>0.000056J</b>	mg/L	0.00050	0.000036	1	09/17/18 14:50	09/18/18 15:42	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>409</b>	mg/L	25.0	10.0	1		09/18/18 16:58		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>7.0</b>	mg/L	0.25	0.024	1		09/19/18 12:37	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		09/19/18 12:37	16984-48-8	
Sulfate	<b>91.2</b>	mg/L	10.0	0.17	10		09/19/18 16:15	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269329

QC Batch: 13618

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Associated Lab Samples: 269329001, 269329002, 269329003

METHOD BLANK: 60678

Matrix: Water

Associated Lab Samples: 269329001, 269329002, 269329003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	09/18/18 14:36	

LABORATORY CONTROL SAMPLE: 60679

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60680

60681

Parameter	Units	269231001 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	.0025	.0025	0.0026	0.0026	103	103	75-125	0	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269329

QC Batch: 13608 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 269329001, 269329002, 269329003

METHOD BLANK: 60649 Matrix: Water  
Associated Lab Samples: 269329001, 269329002, 269329003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/18/18 13:06	
Arsenic	mg/L	ND	0.0050	0.00057	09/18/18 13:06	
Barium	mg/L	ND	0.010	0.00078	09/18/18 13:06	
Beryllium	mg/L	ND	0.0030	0.000050	09/18/18 13:06	
Boron	mg/L	ND	0.040	0.0039	09/18/18 13:06	
Cadmium	mg/L	ND	0.0010	0.000093	09/18/18 13:06	
Calcium	mg/L	ND	0.50	0.014	09/18/18 13:06	
Chromium	mg/L	ND	0.010	0.0016	09/18/18 13:06	
Cobalt	mg/L	ND	0.010	0.00052	09/18/18 13:06	
Lead	mg/L	ND	0.0050	0.00027	09/18/18 13:06	
Lithium	mg/L	ND	0.050	0.00097	09/18/18 13:06	
Molybdenum	mg/L	ND	0.010	0.0019	09/18/18 13:06	
Selenium	mg/L	ND	0.010	0.0014	09/18/18 13:06	
Thallium	mg/L	ND	0.0010	0.00014	09/18/18 13:06	

LABORATORY CONTROL SAMPLE: 60650

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	101	80-120	
Arsenic	mg/L	.1	0.097	97	80-120	
Barium	mg/L	.1	0.10	101	80-120	
Beryllium	mg/L	.1	0.10	100	80-120	
Boron	mg/L	1	0.96	96	80-120	
Cadmium	mg/L	.1	0.10	102	80-120	
Calcium	mg/L	1	1.0	100	80-120	
Chromium	mg/L	.1	0.10	101	80-120	
Cobalt	mg/L	.1	0.10	102	80-120	
Lead	mg/L	.1	0.10	101	80-120	
Lithium	mg/L	.1	0.10	102	80-120	
Molybdenum	mg/L	.1	0.10	103	80-120	
Selenium	mg/L	.1	0.096	96	80-120	
Thallium	mg/L	.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60651 60652

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		269331001 Result	Spike Conc.	Spike Conc.	MS Result						
Antimony	mg/L	0.0056	.1	.1	0.11	0.11	101	107	75-125	5	20

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269329

Parameter	Units	60651		60652		MS % Rec	MSD % Rec	% Rec	Limits	RPD	Max RPD	Qual
		269331001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Arsenic	mg/L	ND	.1	.1	0.099	0.10	99	102	75-125	3	20	
Barium	mg/L	0.015	.1	.1	0.13	0.13	112	117	75-125	4	20	
Beryllium	mg/L	ND	.1	.1	0.10	0.10	102	103	75-125	1	20	
Boron	mg/L	0.0059J	1	1	0.99	1.0	98	100	75-125	2	20	
Cadmium	mg/L	ND	.1	.1	0.10	0.10	101	102	75-125	2	20	
Calcium	mg/L	29.2	1	1	31.6	31.5	238	231	75-125	0	20	M6
Chromium	mg/L	ND	.1	.1	0.10	0.10	101	101	75-125	0	20	
Cobalt	mg/L	ND	.1	.1	0.098	0.10	98	101	75-125	4	20	
Lead	mg/L	ND	.1	.1	0.099	0.10	99	101	75-125	3	20	
Lithium	mg/L	ND	.1	.1	0.10	0.11	103	105	75-125	2	20	
Molybdenum	mg/L	ND	.1	.1	0.11	0.11	106	110	75-125	4	20	
Selenium	mg/L	ND	.1	.1	0.097	0.10	97	101	75-125	4	20	
Thallium	mg/L	ND	.1	.1	0.098	0.10	98	103	75-125	4	20	

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### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269329

QC Batch: 13708 Analysis Method: SM 2540C  
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids  
Associated Lab Samples: 269329001, 269329002, 269329003

LABORATORY CONTROL SAMPLE: 61096

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	406	102	84-108	

SAMPLE DUPLICATE: 61097

Parameter	Units	269331005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

SAMPLE DUPLICATE: 61098

Parameter	Units	269329001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	403	426	6	10	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269329

QC Batch: 13668 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 269329001, 269329002, 269329003

METHOD BLANK: 60888 Matrix: Water  
Associated Lab Samples: 269329001, 269329002, 269329003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.058J	0.25	0.024	09/19/18 03:45	
Fluoride	mg/L	ND	0.30	0.029	09/19/18 03:45	
Sulfate	mg/L	ND	1.0	0.017	09/19/18 03:45	

LABORATORY CONTROL SAMPLE: 60889

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.3	103	90-110	
Fluoride	mg/L	10	10.2	102	90-110	
Sulfate	mg/L	10	10.1	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 60890 60891

Parameter	Units	269334009 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Chloride	mg/L	0.076J	10	10	10.2	10.2	102	101	90-110	0	15	
Fluoride	mg/L	ND	10	10	10.1	10.2	101	102	90-110	0	15	
Sulfate	mg/L	ND	10	10	10.0	10.1	100	101	90-110	0	15	

MATRIX SPIKE SAMPLE: 60892

Parameter	Units	269334010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L		1.4	10	11.6	90-110	
Fluoride	mg/L		ND	10	10.5	90-110	
Sulfate	mg/L		1.8	10	12.0	90-110	

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269329

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### 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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269329

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
269329001	PZ-17	EPA 3005A	13608	EPA 6020B	13685
269329002	PZ-33	EPA 3005A	13608	EPA 6020B	13685
269329003	Dup-02	EPA 3005A	13608	EPA 6020B	13685
269329001	PZ-17	EPA 7470A	13618	EPA 7470A	13664
269329002	PZ-33	EPA 7470A	13618	EPA 7470A	13664
269329003	Dup-02	EPA 7470A	13618	EPA 7470A	13664
269329001	PZ-17	SM 2540C	13708		
269329002	PZ-33	SM 2540C	13708		
269329003	Dup-02	SM 2540C	13708		
269329001	PZ-17	EPA 300.0	13668		
269329002	PZ-33	EPA 300.0	13668		
269329003	Dup-02	EPA 300.0	13668		

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A		Section B		Section C	
Required Client Information:		Required Project Information:		Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Juju Abraham	Attention:	SCSINVOICES@southernco.com
Address:	2480 Marner Road Atlanta, GA 30339	Copy To:	Wood PLC	Company Name:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Address:	
Phone:	(404)506-7239	Project Name:	Plant Mitchell CCR	Pace Quote:	
Requested Due Date:	Standard	Project #:	6122160170	Pace Project Manager:	betsy.mcdaniel@pacelabs.com
				Pace Profile #:	333
				Regulatory Agency:	
				State / Location:	GA

ITEM #	MATRIX	CODE	COLLECTED		SAMPLE TYPE (G-GRAB C-COMP)	MATRIX CODE (see valid codes to left)	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Requested Analysis Filtered (Y/N)														
			START DATE	END DATE					H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Radium 226/228	App. III & App. IV Metals	TDS, Cl, F, SO4	Residual Chlorine (Y/N)			
1	PZ-17	DW	9/14/18	1010	WG			4	X	X						X	X	X					
2	PZ-33	WT	9/14/18	1125	WG			4	X	X						X	X	X					
3	DUP-02	SL	9/14/18	--	WG			4	X	X						X	X	X					
4	Temp Blank	OL																					
5		WP																					
6		AR																					
7		OT																					
8		TS																					
9																							
10																							
11																							
12																							

WO#: 269329

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP in C	Received on Ice (Y/N)	Custody (Y/N)	Sealed Cooler (Y/N)	Samples Intact (Y/N)
Daniel K Howard Wood	Daniel K Howard Wood	9/14/18	1735	Paul Salamon	9/14/18	1735	1.0	Y	Y	Y	Y

SAMPLER NAME AND SIGNATURE  
 PRINT Name of SAMPLER: Daniel Howard / Evergreen  
 SIGNATURE of SAMPLER: Daniel Howard  
 DATE Signed: 9/14/18

**Sample Condition Upon Receipt**



Client Name: GIA Power

Project # \_\_\_\_\_

**WO#: 269329**

PM: BM

Due Date: 09/24/18

CLIENT: GA Power-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 83 Type of Ice: Wet 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: 9/14/18 MK

Comments:

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Field Data Required? Y N

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)

October 09, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269330

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 14, 2018. 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: Maria Padilla, Georgia Power  
Rhonda Quinn, Norfolk Southern\_Wood E&I Solutions, Inc.  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269330

---

### 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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269330

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
269330001	PZ-17	Water	09/14/18 10:10	09/14/18 17:35
269330002	PZ-33	Water	09/14/18 11:25	09/14/18 17:35
269330003	Dup-02	Water	09/14/18 00:00	09/14/18 17:35

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269330

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
269330001	PZ-17	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269330002	PZ-33	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
269330003	Dup-02	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269330

**Sample: PZ-17**      **Lab ID: 269330001**      Collected: 09/14/18 10:10      Received: 09/14/18 17:35      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.495 ± 0.256 (0.297)</b> C:94% T:NA	pCi/L	09/26/18 08:22	13982-63-3	
Radium-228	EPA 9320	<b>0.666 ± 0.396 (0.718)</b> C:74% T:75%	pCi/L	09/27/18 15:06	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.16 ± 0.652 (1.02)</b>	pCi/L	09/28/18 12:19	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269330

**Sample: PZ-33**      **Lab ID: 269330002**      Collected: 09/14/18 11:25      Received: 09/14/18 17:35      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.532 ± 0.280 (0.388)</b> <b>C:95% T:NA</b>	pCi/L	09/26/18 08:22	13982-63-3	
Radium-228	EPA 9320	<b>0.476 ± 0.417 (0.847)</b> <b>C:76% T:81%</b>	pCi/L	09/27/18 15:06	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.01 ± 0.697 (1.24)</b>	pCi/L	09/28/18 12:19	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269330

**Sample: Dup-02**      **Lab ID: 269330003**      Collected: 09/14/18 00:00      Received: 09/14/18 17:35      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.800 ± 0.375 (0.521)</b> <b>C:94% T:NA</b>	pCi/L	09/26/18 08:22	13982-63-3	
Radium-228	EPA 9320	<b>0.463 ± 0.362 (0.713)</b> <b>C:73% T:86%</b>	pCi/L	09/27/18 15:06	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.26 ± 0.737 (1.23)</b>	pCi/L	09/28/18 12:19	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269330

QC Batch: 313703

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 269330001, 269330002, 269330003

METHOD BLANK: 1531593

Matrix: Water

Associated Lab Samples: 269330001, 269330002, 269330003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0882 ± 0.339 (0.768) C:78% T:77%	pCi/L	09/27/18 15:05	

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 Mitchell Ash Ponds

Pace Project No.: 269330

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QC Batch:	313720	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	269330001, 269330002, 269330003		

---

METHOD BLANK:	1531650	Matrix:	Water
Associated Lab Samples:	269330001, 269330002, 269330003		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0636 ± 0.153 (0.367) C:99% T:NA	pCi/L	09/26/18 08:20	

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 269330

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### 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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 269330

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
269330001	PZ-17	EPA 9315	313720		
269330002	PZ-33	EPA 9315	313720		
269330003	Dup-02	EPA 9315	313720		
269330001	PZ-17	EPA 9320	313703		
269330002	PZ-33	EPA 9320	313703		
269330003	Dup-02	EPA 9320	313703		
269330001	PZ-17	Total Radium Calculation	314760		
269330002	PZ-33	Total Radium Calculation	314760		
269330003	Dup-02	Total Radium Calculation	314760		

### REPORT OF LABORATORY ANALYSIS

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company	Georgia Power - Coal Combustion Residuals	Report To:	Joiu Abraham	Attention:	scsinvoices@southernco.com
Address	2480 Marner Road Atlanta, GA 30339	Copy To:	Wood PLC	Company Name	
Email	jabraham@southernco.com	Purchase Order #:	SCS10346606	Address	
Phone	(404)506-7239	Project Name:	Plant Mitchell CCR	Pace Project Manager:	betsy.mcdaniel@pacelabs.com
Requested Due Date:	Standard	Project #:	6122160170	Pace Profile #:	333
Regulatory Agency		State / Location		GA	

Page: 1 Of 1

ITEM #	MATRIX CODE Drinking Water (DW) Waste Water (WW) Product (P) Soil/Solid (SL) Oil (OL) Wipe (WP) Air (AR) Other (OT) Tissue (TS)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		# OF CONTAINERS	PRESERVATIVES							ANALYSES TEST Y/N	Requested Analysis Filtered (Y/N)			
			START DATE	END DATE		H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other			Radium 226/228	App. III & App. IV Metals	TDS, Cl, F, SO4
1	PZ-17	WG	9/14/18	1010	4	X	X										
2	PZ-33	WG	9/14/18	1125	4	X	X										
3	DUP-02	WG	9/14/18	--	4	X	X										
4	Temp Blank																
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

WO#: 269330



ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS	TEMP in C	Received on	Ice (Y/N)	Sealed (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)
Daniel Howard Wood	Daniel Howard Wood	9/14/18	1735	Paul Salzman	9/14/18	1735	Y	1.0	Y	N	N	N	N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Daniel Howard Wood

SIGNATURE of SAMPLER: *Daniel Howard Wood*

DATE Signed: 9/14/18

**Sample Condition Upon Receipt**

Pace Analytical

Client Name: GIA Power

Project # \_\_\_\_\_

**WO#: 269330**

PM: BM

Due Date: 10/15/18

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 83 Type of Ice: Wet 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: 9/14/18 JH

Comments: \_\_\_\_\_

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Field Data Required? Y / N

**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).

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JJY  
Date: 9/25/2018  
Worklist: 43874  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531650
MB Concentration:	0.064
MB Counting Uncertainty:	0.152
MB MDC:	0.367
MB Numerical Performance Indicator:	0.82
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS43874	LCS43874
Count Date:	9/26/2018
Spike I.D.:	18-029
Spike Concentration (pCi/mL):	80.337
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.501
Target Conc. (pCi/L, g, F):	15.765
Uncertainty (Calculated):	1.452
Result (pCi/L, g, F):	13.224
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.183
Numerical Performance Indicator:	-2.66
Percent Recovery:	83.88%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS43874
Duplicate Sample I.D.:	LCS43874
Sample Result (pCi/L, g, F):	13.224
Sample Duplicate Result (pCi/L, g, F):	1.183
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	12.079
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.095
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	1.392
Duplicate RPD:	9.05%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc.(pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

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

Comments:

*August*

*Umm 9/26/18*

# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: JJY  
Date: 9/25/2018  
Worklist: 43874  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531650
MB concentration:	0.064
M/B Counting Uncertainty:	0.152
MB MDC:	0.367
MB Numerical Performance Indicator:	0.82
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	9/26/2018
Spike I.D.:	18-029
Spike Concentration (pCi/mL):	80.337
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.510
Target Conc. (pCi/L, g, F):	15.765
Uncertainty (Calculated):	1.452
Result (pCi/L, g, F):	13.224
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.183
Numerical Performance Indicator:	-2.66
Percent Recovery:	83.88%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	269286003
Duplicate Sample I.D.:	269286003DUP
Sample Result (pCi/L, g, F):	0.328
Sample Duplicate Result (pCi/L, g, F):	0.230
Sample Result Counting Uncertainty (pCi/L, g, F):	0.240
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.183
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	0.588
Duplicate RPD:	30.98%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

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

Comments:

result is 5x mdc, not < 2 acceptable

\*\*\*Btch must be re-prepped due to unacceptable precision\*\*\*

Jan 9/26/18

Jan 9/26/18

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: VAL  
Date: 9/25/2018  
Worklist: 43868  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531593
MB concentration:	0.088
M/B Counting Uncertainty:	0.338
MB MDC:	0.768
MB Numerical Performance Indicator:	0.51
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS43868	9/27/2018
Count Date:	18-026
Spike I.D.:	39.719
Spike Concentration (pCi/mL):	0.10
Volume Used (mL):	0.802
Aliquot Volume (L, g, F):	4.951
Target Conc. (pCi/L, g, F):	0.243
Uncertainty (Calculated):	4.112
Result (pCi/L, g, F):	0.633
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	-2.43
Numerical Performance Indicator:	83.05%
Percent Recovery:	N/A
Status vs Numerical Indicator:	Pass
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS43868
Duplicate Sample I.D.:	LCS43868
Sample Result (pCi/L, g, F):	4.112
Sample Duplicate Result (pCi/L, g, F):	0.633
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	2.995
Sample Duplicate Result Uncertainty (pCi/L, g, F):	0.633
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	2.444
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	31.47%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

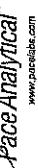
*Handwritten: 8/11/2018 MD*

*Handwritten: 50-850*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	Sample I.D.
Sample MS I.D.:	Sample MS I.D.
Sample MSD I.D.:	Spike I.D.:
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike Volume Used in MS (mL):
Spike Volume Used in MSD (mL):	MS Aliquot (L, g, F):
MS Target Conc. (pCi/L, g, F):	MSD Aliquot (L, g, F):
MSD Target Conc. (pCi/L, g, F):	Spike uncertainty (calculated):
Sample Result:	Sample Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Result:	Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
MS Numerical Performance Indicator:	MS Numerical Performance Indicator:
MSD Numerical Performance Indicator:	MSD Numerical Performance Indicator:
MS Percent Recovery:	MS Percent Recovery:
MS Status vs Numerical Indicator:	MS Status vs Numerical Indicator:
MSD Status vs Recovery:	MSD Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample MS I.D.:
Sample MS I.D.:	Sample MSD I.D.:
Sample Matrix Spike Result:	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Duplicate Numerical Performance Indicator:	Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:	MS/MSD Duplicate Status vs RPD:

# Quality Control Sample Performance Assessment



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

Test: Ra-228  
Analyst: VAL  
Date: 9/25/2018  
Worklist: 43869  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1531594
MB concentration:	0.088
M/B Counting Uncertainty:	0.338
MB MDC:	0.768
MB Numerical Performance Indicator:	0.51
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		Y
LCS (Y or N)?		
LCS43869	9/27/2018	LCSD43869
Count Date:	9/27/2018	
Spike I.D.:	18-026	
Spike Concentration (pCi/mL):	39.719	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.802	
Target Conc. (pCi/L, g, F):	4.953	
Uncertainty (Calculated):	0.243	
Result (pCi/L, g, F):	4.112	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.633	
Numerical Performance Indicator:	-2.43	
Percent Recovery:	83.05%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Duplicate Sample Assessment	
Sample I.D.:	LCS43869
Duplicate Sample I.D.:	LCSD43869
Sample Result (pCi/L, g, F):	4.112
Sample Duplicate Result (pCi/L, g, F):	0.633
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	2.995
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.633
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	2.444
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	31.47%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

*Handwritten signature: S. J. B. / B. M. M.*

Sample Matrix Spike Control Assessment	
Sample Collection Date:	9/17/2018
Sample I.D.:	30265483001
Sample MS I.D.:	30265483001MS
Sample MSD I.D.:	
Spike I.D.:	18-026
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	39.850
Spike Volume Used in MS (mL):	0.20
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	0.812
MS Target Conc. (pCi/L, g, F):	9.815
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	0.481
Sample Result:	0.671
Sample Result Counting Uncertainty (pCi/L, g, F):	0.401
Sample Matrix Spike Result:	7.801
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	0.766
Sample Matrix Spike Duplicate Result:	
MS Numerical Performance Indicator:	-5.318
MSD Numerical Performance Indicator:	
MS Percent Recovery:	72.64%
MS Status vs Numerical Indicator:	N/A
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	Pass
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

October 15, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2610164

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 05, 2018. 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: Maria Padilla, Georgia Power  
Rhonda Quinn, Norfolk Southern\_Wood E&I Solutions, Inc.  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610164

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### 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

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610164

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2610164001	FB-01	Water	10/03/18 12:30	10/05/18 16:20
2610164002	EB-01	Water	10/03/18 12:40	10/05/18 16:20
2610164003	PZ33	Water	10/04/18 10:40	10/05/18 16:20
2610164004	PZ2D	Water	10/04/18 12:05	10/05/18 16:20
2610164005	Dup	Water	10/04/18 13:00	10/05/18 16:20

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610164

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2610164001	FB-01	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610164002	EB-01	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610164003	PZ33	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610164004	PZ2D	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610164005	Dup	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2610164

Sample: <b>FB-01</b>		Lab ID: <b>2610164001</b>		Collected: 10/03/18 12:30	Received: 10/05/18 16:20	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	10/09/18 16:23	10/12/18 19:16	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	10/09/18 16:23	10/12/18 19:16	7440-38-2		
Barium	ND	mg/L	0.010	0.00078	1	10/09/18 16:23	10/12/18 19:16	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	10/09/18 16:23	10/12/18 19:16	7440-41-7		
Boron	ND	mg/L	0.040	0.0039	1	10/09/18 16:23	10/12/18 19:16	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	10/09/18 16:23	10/12/18 19:16	7440-43-9		
Calcium	<b>0.014J</b>	mg/L	0.50	0.014	1	10/09/18 16:23	10/12/18 19:16	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	10/09/18 16:23	10/12/18 19:16	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	10/09/18 16:23	10/12/18 19:16	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	10/09/18 16:23	10/12/18 19:16	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	10/09/18 16:23	10/12/18 19:16	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	10/09/18 16:23	10/12/18 19:16	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	10/09/18 16:23	10/12/18 19:16	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	10/09/18 16:23	10/12/18 19:16	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	10/10/18 08:25	10/10/18 12:41	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>11.0J</b>	mg/L	25.0	10.0	1		10/08/18 18:02		D6	
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>0.17J</b>	mg/L	0.25	0.024	1		10/10/18 23:09	16887-00-6	B	
Fluoride	ND	mg/L	0.30	0.029	1		10/10/18 23:09	16984-48-8		
Sulfate	ND	mg/L	1.0	0.017	1		10/10/18 23:09	14808-79-8		

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2610164

Sample: EB-01		Lab ID: 2610164002		Collected: 10/03/18 12:40	Received: 10/05/18 16:20	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	10/09/18 16:23	10/12/18 19:21	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	10/09/18 16:23	10/12/18 19:21	7440-38-2		
Barium	ND	mg/L	0.010	0.00078	1	10/09/18 16:23	10/12/18 19:21	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	10/09/18 16:23	10/12/18 19:21	7440-41-7		
Boron	ND	mg/L	0.040	0.0039	1	10/09/18 16:23	10/12/18 19:21	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	10/09/18 16:23	10/12/18 19:21	7440-43-9		
Calcium	<b>0.016J</b>	mg/L	0.50	0.014	1	10/09/18 16:23	10/12/18 19:21	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	10/09/18 16:23	10/12/18 19:21	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	10/09/18 16:23	10/12/18 19:21	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	10/09/18 16:23	10/12/18 19:21	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	10/09/18 16:23	10/12/18 19:21	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	10/09/18 16:23	10/12/18 19:21	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	10/09/18 16:23	10/12/18 19:21	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	10/09/18 16:23	10/12/18 19:21	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	10/10/18 08:25	10/10/18 12:43	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		10/08/18 18:02			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>0.21J</b>	mg/L	0.25	0.024	1		10/10/18 23:32	16887-00-6	B	
Fluoride	ND	mg/L	0.30	0.029	1		10/10/18 23:32	16984-48-8		
Sulfate	ND	mg/L	1.0	0.017	1		10/10/18 23:32	14808-79-8		

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2610164

Sample: PZ33		Lab ID: 2610164003		Collected: 10/04/18 10:40		Received: 10/05/18 16:20		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	10/09/18 16:23	10/12/18 19:39	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	10/09/18 16:23	10/12/18 19:39	7440-38-2		
Barium	<b>0.072</b>	mg/L	0.010	0.00078	1	10/09/18 16:23	10/12/18 19:39	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	10/09/18 16:23	10/12/18 19:39	7440-41-7		
Boron	<b>0.39</b>	mg/L	0.040	0.0039	1	10/09/18 16:23	10/12/18 19:39	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	10/09/18 16:23	10/12/18 19:39	7440-43-9		
Calcium	<b>126</b>	mg/L	25.0	0.69	50	10/09/18 16:23	10/12/18 19:44	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	10/09/18 16:23	10/12/18 19:39	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	10/09/18 16:23	10/12/18 19:39	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	10/09/18 16:23	10/12/18 19:39	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	10/09/18 16:23	10/12/18 19:39	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	10/09/18 16:23	10/12/18 19:39	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	10/09/18 16:23	10/12/18 19:39	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	10/09/18 16:23	10/12/18 19:39	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	10/10/18 08:25	10/10/18 12:46	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>450</b>	mg/L	25.0	10.0	1		10/08/18 18:02			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>7.0</b>	mg/L	0.25	0.024	1		10/11/18 01:04	16887-00-6		
Fluoride	<b>0.15J</b>	mg/L	0.30	0.029	1		10/11/18 01:04	16984-48-8		
Sulfate	<b>97.8</b>	mg/L	10.0	0.17	10		10/11/18 20:12	14808-79-8		

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610164

Sample: PZ2D		Lab ID: 2610164004		Collected: 10/04/18 12:05	Received: 10/05/18 16:20	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	10/09/18 16:23	10/12/18 19:50	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	10/09/18 16:23	10/12/18 19:50	7440-38-2	
Barium	<b>0.0066J</b>	mg/L	0.010	0.00078	1	10/09/18 16:23	10/12/18 19:50	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	10/09/18 16:23	10/12/18 19:50	7440-41-7	
Boron	<b>0.016J</b>	mg/L	0.040	0.0039	1	10/09/18 16:23	10/12/18 19:50	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/09/18 16:23	10/12/18 19:50	7440-43-9	
Calcium	<b>25.0</b>	mg/L	25.0	0.69	50	10/09/18 16:23	10/12/18 19:56	7440-70-2	
Chromium	<b>0.0057J</b>	mg/L	0.010	0.0016	1	10/09/18 16:23	10/12/18 19:50	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	10/09/18 16:23	10/12/18 19:50	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	10/09/18 16:23	10/12/18 19:50	7439-92-1	
Lithium	<b>0.0021J</b>	mg/L	0.050	0.00097	1	10/09/18 16:23	10/12/18 19:50	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/09/18 16:23	10/12/18 19:50	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	10/09/18 16:23	10/12/18 19:50	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/09/18 16:23	10/12/18 19:50	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	10/10/18 08:25	10/10/18 12:48	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>103</b>	mg/L	25.0	10.0	1		10/08/18 18:02		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>2.7</b>	mg/L	0.25	0.024	1		10/11/18 04:52	16887-00-6	
Fluoride	<b>0.15J</b>	mg/L	0.30	0.029	1		10/11/18 04:52	16984-48-8	
Sulfate	<b>5.8</b>	mg/L	1.0	0.017	1		10/11/18 04:52	14808-79-8	

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2610164

Sample: Dup		Lab ID: 2610164005		Collected: 10/04/18 13:00		Received: 10/05/18 16:20		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	10/09/18 16:23	10/12/18 20:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	10/09/18 16:23	10/12/18 20:01	7440-38-2	
Barium	<b>0.0057J</b>	mg/L	0.010	0.00078	1	10/09/18 16:23	10/12/18 20:01	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	10/09/18 16:23	10/12/18 20:01	7440-41-7	
Boron	<b>0.013J</b>	mg/L	0.040	0.0039	1	10/09/18 16:23	10/12/18 20:01	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/09/18 16:23	10/12/18 20:01	7440-43-9	
Calcium	<b>21.4J</b>	mg/L	25.0	0.69	50	10/09/18 16:23	10/12/18 20:07	7440-70-2	D3
Chromium	<b>0.0049J</b>	mg/L	0.010	0.0016	1	10/09/18 16:23	10/12/18 20:01	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	10/09/18 16:23	10/12/18 20:01	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	10/09/18 16:23	10/12/18 20:01	7439-92-1	
Lithium	<b>0.0019J</b>	mg/L	0.050	0.00097	1	10/09/18 16:23	10/12/18 20:01	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/09/18 16:23	10/12/18 20:01	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	10/09/18 16:23	10/12/18 20:01	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/09/18 16:23	10/12/18 20:01	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	10/10/18 08:25	10/10/18 12:51	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>104</b>	mg/L	25.0	10.0	1		10/08/18 18:02		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>2.8</b>	mg/L	0.25	0.024	1		10/11/18 05:15	16887-00-6	
Fluoride	<b>0.17J</b>	mg/L	0.30	0.029	1		10/11/18 05:15	16984-48-8	
Sulfate	<b>6.0</b>	mg/L	1.0	0.017	1		10/11/18 05:15	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2610164

QC Batch: 15032 Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury  
Associated Lab Samples: 2610164001, 2610164002, 2610164003, 2610164004, 2610164005

METHOD BLANK: 67254 Matrix: Water  
Associated Lab Samples: 2610164001, 2610164002, 2610164003, 2610164004, 2610164005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	10/10/18 11:47	

LABORATORY CONTROL SAMPLE: 67255

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0025	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 67256 67257

Parameter	Units	269791027 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	.0025	.0025	0.0026	0.0026	103	105	75-125	2	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2610164

QC Batch: 15051 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 2610164001, 2610164002, 2610164003, 2610164004, 2610164005

METHOD BLANK: 67344 Matrix: Water  
Associated Lab Samples: 2610164001, 2610164002, 2610164003, 2610164004, 2610164005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	10/12/18 16:10	
Arsenic	mg/L	ND	0.0050	0.00057	10/12/18 16:10	
Barium	mg/L	ND	0.010	0.00078	10/12/18 16:10	
Beryllium	mg/L	ND	0.0030	0.000050	10/12/18 16:10	
Boron	mg/L	ND	0.040	0.0039	10/12/18 16:10	
Cadmium	mg/L	ND	0.0010	0.000093	10/12/18 16:10	
Calcium	mg/L	ND	0.50	0.014	10/12/18 16:10	
Chromium	mg/L	ND	0.010	0.0016	10/12/18 16:10	
Cobalt	mg/L	ND	0.010	0.00052	10/12/18 16:10	
Lead	mg/L	ND	0.0050	0.00027	10/12/18 16:10	
Lithium	mg/L	ND	0.050	0.00097	10/12/18 16:10	
Molybdenum	mg/L	ND	0.010	0.0019	10/12/18 16:10	
Selenium	mg/L	ND	0.010	0.0014	10/12/18 16:10	
Thallium	mg/L	ND	0.0010	0.00014	10/12/18 16:10	

LABORATORY CONTROL SAMPLE: 67345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.11	108	80-120	
Arsenic	mg/L	.1	0.10	103	80-120	
Barium	mg/L	.1	0.10	104	80-120	
Beryllium	mg/L	.1	0.10	105	80-120	
Boron	mg/L	1	1.0	103	80-120	
Cadmium	mg/L	.1	0.10	104	80-120	
Calcium	mg/L	1	1.0	104	80-120	
Chromium	mg/L	.1	0.11	106	80-120	
Cobalt	mg/L	.1	0.10	103	80-120	
Lead	mg/L	.1	0.10	103	80-120	
Lithium	mg/L	.1	0.10	105	80-120	
Molybdenum	mg/L	.1	0.10	103	80-120	
Selenium	mg/L	.1	0.10	101	80-120	
Thallium	mg/L	.1	0.10	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 67346 67347

Parameter	Units	2610159001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					
Antimony	mg/L	ND	.1	.1	0.11	0.11	109	107	75-125	2	20

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610164

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 67346		67347		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		2610159001 Result	MS Spike Conc.	MSD Spike Conc.									
Arsenic	mg/L	ND	.1	.1	0.11	0.10	105	105	75-125	1	20		
Barium	mg/L	0.18	.1	.1	0.29	0.29	116	107	75-125	3	20		
Beryllium	mg/L	ND	.1	.1	0.096	0.094	96	94	75-125	2	20		
Boron	mg/L	0.082	1	1	1.0	1.0	95	92	75-125	3	20		
Cadmium	mg/L	ND	.1	.1	0.10	0.10	104	102	75-125	2	20		
Calcium	mg/L	41.7	1	1	50.9	43.6	917	191	75-125	15	20	M6	
Chromium	mg/L	ND	.1	.1	0.11	0.10	108	103	75-125	5	20		
Cobalt	mg/L	ND	.1	.1	0.11	0.10	105	103	75-125	3	20		
Lead	mg/L	ND	.1	.1	0.099	0.098	99	98	75-125	1	20		
Lithium	mg/L	0.011J	.1	.1	0.11	0.11	97	95	75-125	2	20		
Molybdenum	mg/L	ND	.1	.1	0.11	0.10	107	102	75-125	5	20		
Selenium	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	2	20		
Thallium	mg/L	ND	.1	.1	0.10	0.10	100	100	75-125	0	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610164

QC Batch: 14931

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 2610164001, 2610164002, 2610164003, 2610164004, 2610164005

LABORATORY CONTROL SAMPLE: 66900

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	406	102	84-108	

SAMPLE DUPLICATE: 66901

Parameter	Units	2610164001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	11.0J	17.0J	43	10	D6

SAMPLE DUPLICATE: 66902

Parameter	Units	2610162002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	135	128	5	10	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2610164

QC Batch: 15084 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 2610164001, 2610164002, 2610164003, 2610164004, 2610164005

METHOD BLANK: 67495 Matrix: Water  
Associated Lab Samples: 2610164001, 2610164002, 2610164003, 2610164004, 2610164005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.16J	0.25	0.024	10/10/18 14:23	
Fluoride	mg/L	ND	0.30	0.029	10/10/18 14:23	
Sulfate	mg/L	ND	1.0	0.017	10/10/18 14:23	

LABORATORY CONTROL SAMPLE: 67496

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	100	90-110	
Sulfate	mg/L	10	10.7	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 67497 67498

Parameter	Units	2610158001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.1	10	10	16.5	16.5	104	105	90-110	0	15	
Fluoride	mg/L	0.24J	10	10	10.3	10.3	100	100	90-110	0	15	
Sulfate	mg/L	209	10	10	154	154	-555	-554	90-110	0	15 E,M1	

MATRIX SPIKE SAMPLE: 67499

Parameter	Units	2610158002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	1.4	10	11.9	105	90-110	
Fluoride	mg/L	0.17J	10	10.2	100	90-110	
Sulfate	mg/L	5.2	10	15.6	104	90-110	

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610164

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### 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.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610164

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2610164001	FB-01	EPA 3005A	15051	EPA 6020B	15111
2610164002	EB-01	EPA 3005A	15051	EPA 6020B	15111
2610164003	PZ33	EPA 3005A	15051	EPA 6020B	15111
2610164004	PZ2D	EPA 3005A	15051	EPA 6020B	15111
2610164005	Dup	EPA 3005A	15051	EPA 6020B	15111
2610164001	FB-01	EPA 7470A	15032	EPA 7470A	15116
2610164002	EB-01	EPA 7470A	15032	EPA 7470A	15116
2610164003	PZ33	EPA 7470A	15032	EPA 7470A	15116
2610164004	PZ2D	EPA 7470A	15032	EPA 7470A	15116
2610164005	Dup	EPA 7470A	15032	EPA 7470A	15116
2610164001	FB-01	SM 2540C	14931		
2610164002	EB-01	SM 2540C	14931		
2610164003	PZ33	SM 2540C	14931		
2610164004	PZ2D	SM 2540C	14931		
2610164005	Dup	SM 2540C	14931		
2610164001	FB-01	EPA 300.0	15084		
2610164002	EB-01	EPA 300.0	15084		
2610164003	PZ33	EPA 300.0	15084		
2610164004	PZ2D	EPA 300.0	15084		
2610164005	Dup	EPA 300.0	15084		

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Section A</b>	<b>Section B</b>	<b>Section C</b>	<b>Section D</b>
<b>Required Client Information:</b> Company: Georgia Power - Coal Combustion Residuals Address: 2480 Maner Road Atlanta, GA 30339 Email: j.abraham@southernmco.com Phone: (404)506-7239 Requested Due Date:	<b>Required Project Information:</b> Report To: Joju Abraham Copy To: Wood PLC Purchase Order #: SCS10348606 Project Name: Plant Mitchell CCR Project #:	<b>Invoice Information:</b> Attention: scsinvoices@southernmco.com Company Name: Address: Pace Quote: Pace Project Manager: belsy.mcdaniel@pacelabs.com Pace Profile #: 333	<b>Regulatory Agency:</b> State / Location: GA
Page: _____ Of _____			

ITEM #	MATRIX CODE (see valid codes to left)	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives											Y/N	Residual Chlorine (Y/N)						
		START DATE	END DATE				H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Radium 226/228	App. III & App. IV Metals	TDS, Cl, F, SO4									
																	DATE			TIME	DATE	TIME	DATE	TIME	DATE
1	FB-01	10/13/18	1230	G	18	4									X	X	X								
2	EG-01	10/13/18	1240	G	4	4									X	X	X								
3	R233	10/14/18	1040	G	4	4									X	X	X								
4	R22D	10/14/18	1205	G	4	4									X	X	X								
5	DUP	10/14/18	1300	G	4	4									X	X	X								

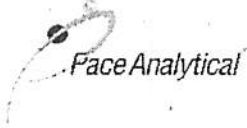
**WO#: 2610164**

**2610164**

ADDITIONAL COMMENTS	REQUISITIONED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP in C	Received on	Ice (Y/N)	Custody (Y/N)	Sealed Cooler (Y/N)	Samples Intact (Y/N)
	<i>[Signature]</i> Wood PLC	10/11	2030	Mike Nguyen / Pace	10/5/18	1152						
				<i>[Signature]</i>	10/05/18	1620	2.5		X	X	X	X

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: *[Signature]*  
SIGNATURE of SAMPLER: *[Signature]*



### Sample Condition Upon Receipt

Client Name: GIA Power

Project # \_\_\_\_\_

**WO#: 2610164**  
PM: BM  
Due Date: 10/12/18  
CLIENT: CAPower-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 83 Type of Ice:  Wet  Blue  None

Samples on ice, cooling process has begun

Cooler Temperature 2.5 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 10/05/18 MK

Temp should be above freezing to 6°C

Comments: \_\_\_\_\_

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

**Client Notification/ Resolution:** \_\_\_\_\_

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Field Data Required? Y / N

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)



October 29, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2610165

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 05, 2018. 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: Maria Padilla, Georgia Power  
Rhonda Quinn, Norfolk Southern\_Wood E&I Solutions, Inc.  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610165

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### 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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610165

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
2610165001	FB-01	Water	10/03/18 12:30	10/05/18 16:20
2610165002	EB-01	Water	10/03/18 12:40	10/05/18 16:20
2610165003	PZ33	Water	10/04/18 10:40	10/05/18 16:20
2610165004	PZ2D	Water	10/04/18 12:05	10/05/18 16:20
2610165005	Dup	Water	10/04/18 13:00	10/05/18 16:20

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610165

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2610165001	FB-01	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610165002	EB-01	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610165003	PZ33	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610165004	PZ2D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610165005	Dup	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610165

**Sample: FB-01**      **Lab ID: 2610165001**      Collected: 10/03/18 12:30      Received: 10/05/18 16:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.238 ± 0.184 (0.318)</b> <b>C:94% T:NA</b>	pCi/L	10/17/18 09:37	13982-63-3	
Radium-228	EPA 9320	<b>0.550 ± 0.371 (0.693)</b> <b>C:77% T:70%</b>	pCi/L	10/19/18 11:16	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.788 ± 0.555 (1.01)</b>	pCi/L	10/22/18 12:23	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610165

**Sample: EB-01**      **Lab ID: 2610165002**      Collected: 10/03/18 12:40      Received: 10/05/18 16:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.126 ± 0.140 (0.275)</b> <b>C:94% T:NA</b>	pCi/L	10/17/18 09:37	13982-63-3	
Radium-228	EPA 9320	<b>0.0572 ± 0.320 (0.736)</b> <b>C:74% T:85%</b>	pCi/L	10/19/18 14:20	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.183 ± 0.460 (1.01)</b>	pCi/L	10/22/18 12:23	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610165

**Sample: PZ33**      **Lab ID: 2610165003**      Collected: 10/04/18 10:40      Received: 10/05/18 16:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.519 ± 0.236 (0.300)</b> C:94% T:NA	pCi/L	10/17/18 09:41	13982-63-3	
Radium-228	EPA 9320	<b>0.531 ± 0.381 (0.734)</b> C:75% T:84%	pCi/L	10/19/18 14:20	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.05 ± 0.617 (1.03)</b>	pCi/L	10/22/18 12:23	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610165

**Sample: PZ2D**      **Lab ID: 2610165004**      Collected: 10/04/18 12:05      Received: 10/05/18 16:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.213 ± 0.173 (0.311)</b> <b>C:93% T:NA</b>	pCi/L	10/17/18 09:37	13982-63-3	
Radium-228	EPA 9320	<b>0.926 ± 0.430 (0.703)</b> <b>C:73% T:79%</b>	pCi/L	10/19/18 14:21	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.14 ± 0.603 (1.01)</b>	pCi/L	10/22/18 12:23	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610165

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.236 ± 0.164 (0.256)</b> C:93% T:NA	pCi/L	10/17/18 09:37	13982-63-3	
Radium-228	EPA 9320	<b>0.468 ± 0.370 (0.720)</b> C:72% T:75%	pCi/L	10/19/18 14:21	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.704 ± 0.534 (0.976)</b>	pCi/L	10/22/18 12:23	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610165

QC Batch: 316253

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 2610165001, 2610165002, 2610165003, 2610165004, 2610165005

METHOD BLANK: 1543390

Matrix: Water

Associated Lab Samples: 2610165001, 2610165002, 2610165003, 2610165004, 2610165005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.293 ± 0.309 (0.637) C:77% T:81%	pCi/L	10/19/18 11:16	

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

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610165

QC Batch: 316252 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Associated Lab Samples: 2610165001, 2610165002, 2610165003, 2610165004, 2610165005

METHOD BLANK: 1543389 Matrix: Water

Associated Lab Samples: 2610165001, 2610165002, 2610165003, 2610165004, 2610165005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.132 ± 0.137 (0.260) C:96% T:NA	pCi/L	10/17/18 09:36	

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 Mitchell Ash Ponds

Pace Project No.: 2610165

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### 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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610165

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2610165001	FB-01	EPA 9315	316252		
2610165002	EB-01	EPA 9315	316252		
2610165003	PZ33	EPA 9315	316252		
2610165004	PZ2D	EPA 9315	316252		
2610165005	Dup	EPA 9315	316252		
2610165001	FB-01	EPA 9320	316253		
2610165002	EB-01	EPA 9320	316253		
2610165003	PZ33	EPA 9320	316253		
2610165004	PZ2D	EPA 9320	316253		
2610165005	Dup	EPA 9320	316253		
2610165001	FB-01	Total Radium Calculation	317513		
2610165002	EB-01	Total Radium Calculation	317513		
2610165003	PZ33	Total Radium Calculation	317513		
2610165004	PZ2D	Total Radium Calculation	317513		
2610165005	Dup	Total Radium Calculation	317513		

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Section A</b>		<b>Section B</b>		<b>Section C</b>	
<b>Required Client Information:</b>		<b>Required Project Information:</b>		<b>Invoice Information:</b>	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	SCSInvoices@southernco.com
Address:	2480 Marner Road Atlanta, GA 30339	Copy To:	Wood PLC	Company Name:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Address:	
Phone:	(404)505-7239	Project Name:	Plant Mitchell CCR	Pace Quote:	
Requested Due Date:		Project #:		Pace Project Manager:	betsy.mcdaniel@pacelabs.com
				Pace Profile #:	333
				State / Location:	GA
				Regulatory Agency:	

Page : \_\_\_\_\_ Of \_\_\_\_\_

ITEM #	MATRIX	CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	*OF CONTAINERS	Preservatives	Y/N	Requester Analysis Filtered (Y/N)	Residual Chlorine (Y/N)
			START DATE TIME	END DATE TIME						
1	Drinking Water	FB-01	10/31/18 1230		G	4	H2SO4 Unpreserved	X		
2	Waste Water	EB-01	10/31/18 1240		G	4	HNO3 Unpreserved	X		
3	Product	P233	10/4/18 1040		G	4	HNO3 Unpreserved	X		
4	Soil/Solid	P22D	10/4/18 1205		G	4	HNO3 Unpreserved	X		
5	Oil	DUP	10/4/18 1300		G	4	HNO3 Unpreserved	X		
6	Wipe									
7	Air									
8	Other									
9	Tissue									
10										
11										
12										

**WO# : 2610165**

2610165

ADDITIONAL COMMENTS	REQUISITIONED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP in C	Received on	Ice (Y/N)	Custody Sealed (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)
	Joju Abraham - Wood PLC	10/4/18	2030	Mike Nguyen / Pace	10/5/18	1152						
				Madeline	10/05/18	1620						
							2.5					

SAMPLER NAME AND SIGNATURE  
 PRINT Name of SAMPLER: Wood PLC  
 SIGNATURE of SAMPLER: *[Signature]*



# Sample Condition Upon Receipt

Client Name: GIA Power

Project # \_\_\_\_\_

**WO#: 2610165**  
PM: BM Due Date: 11/02/18  
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 83 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 2.5 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 10/05/18 MK

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

**Client Notification/ Resolution:** \_\_\_\_\_

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Field Data Required? Y / N

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)

July 23, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 263915

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on April 13, 2018. 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.

Radium analytical reported as 263917.

REV07232018\_report revised per consultant request to remove errant qualifiers.

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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 263915

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### 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

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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### Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 263915

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
263915001	PZ-2D	Water	04/12/18 16:30	04/13/18 12:45
263915002	EB-01	Water	04/12/18 17:31	04/13/18 12:45

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 263915

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
263915001	PZ-2D	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
263915002	EB-01	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	AAP	1	PASI-GA
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 263915

Sample: PZ-2D		Lab ID: 263915001		Collected: 04/12/18 16:30		Received: 04/13/18 12:45		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/16/18 10:58	04/17/18 18:27	7440-36-0		
Arsenic	<b>0.00064J</b>	mg/L	0.0050	0.00057	1	04/16/18 10:58	04/17/18 18:27	7440-38-2		
Barium	ND	mg/L	0.010	0.00078	1	04/16/18 10:58	04/17/18 18:27	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	04/16/18 10:58	04/17/18 18:27	7440-41-7		
Boron	<b>0.016J</b>	mg/L	0.040	0.0039	1	04/16/18 10:58	04/17/18 18:27	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	04/16/18 10:58	04/17/18 18:27	7440-43-9		
Calcium	ND	mg/L	25.0	0.69	50	04/16/18 10:58	04/17/18 18:33	7440-70-2	D3	
Chromium	<b>0.010</b>	mg/L	0.010	0.0016	1	04/16/18 10:58	04/17/18 18:27	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	04/16/18 10:58	04/17/18 18:27	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	04/16/18 10:58	04/17/18 18:27	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	04/16/18 10:58	04/17/18 18:27	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	04/16/18 10:58	04/17/18 18:27	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	04/16/18 10:58	04/17/18 18:27	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	04/16/18 10:58	04/17/18 18:27	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	04/16/18 10:00	04/16/18 13:56	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>69.0</b>	mg/L	25.0	25.0	1		04/17/18 00:40			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>2.6</b>	mg/L	0.25	0.024	1		04/17/18 20:03	16887-00-6	B	
Fluoride	ND	mg/L	0.30	0.029	1		04/17/18 20:03	16984-48-8		
Sulfate	<b>4.8</b>	mg/L	1.0	0.017	1		04/17/18 20:03	14808-79-8		

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 263915

Sample: EB-01		Lab ID: 263915002		Collected: 04/12/18 17:31		Received: 04/13/18 12:45		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/16/18 10:58	04/17/18 18:44	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	04/16/18 10:58	04/17/18 18:44	7440-38-2		
Barium	ND	mg/L	0.010	0.00078	1	04/16/18 10:58	04/17/18 18:44	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	04/16/18 10:58	04/17/18 18:44	7440-41-7		
Boron	ND	mg/L	0.040	0.0039	1	04/16/18 10:58	04/17/18 18:44	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	04/16/18 10:58	04/17/18 18:44	7440-43-9		
Calcium	ND	mg/L	0.50	0.014	1	04/16/18 10:58	04/17/18 18:44	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	04/16/18 10:58	04/17/18 18:44	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	04/16/18 10:58	04/17/18 18:44	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	04/16/18 10:58	04/17/18 18:44	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	04/16/18 10:58	04/17/18 18:44	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	04/16/18 10:58	04/17/18 18:44	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	04/16/18 10:58	04/17/18 18:44	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	04/16/18 10:58	04/17/18 18:44	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	04/16/18 10:00	04/16/18 13:59	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		04/17/18 00:40			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	ND	mg/L	0.25	0.024	1		04/19/18 06:04	16887-00-6	B	
Fluoride	ND	mg/L	0.30	0.029	1		04/19/18 06:04	16984-48-8		
Sulfate	ND	mg/L	1.0	0.017	1		04/19/18 06:04	14808-79-8		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 263915

QC Batch: 4365 Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury  
Associated Lab Samples: 263915001, 263915002

METHOD BLANK: 21638 Matrix: Water  
Associated Lab Samples: 263915001, 263915002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000036	04/16/18 13:40	

LABORATORY CONTROL SAMPLE: 21639

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0022	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 21798 21799

Parameter	Units	263833001 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	.0025	.0025	0.0023	0.0022	90	88	75-125	2	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 263915

QC Batch: 4391 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 263915001, 263915002

METHOD BLANK: 21772 Matrix: Water  
Associated Lab Samples: 263915001, 263915002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	04/17/18 18:15	
Arsenic	mg/L	ND	0.0050	0.00057	04/17/18 18:15	
Barium	mg/L	ND	0.010	0.00078	04/17/18 18:15	
Beryllium	mg/L	ND	0.0030	0.000050	04/17/18 18:15	
Boron	mg/L	ND	0.040	0.0039	04/17/18 18:15	
Cadmium	mg/L	ND	0.0010	0.000093	04/17/18 18:15	
Calcium	mg/L	ND	0.50	0.014	04/17/18 18:15	
Chromium	mg/L	ND	0.010	0.0016	04/17/18 18:15	
Cobalt	mg/L	ND	0.010	0.00052	04/17/18 18:15	
Lead	mg/L	ND	0.0050	0.00027	04/17/18 18:15	
Lithium	mg/L	ND	0.050	0.00097	04/17/18 18:15	
Molybdenum	mg/L	ND	0.010	0.0019	04/17/18 18:15	
Selenium	mg/L	ND	0.010	0.0014	04/17/18 18:15	
Thallium	mg/L	ND	0.0010	0.00014	04/17/18 18:15	

LABORATORY CONTROL SAMPLE: 21773

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	100	80-120	
Arsenic	mg/L	.1	0.10	101	80-120	
Barium	mg/L	.1	0.099	99	80-120	
Beryllium	mg/L	.1	0.11	108	80-120	
Boron	mg/L	1	1.1	109	80-120	
Cadmium	mg/L	.1	0.10	102	80-120	
Calcium	mg/L	1	1.0	100	80-120	
Chromium	mg/L	.1	0.10	101	80-120	
Cobalt	mg/L	.1	0.10	103	80-120	
Lead	mg/L	.1	0.10	100	80-120	
Lithium	mg/L	.1	0.11	112	80-120	
Molybdenum	mg/L	.1	0.10	102	80-120	
Selenium	mg/L	.1	0.099	99	80-120	
Thallium	mg/L	.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 21834 21835

Parameter	Units	263915002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	.1	.1	0.10	0.10	104	102	75-125	2	20	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 263915

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 21834		21835		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		263915002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	mg/L	ND	.1	.1	0.10	0.10	100	103	75-125	2	20		
Barium	mg/L	ND	.1	.1	0.099	0.10	99	100	75-125	2	20		
Beryllium	mg/L	ND	.1	.1	0.11	0.11	108	109	75-125	1	20		
Boron	mg/L	ND	1	1	1.1	1.2	113	115	75-125	2	20		
Cadmium	mg/L	ND	.1	.1	0.10	0.10	104	102	75-125	2	20		
Calcium	mg/L	ND	1	1	1.0	1.0	100	100	75-125	0	20		
Chromium	mg/L	ND	.1	.1	0.10	0.10	102	103	75-125	0	20		
Cobalt	mg/L	ND	.1	.1	0.10	0.10	104	103	75-125	1	20		
Lead	mg/L	ND	.1	.1	0.10	0.098	100	98	75-125	2	20		
Lithium	mg/L	ND	.1	.1	0.11	0.11	108	113	75-125	4	20		
Molybdenum	mg/L	ND	.1	.1	0.10	0.10	103	104	75-125	1	20		
Selenium	mg/L	ND	.1	.1	0.098	0.10	98	101	75-125	3	20		
Thallium	mg/L	ND	.1	.1	0.098	0.097	98	97	75-125	1	20		

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 263915

QC Batch: 406504

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 263915001, 263915002

METHOD BLANK: 2255362

Matrix: Water

Associated Lab Samples: 263915001, 263915002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	04/17/18 00:40	

LABORATORY CONTROL SAMPLE: 2255363

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	254	102	90-110	

SAMPLE DUPLICATE: 2255364

Parameter	Units	263915001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	69.0	70.0	1	5	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 263915

QC Batch: 4485 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 263915001

METHOD BLANK: 22082 Matrix: Water  
Associated Lab Samples: 263915001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.29J	0.25	0.024	04/17/18 16:10	
Fluoride	mg/L	ND	0.30	0.029	04/17/18 16:10	
Sulfate	mg/L	ND	1.0	0.017	04/17/18 16:10	

LABORATORY CONTROL SAMPLE: 22083

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.0	100	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: 22084 22085

Parameter	Units	263799001		22085		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MS Result	MSD Result	% Rec	% Rec						
Chloride	mg/L	13.6	1	10	16.6	16.7	294	31	90-110	1	15	M1	
Fluoride	mg/L	0.50	1	10	12.2	13.0	1170	125	90-110	6	15	M1	
Sulfate	mg/L	1200	1	10	566	566	-63000	-6300	90-110	0	15	E, M1	

MATRIX SPIKE SAMPLE: 22086

Parameter	Units	263799003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	23.3	10	19.9	-34	90-110	M1
Fluoride	mg/L	5.2	10	13.8	86	90-110	M1
Sulfate	mg/L	1110	10	526	-5830	90-110	E, M1

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 263915

QC Batch: 4601	Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0	Analysis Description: 300.0 IC Anions
Associated Lab Samples: 263915002	

METHOD BLANK: 22576 Matrix: Water  
Associated Lab Samples: 263915002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	04/19/18 04:35	
Fluoride	mg/L	ND	0.30	0.029	04/19/18 04:35	
Sulfate	mg/L	ND	1.0	0.017	04/19/18 04:35	

LABORATORY CONTROL SAMPLE: 22577

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.5	105	90-110	
Fluoride	mg/L	10	10.4	104	90-110	
Sulfate	mg/L	10	10.5	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 22578 22579

Parameter	Units	263915002		22579		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	ND	10	10	10.2	10.3	101	103	90-110	1	15
Fluoride	mg/L	ND	10	10	10.3	10.4	103	104	90-110	1	15
Sulfate	mg/L	ND	10	10	10.1	10.3	101	103	90-110	2	15

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 263915

---

### 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

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.  
E Analyte concentration exceeded the calibration range. The reported result is estimated.  
M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

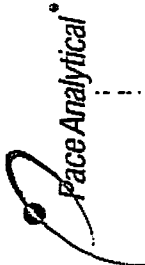
Project: Plant Mitchell Ash Ponds

Pace Project No.: 263915

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
263915001	PZ-2D	EPA 3005A	4391	EPA 6020B	4529
263915002	EB-01	EPA 3005A	4391	EPA 6020B	4529
263915001	PZ-2D	EPA 7470A	4365	EPA 7470A	4420
263915002	EB-01	EPA 7470A	4365	EPA 7470A	4420
263915001	PZ-2D	SM 2540C	406504		
263915002	EB-01	SM 2540C	406504		
263915001	PZ-2D	EPA 300.0	4485		
263915002	EB-01	EPA 300.0	4601		

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

CHAIN OF CUSTODY RECORD

PAGE: 1 OF 1

CLIENT NAME: Georgia Power  
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE, Atlanta, GA 30308, 404-506-7239  
REPORT TO: Joju Abraham, CC: Maria Padilla, Heath McCorkle, PO #: GPC10684198  
PROJECT NAME/STATE: Plant Mitchell/GA  
PROJECT #: Phase II CCR

Collection DATE	Collection TIME	MATRIX CODE	SAMPLE IDENTIFICATION				ANALYSIS REQUESTED	CONTAINER TYPE	PRESERVATION	# of CONTAINERS	RELINQUISHED BY	DATE/TIME	RELINQUISHED BY	DATE/TIME	SAMPLE SHIPPED VIA	COURIER	OTHER	CLIENT	Cooler ID
			C	G	O	R													
4/12/18	1630	GW	✓																
4/12/18	1731	W	✓																

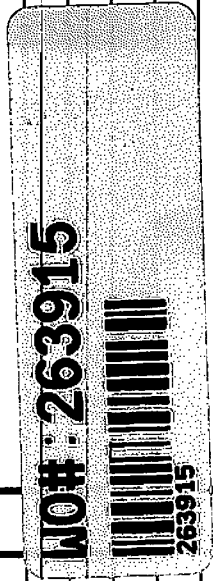
RELINQUISHED BY: Daniel Howard / Chemist, DATE/TIME: 4/13/18 12:45 PM  
RELINQUISHED BY: R. Anne L. Howard, DATE/TIME: 4/13/18 12:45 PM  
SAMPLE SHIPPED VIA: UPS, COURIER: # of Coolers: 0, Other: FS

RECEIVED BY: [Signature], DATE/TIME: 04/13/18 12:45  
Temperature: 4.7 Min, Max: 4.7

LAB # : 263915  
DATE/TIME: 4/13/18 12:45  
DATE/TIME: 4/13/18 12:45

FOR LAB USE ONLY

Entered into LIMS: Tracking #:



**Sample Condition Upon Receipt**



Client Name: GIA Power

Project # \_\_\_\_\_

**WO# : 263915**

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: \_\_\_\_\_

PM: BM Due Date: 04/20/18  
CLIENT: GAPower-CCR

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

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 4.7 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 4/13/18 MR

Comments: \_\_\_\_\_

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

Client Notification/ Resolution:

Field Data Required? 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 (a) out of hold (b) incorrect preservative (c) out of time (d) incorrect containers

May 04, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 263917

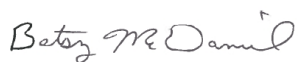
Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on April 13, 2018. 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.

Pace-Atlanta tests reported as 263915.

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: Maria Padilla, Georgia Power  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 263917

---

### 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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 263917

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
263917001	PZ-2D	Water	04/12/18 16:30	04/13/18 12:45
263917002	EB-01	Water	04/12/18 17:31	04/13/18 12:45

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 263917

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
263917001	PZ-2D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
263917002	EB-01	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 263917

**Sample: PZ-2D**      **Lab ID: 263917001**      Collected: 04/12/18 16:30      Received: 04/13/18 12:45      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.166 ± 0.193 (0.397)</b> <b>C:86% T:NA</b>	pCi/L	04/25/18 18:12	13982-63-3	
Radium-228	EPA 9320	<b>0.608 ± 0.483 (0.965)</b> <b>C:71% T:80%</b>	pCi/L	04/25/18 15:48	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.774 ± 0.676 (1.36)</b>	pCi/L	04/30/18 12:24	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 263917

**Sample: EB-01**      **Lab ID: 263917002**      Collected: 04/12/18 17:31      Received: 04/13/18 12:45      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.284 ± 0.187 (0.316)</b> <b>C:91% T:NA</b>	pCi/L	04/25/18 18:12	13982-63-3	
Radium-228	EPA 9320	<b>0.370 ± 0.405 (0.849)</b> <b>C:72% T:89%</b>	pCi/L	04/25/18 15:49	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.654 ± 0.592 (1.17)</b>	pCi/L	04/30/18 12:24	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 263917

QC Batch: 295250

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 263917001, 263917002

METHOD BLANK: 1445581

Matrix: Water

Associated Lab Samples: 263917001, 263917002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.620 ± 0.360 (0.645) C:79% T:76%	pCi/L	04/25/18 12:29	

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

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 263917

QC Batch: 295798

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 263917001, 263917002

METHOD BLANK: 1448339

Matrix: Water

Associated Lab Samples: 263917001, 263917002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.204 ± 0.171 (0.306) C:87% T:NA	pCi/L	04/25/18 18:08	

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.

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 263917

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 263917

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
263917001	PZ-2D	EPA 9315	295798		
263917002	EB-01	EPA 9315	295798		
263917001	PZ-2D	EPA 9320	295250		
263917002	EB-01	EPA 9320	295250		
263917001	PZ-2D	Total Radium Calculation	296443		
263917002	EB-01	Total Radium Calculation	296443		

**REPORT OF LABORATORY ANALYSIS**

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### Sample Condition Upon Receipt

Client Name: GIA power

Project #

**WO# : 263917**

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_  
Tracking #: \_\_\_\_\_

PM: BM Due Date: 05/11/18  
CLIENT: GAPower-CCR

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

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 4.7 Biological Tissue is Frozen: Yes No  
Temp should be above freezing to 6°C

Date and Initials of person examining contents: 4/13/18 MR

Comments:

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

Client Notification/ Resolution:  
Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Comments/ Resolution: \_\_\_\_\_

Field Data Required? Y / N

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 (a) out of hold incorrect preservative (b) out of temp incorrect containers

June 04, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 265387

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on May 24, 2018. 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: Maria Padilla, Georgia Power  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 265387

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### 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

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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### Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 265387

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
265387001	PZ-2D	Water	05/23/18 10:35	05/24/18 16:08
265387002	EB-01	Water	05/23/18 11:00	05/24/18 16:08

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 265387

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
265387001	PZ-2D	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	MWB	3	PASI-GA
265387002	EB-01	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	DRB	1	PASI-GA
		SM 2540C	NAL	1	PASI-A
		EPA 300.0	MWB	3	PASI-GA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 265387

Sample: PZ-2D		Lab ID: 265387001		Collected: 05/23/18 10:35		Received: 05/24/18 16:08		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	<b>0.0017J</b>	mg/L	0.0030	0.00078	1	05/29/18 12:00	05/30/18 14:32	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	05/29/18 12:00	05/30/18 14:32	7440-38-2		
Barium	<b>0.0042J</b>	mg/L	0.010	0.00078	1	05/29/18 12:00	05/30/18 14:32	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	05/29/18 12:00	05/30/18 14:32	7440-41-7		
Boron	<b>0.018J</b>	mg/L	0.040	0.0039	1	05/29/18 12:00	05/30/18 14:32	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	05/29/18 12:00	05/30/18 14:32	7440-43-9		
Calcium	<b>17.6J</b>	mg/L	25.0	0.69	50	05/29/18 12:00	05/30/18 14:32	7440-70-2	D3	
Chromium	<b>0.011</b>	mg/L	0.010	0.0016	1	05/29/18 12:00	05/30/18 14:32	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	05/29/18 12:00	05/30/18 14:32	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	05/29/18 12:00	05/30/18 14:32	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	05/29/18 12:00	05/30/18 14:32	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	05/29/18 12:00	05/30/18 14:32	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	05/29/18 12:00	05/30/18 14:32	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	05/29/18 12:00	05/30/18 14:32	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	05/29/18 08:30	05/29/18 12:18	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>62.0</b>	mg/L	25.0	25.0	1		05/30/18 20:47		D6	
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>2.5</b>	mg/L	0.25	0.024	1		05/29/18 15:54	16887-00-6		
Fluoride	<b>0.063J</b>	mg/L	0.30	0.029	1		05/29/18 15:54	16984-48-8		
Sulfate	<b>4.5</b>	mg/L	1.0	0.017	1		05/29/18 15:54	14808-79-8		

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 265387

Sample: EB-01		Lab ID: 265387002		Collected: 05/23/18 11:00		Received: 05/24/18 16:08		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	05/29/18 12:00	05/30/18 14:49	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	05/29/18 12:00	05/30/18 14:49	7440-38-2		
Barium	ND	mg/L	0.010	0.00078	1	05/29/18 12:00	05/30/18 14:49	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	05/29/18 12:00	05/30/18 14:49	7440-41-7		
Boron	ND	mg/L	0.040	0.0039	1	05/29/18 12:00	05/30/18 14:49	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	05/29/18 12:00	05/30/18 14:49	7440-43-9		
Calcium	ND	mg/L	0.50	0.014	1	05/29/18 12:00	05/30/18 14:49	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	05/29/18 12:00	05/30/18 14:49	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	05/29/18 12:00	05/30/18 14:49	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	05/29/18 12:00	05/30/18 14:49	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	05/29/18 12:00	05/30/18 14:49	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	05/29/18 12:00	05/30/18 14:49	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	05/29/18 12:00	05/30/18 14:49	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	05/29/18 12:00	05/30/18 14:49	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	05/29/18 08:30	05/29/18 12:21	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		05/30/18 20:47			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>0.18J</b>	mg/L	0.25	0.024	1		05/29/18 16:56	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		05/29/18 16:56	16984-48-8		
Sulfate	ND	mg/L	1.0	0.017	1		05/29/18 16:56	14808-79-8		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 265387

QC Batch: 6886 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 265387001, 265387002

METHOD BLANK: 32709 Matrix: Water  
Associated Lab Samples: 265387001, 265387002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	05/30/18 14:20	
Arsenic	mg/L	ND	0.0050	0.00057	05/30/18 14:20	
Barium	mg/L	ND	0.010	0.00078	05/30/18 14:20	
Beryllium	mg/L	ND	0.0030	0.000050	05/30/18 14:20	
Boron	mg/L	ND	0.040	0.0039	05/30/18 14:20	
Cadmium	mg/L	ND	0.0010	0.000093	05/30/18 14:20	
Calcium	mg/L	ND	0.50	0.014	05/30/18 14:20	
Chromium	mg/L	ND	0.010	0.0016	05/30/18 14:20	
Cobalt	mg/L	ND	0.010	0.00052	05/30/18 14:20	
Lead	mg/L	ND	0.0050	0.00027	05/30/18 14:20	
Lithium	mg/L	ND	0.050	0.00097	05/30/18 14:20	
Molybdenum	mg/L	ND	0.010	0.0019	05/30/18 14:20	
Selenium	mg/L	ND	0.010	0.0014	05/30/18 14:20	
Thallium	mg/L	ND	0.0010	0.00014	05/30/18 14:20	

LABORATORY CONTROL SAMPLE: 32710

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.11	106	80-120	
Arsenic	mg/L	.1	0.10	103	80-120	
Barium	mg/L	.1	0.10	104	80-120	
Beryllium	mg/L	.1	0.10	105	80-120	
Boron	mg/L	1	1.2	115	80-120	
Cadmium	mg/L	.1	0.10	100	80-120	
Calcium	mg/L	1	1.0	101	80-120	
Chromium	mg/L	.1	0.11	108	80-120	
Cobalt	mg/L	.1	0.11	109	80-120	
Lead	mg/L	.1	0.10	101	80-120	
Lithium	mg/L	.1	0.10	104	80-120	
Molybdenum	mg/L	.1	0.11	107	80-120	
Selenium	mg/L	.1	0.10	103	80-120	
Thallium	mg/L	.1	0.10	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 32818 32819

Parameter	Units	265387002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result	MSD Result						
Antimony	mg/L	ND	.1	.1	0.10	0.10	104	102	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 Mitchell Ash Ponds

Pace Project No.: 265387

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 32818		32819		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		265387002 Result	MS Spike Conc.	MSD Spike Conc.									
Arsenic	mg/L	ND	.1	.1	0.10	0.10	104	103	75-125	1	20		
Barium	mg/L	ND	.1	.1	0.10	0.10	101	100	75-125	1	20		
Beryllium	mg/L	ND	.1	.1	0.11	0.10	107	104	75-125	2	20		
Boron	mg/L	ND	1	1	1.2	1.1	116	113	75-125	3	20		
Cadmium	mg/L	ND	.1	.1	0.10	0.10	102	100	75-125	2	20		
Calcium	mg/L	ND	1	1	1.0	1.1	102	104	75-125	2	20		
Chromium	mg/L	ND	.1	.1	0.11	0.11	108	110	75-125	1	20		
Cobalt	mg/L	ND	.1	.1	0.11	0.11	107	108	75-125	1	20		
Lead	mg/L	ND	.1	.1	0.10	0.099	103	99	75-125	4	20		
Lithium	mg/L	ND	.1	.1	0.11	0.10	109	104	75-125	4	20		
Molybdenum	mg/L	ND	.1	.1	0.11	0.11	106	105	75-125	1	20		
Selenium	mg/L	ND	.1	.1	0.11	0.10	108	103	75-125	5	20		
Thallium	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	2	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 265387

QC Batch: 413008

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 265387001, 265387002

METHOD BLANK: 2290815

Matrix: Water

Associated Lab Samples: 265387001, 265387002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	05/30/18 20:47	

LABORATORY CONTROL SAMPLE: 2290816

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	256	102	90-110	

SAMPLE DUPLICATE: 2290817

Parameter	Units	265387001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	62.0	75.0	19	5	D6

SAMPLE DUPLICATE: 2290818

Parameter	Units	92386101006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	111	118	6	5	D6

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 265387

QC Batch: 6896 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 265387001, 265387002

METHOD BLANK: 32736 Matrix: Water

Associated Lab Samples: 265387001, 265387002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	05/29/18 15:13	
Fluoride	mg/L	ND	0.30	0.029	05/29/18 15:13	
Sulfate	mg/L	ND	1.0	0.017	05/29/18 15:13	

LABORATORY CONTROL SAMPLE: 32737

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.1	101	90-110	
Fluoride	mg/L	10	9.2	92	90-110	
Sulfate	mg/L	10	10.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 32738 32739

Parameter	Units	265387001 Result	MS Spike Conc.	MSD Spike Conc.	32738		32739		% Rec Limits	RPD	Max RPD	Qual
					MS Result	MSD Result	MS % Rec	MSD % Rec				
Chloride	mg/L	2.5	10	10	12.7	12.7	102	102	90-110	0	15	
Fluoride	mg/L	0.063J	10	10	9.2	9.2	91	91	90-110	0	15	
Sulfate	mg/L	4.5	10	10	14.3	14.2	98	97	90-110	1	15	

MATRIX SPIKE SAMPLE: 32740

Parameter	Units	265387002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.18J	10	10.0	98	90-110	
Fluoride	mg/L	ND	10	9.1	91	90-110	
Sulfate	mg/L	ND	10	10	100	90-110	

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 265387

---

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

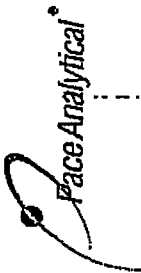
Pace Project No.: 265387

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
265387001	PZ-2D	EPA 3005A	6886	EPA 6020B	6986
265387002	EB-01	EPA 3005A	6886	EPA 6020B	6986
265387001	PZ-2D	EPA 7470A	6829	EPA 7470A	6877
265387002	EB-01	EPA 7470A	6829	EPA 7470A	6877
265387001	PZ-2D	SM 2540C	413008		
265387002	EB-01	SM 2540C	413008		
265387001	PZ-2D	EPA 300.0	6896		
265387002	EB-01	EPA 300.0	6896		

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

PAGE: \_\_\_\_\_ OF \_\_\_\_\_

**CHAIN OF CUSTODY RECORD**

CLIENT NAME: Georgia Power  
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-506-7239  
REPORT TO: Jotu Abraham  
CC: Maria Padilla Heath McCorkle  
REQUESTED COMPLETION DATE: \_\_\_\_\_ PO #: GPC10684198

PROJECT NAME/STATE: **Plant Mitchell / GA**  
PROJECT #: **PHASE II CER**

CONTAINER TYPE PRESERVATIVE	# of	P	P	P	P	P	P
3	7	7	3				

Collection DATE	Collection TIME	MATRIX CODE	COR			SAMPLE IDENTIFICATION
			C	O	R	
5/23/18	1035	G-W	✓			P2-2D
5/23/18	1100	W	✓			EB-01

CONTAINER TYPE	ANALYSIS REQUESTED	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME
3	EPA 820/470 Metals App. III & IV	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100
7	EPA 350.0 IC (Cl, F, SO4)	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100
7	SM 25400 TDS	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100
3	Radionuclides 226 & 228 SW-846 9315/9320	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100

RECEIVED BY AND TITLE: **Paula G. Yels**  
RECEIVED BY: **Paula G. Yels**  
RECEIVED BY LAB: **Paula G. Yels**  
TEMPERATURE: Min: 2.3 Max: 3  
DATE/TIME: 5/23/18 1100  
DATE/TIME: 5/23/18 15:25  
DATE/TIME: 5/24/18 11:08  
SAMPLER SHIPPED VIA: **UPS FEDEX**  
CUSTODY SEAL: Intact ( ) Broken ( )  
REINVOICED BY: **Paula G. Yels**  
REINVOICED BY DATE/TIME: 5/23/18 1100  
REINVOICED BY DATE/TIME: 5/23/18 15:25  
REINVOICED BY DATE/TIME: 5/24/18 11:08  
REINVOICED BY DATE/TIME: 5/24/18 1608

CONTAINER TYPE	ANALYSIS REQUESTED	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME
3	EPA 820/470 Metals App. III & IV	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100
7	EPA 350.0 IC (Cl, F, SO4)	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100
7	SM 25400 TDS	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100
3	Radionuclides 226 & 228 SW-846 9315/9320	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100	5/23/18 1100

REMARKS/ADDITIONAL INFORMATION:  
**PG**

NO#: 265387

CLIENT INFORMATION: COURIER: **Paula G. Yels** OTHER: **Paula G. Yels**  
CARRIER ID: \_\_\_\_\_  
ENTERED INTO LIMS: \_\_\_\_\_  
TRACKING #: \_\_\_\_\_

FOR LAB USE ONLY  
LAB #: \_\_\_\_\_  
DATE/TIME: 5/23/18 1100  
DATE/TIME: 5/23/18 15:25  
DATE/TIME: 5/24/18 11:08  
DATE/TIME: 5/24/18 1608

CLIENT INFORMATION: COURIER: **Paula G. Yels** OTHER: **Paula G. Yels**  
CARRIER ID: \_\_\_\_\_  
ENTERED INTO LIMS: \_\_\_\_\_  
TRACKING #: \_\_\_\_\_

**Sample Condition Upon Receipt**



Client Name: GIA Power

Project # \_\_\_\_\_

**WO#: 265387**

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other \_\_\_\_\_

Tracking #: \_\_\_\_\_

PM: **BM** Due Date: **06/01/18**

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

CLIENT: **GAPower-CCR**

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 23 Type of Ice:  Wet  Blue  None  Samples on ice, cooling process has begun

Cooler Temperature 2.3 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 5/24/18 MR

Temp should be above freezing to 6°C

Comments: \_\_\_\_\_

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

Client Notification/ Resolution:

Field Data Required? 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 (ie. out of hold, incorrect preservative, out of temp, incorrect containers)

June 20, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 265388

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on May 24, 2018. 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: Maria Padilla, Georgia Power  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 265388

---

### **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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 265388

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
265388001	PZ-2D	Water	05/23/18 10:35	05/24/18 16:08
265388002	EB-01	Water	05/23/18 11:00	05/24/18 16:08

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 265388

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
265388001	PZ-2D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
265388002	EB-01	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 265388

**Sample: PZ-2D**      **Lab ID: 265388001**      Collected: 05/23/18 10:35      Received: 05/24/18 16:08      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.301 ± 0.143 (0.219)</b> C:90% T:NA	pCi/L	06/11/18 08:13	13982-63-3	
Radium-228	EPA 9320	<b>-0.435 ± 0.413 (1.03)</b> C:69% T:79%	pCi/L	06/08/18 11:09	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.301 ± 0.556 (1.25)</b>	pCi/L	06/15/18 11:38	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 265388

**Sample: EB-01**      **Lab ID: 265388002**      Collected: 05/23/18 11:00      Received: 05/24/18 16:08      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.0998 ± 0.106 (0.214)</b> <b>C:83% T:NA</b>	pCi/L	06/11/18 08:13	13982-63-3	
Radium-228	EPA 9320	<b>0.985 ± 0.463 (0.776)</b> <b>C:73% T:80%</b>	pCi/L	06/08/18 11:09	15262-20-1	
Total Radium	Total Radium Calculation	<b>1.08 ± 0.569 (0.990)</b>	pCi/L	06/15/18 11:38	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 265388

QC Batch: 301272

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 265388001, 265388002

METHOD BLANK: 1474122

Matrix: Water

Associated Lab Samples: 265388001, 265388002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.104 ± 0.0810 (0.140) C:90% T:NA	pCi/L	06/11/18 08:12	

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

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 265388

QC Batch: 300897

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 265388001, 265388002

METHOD BLANK: 1472522

Matrix: Water

Associated Lab Samples: 265388001, 265388002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.157 ± 0.351 (0.777) C:76% T:84%	pCi/L	06/08/18 11:07	

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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## QUALIFIERS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 265388

---

### 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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

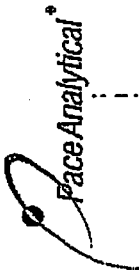
Project: Plant Mitchell Ash Ponds

Pace Project No.: 265388

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
265388001	PZ-2D	EPA 9315	301272		
265388002	EB-01	EPA 9315	301272		
265388001	PZ-2D	EPA 9320	300897		
265388002	EB-01	EPA 9320	300897		
265388001	PZ-2D	Total Radium Calculation	302329		
265388002	EB-01	Total Radium Calculation	302329		

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

PAGE: OF

CHAIN OF CUSTODY RECORD

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

REPORT TO: Jeju Abraham

CC: Maria Padilla  
 Heath McCorkle

PO #: GPC10684198

PROJECT NAME/STATE: PLANT Mitchell / GA  
 PROJECT #: PHASE II ccr

CONTAINER TYPE	PRESERVATION	ANALYSIS REQUESTED											REMARKS/ADDITIONAL INFORMATION	
		P	P	P	P	P	P	P	P	P	P	P		
# of		3	7	7	3									
CONTAINERS	C O N T A I N E R S	Metals App. III & IV	EPA 60207470	IC (CL, P, SO4)	EPA 3000	TDS	SM 254OC	Radium 226 & 228	GW-846 9315/9320					
		S	X	X	X	X	X	X						
		S	X	X	X	X	X							

Collection DATE	Collection TIME	MATRIX CODE	SAMPLE IDENTIFICATION			
			C	O	R	B
5/23/18	1035	G-W	✓			
5/23/18	1100	W	✓			

LOT#: 265388



265388

LAB #:	DATE/TIME: 5/23/18 1100	FOR LAB USE ONLY
Entered into LIMS:	DATE/TIME: 5/23/18 15:25	
Tracking #:	DATE/TIME: 5/24/18 1608	
RECEIVED BY AND TITLE:	RECEIVED BY:	Cooler ID:
RECEIVED BY:	RECEIVED BY:	
RECEIVED BY:	SAMPLE SHIPPED VIA:	
Temp: Min: 2.3 Max: 8	UPS: COURIER	Other: FS
Checked: Yes No NA	Sample Seal: Intact Broken Not Present	

**Sample Condition Upon Receipt**



Client Name: GLA Power

Project # \_\_\_\_\_

**WO#: 265388**

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other  
Tracking #: \_\_\_\_\_

PM: **BM** Due Date: **06/22/18**  
CLIENT: **GAPower-CCR**

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

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 2.3 Biological Tissue Is Frozen: Yes No  
Temp should be above freezing to 6°C

Date and Initials of person examining contents: 5/24/18 [Signature]

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

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? 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 (ie out of hold incorrect preservative out of temp incorrect containers)

June 21, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 266099

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on June 14, 2018. 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: Maria Padilla, Georgia Power  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 266099

---

### 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

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 266099

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
266099001	PZ-2D	Water	06/13/18 15:45	06/14/18 16:50
266099002	EB-01	Water	06/13/18 13:20	06/14/18 16:50

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 266099

Lab ID	Sample ID	Method	Analysts	Analytes Reported
266099001	PZ-2D	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
266099002	EB-01	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 266099

Sample: PZ-2D		Lab ID: 266099001		Collected: 06/13/18 15:45		Received: 06/14/18 16:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	<b>0.0018J</b>	mg/L	0.0030	0.00078	1	06/19/18 17:44	06/20/18 18:29	7440-36-0	
Arsenic	<b>0.00070J</b>	mg/L	0.0050	0.00057	1	06/19/18 17:44	06/20/18 18:29	7440-38-2	
Barium	<b>0.012</b>	mg/L	0.010	0.00078	1	06/19/18 17:44	06/20/18 18:29	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	06/19/18 17:44	06/20/18 18:29	7440-41-7	
Boron	<b>0.014J</b>	mg/L	0.040	0.0039	1	06/19/18 17:44	06/20/18 18:29	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/19/18 17:44	06/20/18 18:29	7440-43-9	
Calcium	<b>14.3</b>	mg/L	5.0	0.14	10	06/19/18 17:44	06/20/18 18:35	7440-70-2	
Chromium	<b>0.011</b>	mg/L	0.010	0.0016	1	06/19/18 17:44	06/20/18 18:29	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	06/19/18 17:44	06/20/18 18:29	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	06/19/18 17:44	06/20/18 18:29	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	06/19/18 17:44	06/20/18 18:29	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/19/18 17:44	06/20/18 18:29	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	06/19/18 17:44	06/20/18 18:29	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	06/19/18 17:44	06/20/18 18:29	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	<b>0.000049J</b>	mg/L	0.00050	0.000036	1	06/20/18 14:46	06/21/18 13:04	7439-97-6	B,M1, R1
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>93.0</b>	mg/L	25.0	10.0	1		06/18/18 11:30		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>2.5</b>	mg/L	0.25	0.024	1		06/19/18 17:13	16887-00-6	M1
Fluoride	<b>0.11J</b>	mg/L	0.30	0.029	1		06/19/18 17:13	16984-48-8	
Sulfate	<b>5.3</b>	mg/L	1.0	0.017	1		06/19/18 17:13	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 266099

**Sample: EB-01**      **Lab ID: 266099002**      Collected: 06/13/18 13:20      Received: 06/14/18 16:50      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b> Analytical Method: EPA 6020B      Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.0030	0.00078	1	06/19/18 17:44	06/20/18 18:41	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	06/19/18 17:44	06/20/18 18:41	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	06/19/18 17:44	06/20/18 18:41	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	06/19/18 17:44	06/20/18 18:41	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	06/19/18 17:44	06/20/18 18:41	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	06/19/18 17:44	06/20/18 18:41	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	06/19/18 17:44	06/20/18 18:41	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	06/19/18 17:44	06/20/18 18:41	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	06/19/18 17:44	06/20/18 18:41	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	06/19/18 17:44	06/20/18 18:41	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	06/19/18 17:44	06/20/18 18:41	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	06/19/18 17:44	06/20/18 18:41	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	06/19/18 17:44	06/20/18 18:41	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	06/19/18 17:44	06/20/18 18:41	7440-28-0	
<b>7470 Mercury</b> Analytical Method: EPA 7470A      Preparation Method: EPA 7470A									
Mercury	<b>0.000049J</b>	mg/L	0.00050	0.000036	1	06/20/18 14:46	06/21/18 13:13	7439-97-6	B
<b>2540C Total Dissolved Solids</b> Analytical Method: SM 2540C									
Total Dissolved Solids	<b>12.0J</b>	mg/L	25.0	10.0	1		06/18/18 11:30		
<b>300.0 IC Anions 28 Days</b> Analytical Method: EPA 300.0									
Chloride	<b>0.31</b>	mg/L	0.25	0.024	1		06/19/18 18:22	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		06/19/18 18:22	16984-48-8	
Sulfate	<b>0.11J</b>	mg/L	1.0	0.017	1		06/19/18 18:22	14808-79-8	

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**QUALITY CONTROL DATA**

Project: Plant Mitchell Ash Ponds

Pace Project No.: 266099

QC Batch: 8297 Analysis Method: EPA 6020B  
 QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
 Associated Lab Samples: 266099001, 266099002

METHOD BLANK: 38325 Matrix: Water

Associated Lab Samples: 266099001, 266099002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	06/20/18 18:11	
Arsenic	mg/L	ND	0.0050	0.00057	06/20/18 18:11	
Barium	mg/L	ND	0.010	0.00078	06/20/18 18:11	
Beryllium	mg/L	ND	0.0030	0.000050	06/20/18 18:11	
Boron	mg/L	ND	0.040	0.0039	06/20/18 18:11	
Cadmium	mg/L	ND	0.0010	0.000093	06/20/18 18:11	
Calcium	mg/L	ND	0.50	0.014	06/20/18 18:11	
Chromium	mg/L	ND	0.010	0.0016	06/20/18 18:11	
Cobalt	mg/L	ND	0.010	0.00052	06/20/18 18:11	
Lead	mg/L	ND	0.0050	0.00027	06/20/18 18:11	
Lithium	mg/L	ND	0.050	0.00097	06/20/18 18:11	
Molybdenum	mg/L	ND	0.010	0.0019	06/20/18 18:11	
Selenium	mg/L	ND	0.010	0.0014	06/20/18 18:11	
Thallium	mg/L	ND	0.0010	0.00014	06/20/18 18:11	

LABORATORY CONTROL SAMPLE: 38326

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	104	80-120	
Arsenic	mg/L	.1	0.10	100	80-120	
Barium	mg/L	.1	0.099	99	80-120	
Beryllium	mg/L	.1	0.10	102	80-120	
Boron	mg/L	1	1.0	102	80-120	
Cadmium	mg/L	.1	0.10	100	80-120	
Calcium	mg/L	1	1.0	101	80-120	
Chromium	mg/L	.1	0.10	103	80-120	
Cobalt	mg/L	.1	0.10	105	80-120	
Lead	mg/L	.1	0.099	99	80-120	
Lithium	mg/L	.1	0.10	101	80-120	
Molybdenum	mg/L	.1	0.10	101	80-120	
Selenium	mg/L	.1	0.10	102	80-120	
Thallium	mg/L	.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 38482 38483

Parameter	Units	265859002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	.1	.1	0.10	0.10	105	104	75-125	1	20	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 266099

Parameter	Units	38482		38483		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Arsenic	mg/L	ND	.1	.1	0.10	0.10	103	105	75-125	2	20		
Barium	mg/L	0.068	.1	.1	0.17	0.17	106	104	75-125	1	20		
Beryllium	mg/L	ND	.1	.1	0.093	0.093	93	93	75-125	1	20		
Boron	mg/L	1.4	1	1	2.3	2.3	97	91	75-125	3	20		
Cadmium	mg/L	ND	.1	.1	0.099	0.098	99	98	75-125	1	20		
Calcium	mg/L	81.0	1	1	82.7	80.6	168	-43	75-125	3	20	M6	
Chromium	mg/L	ND	.1	.1	0.095	0.095	95	95	75-125	1	20		
Cobalt	mg/L	0.00056J	.1	.1	0.096	0.098	96	98	75-125	2	20		
Lead	mg/L	ND	.1	.1	0.090	0.091	90	91	75-125	2	20		
Lithium	mg/L	0.0041J	.1	.1	0.097	0.098	93	94	75-125	1	20		
Molybdenum	mg/L	ND	.1	.1	0.099	0.099	99	99	75-125	1	20		
Selenium	mg/L	ND	.1	.1	0.10	0.10	104	101	75-125	3	20		
Thallium	mg/L	ND	.1	.1	0.092	0.091	92	91	75-125	0	20		

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**QUALITY CONTROL DATA**

Project: Plant Mitchell Ash Ponds

Pace Project No.: 266099

QC Batch: 8153	Analysis Method: SM 2540C
QC Batch Method: SM 2540C	Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 266099001, 266099002	

LABORATORY CONTROL SAMPLE: 37848

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	409	102	84-108	

SAMPLE DUPLICATE: 37849

Parameter	Units	266147001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	139	134	4	10	

SAMPLE DUPLICATE: 37850

Parameter	Units	266085012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	228	215	6	10	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 266099

QC Batch: 8258	Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0	Analysis Description: 300.0 IC Anions
Associated Lab Samples: 266099001, 266099002	

METHOD BLANK: 38152 Matrix: Water

Associated Lab Samples: 266099001, 266099002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	06/19/18 16:28	
Fluoride	mg/L	ND	0.30	0.029	06/19/18 16:28	
Sulfate	mg/L	ND	1.0	0.017	06/19/18 16:28	

LABORATORY CONTROL SAMPLE: 38153

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.2	92	90-110	
Fluoride	mg/L	10	9.7	97	90-110	
Sulfate	mg/L	10	10	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 38154 38155

Parameter	Units	38154		38155		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	2.5	10	11.4	11.6	89	91	90-110	1	15	M1
Fluoride	mg/L	0.11J	10	9.5	9.7	94	96	90-110	1	15	
Sulfate	mg/L	5.3	10	14.5	14.6	91	93	90-110	1	15	

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 Mitchell Ash Ponds

Pace Project No.: 266099

---

### 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.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 266099

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
266099001	PZ-2D	EPA 3005A	8297	EPA 6020B	8415
266099002	EB-01	EPA 3005A	8297	EPA 6020B	8415
266099001	PZ-2D	EPA 7470A	8393	EPA 7470A	8485
266099002	EB-01	EPA 7470A	8393	EPA 7470A	8485
266099001	PZ-2D	SM 2540C	8153		
266099002	EB-01	SM 2540C	8153		
266099001	PZ-2D	EPA 300.0	8258		
266099002	EB-01	EPA 300.0	8258		

### REPORT OF LABORATORY ANALYSIS

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CHAIN OF CUSTODY RECORD

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

PAGE: OF

Form containing client information (Georgia Power, 241 Ralph McGill Blvd SE), project details (P HNS II CCR), analysis requested (Metals, EPA 8020/7470, etc.), and a large table with columns for date, collection time, matrix code, and analysis results.

NO#: 266099



FOR LAB USE ONLY

LAB #:

Entered into LIMS:
Tracking #:

Pace COC Revised.xlsx



### Sample Condition Upon Receipt

Client Name: GA Power

Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other  
Tracking #: \_\_\_\_\_

**WO#: 266099**

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

PM: BM Due Date: 06/21/18  
CLIENT: GA Power-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 0.7 Biological Tissue is Frozen: Yes No  
Temp should be above freezing to 6°C

Date and Initials of person examining contents: 6/14/18 MR

Comments:

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Field Data Required? Y N

**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

July 13, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 266100

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on June 14, 2018. 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: Maria Padilla, Georgia Power  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 266100

---

### 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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 266100

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
266100001	PZ-2D	Water	06/13/18 15:45	06/14/18 16:50
266100002	EB-01	Water	06/13/18 13:20	06/14/18 16:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 266100

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
266100001	PZ-2D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266100002	EB-01	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 266100

**Sample: PZ-2D**      **Lab ID: 266100001**      Collected: 06/13/18 15:45      Received: 06/14/18 16:50      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.340 ± 0.247 (0.406)</b> C:85% T:NA	pCi/L	07/03/18 09:57	13982-63-3	
Radium-228	EPA 9320	<b>0.168 ± 0.450 (1.00)</b> C:78% T:80%	pCi/L	07/12/18 15:06	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.508 ± 0.697 (1.41)</b>	pCi/L	07/13/18 09:58	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 266100

**Sample: EB-01**      **Lab ID: 266100002**      Collected: 06/13/18 13:20      Received: 06/14/18 16:50      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	<b>0.118 ± 0.224 (0.514)</b> <b>C:77% T:NA</b>	pCi/L	07/03/18 09:57	13982-63-3	
Radium-228	EPA 9320	<b>0.0799 ± 0.367 (0.838)</b> <b>C:76% T:75%</b>	pCi/L	07/12/18 15:06	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.198 ± 0.591 (1.35)</b>	pCi/L	07/13/18 09:58	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 266100

QC Batch: 302924

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 266100001, 266100002

METHOD BLANK: 1482129

Matrix: Water

Associated Lab Samples: 266100001, 266100002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0380 ± 0.331 (0.764) C:76% T:78%	pCi/L	07/12/18 15:05	

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 Mitchell Ash Ponds

Pace Project No.: 266100

QC Batch: 302917

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 266100001, 266100002

METHOD BLANK: 1482111

Matrix: Water

Associated Lab Samples: 266100001, 266100002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.338 ± 0.240 (0.382) C:97% T:NA	pCi/L	07/03/18 08:19	

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.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 266100

---

### 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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 266100

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
266100001	PZ-2D	EPA 9315	302917		
266100002	EB-01	EPA 9315	302917		
266100001	PZ-2D	EPA 9320	302924		
266100002	EB-01	EPA 9320	302924		
266100001	PZ-2D	Total Radium Calculation	305683		
266100002	EB-01	Total Radium Calculation	305683		

### REPORT OF LABORATORY ANALYSIS


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**CHAIN OF CUSTODY RECORD**

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

PAGE: \_\_\_\_\_ OF \_\_\_\_\_

<b>CLIENT NAME:</b> Georgia Power <b>CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:</b> 241 Ralph McGill Blvd SE Atlanta, GA 30308 404-508-7239		<b>REPORT TO:</b> Joiu Abraham <b>CC:</b> Maria Padilla <b>HEALTH:</b> Health McCorkle <b>PO #:</b> GPC10684198	
<b>PROJECT NAME/STATE:</b> Pound m. kellett / GA <b>PROJECT #:</b> P HNSC II CCR		<b>ANALYSIS REQUESTED</b>	
<b>CONTAINER TYPE:</b> PRESERVATION # of CONTAINERS	P 3 P 7 P 7 P 3	P 7 P 7 P 7 P 3	P 3 P 7 P 7 P 3
<b>CONTAINER TYPE:</b> P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	1 - HCl, 56°C 2 - H <sub>2</sub> SO <sub>4</sub> , 56°C 3 - HNO <sub>3</sub> 4 - NaOH, 56°C 5 - NaOH/2nAc, 56°C 6 - Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 56°C 7 - 56°C not frozen	<b>MATRIX CODES:</b> 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	<b>REMARKS/ADDITIONAL INFORMATION</b>
COLLECTION DATE 6/13/18 6/13/18	MATRIX CODE GW W	SAMPLE IDENTIFICATION P2-20 EB-01	REMAINS REQUESTED EPA 8020/7470 Metals App. III & IV IC (Cl, F, SO4) EPA 300.0 TDS GM 25400 Redum 226 & 228 GW-946 8316/9320
<b>RECEIVED BY AND TITLE:</b> PAUL GUTTO Tech S <b>RECEIVED BY:</b> Mike Norman	DATE/TIME: 6/13/18 1545 DATE/TIME: 6/14/18 1600 DATE/TIME: 6/14/18 1650	RELINQUISHED BY: [Signature] RELINQUISHED BY: [Signature]	DATE/TIME: 6/14/18 1125 DATE/TIME:
pH checked: Yes No NA Temp: Min. 0.7 Max.	SAMPLE SHIPPED VIA: UPS Intact Fed-Ex Broken Not Present	COURIER: [Signature] CLIENT: Pace OTHER: FS	LAB #: _____ ENTERED INTO LIMS: _____ TRACKING #: _____

NO#: 266100  
  
 266100



# Sample Condition Upon Receipt



Client Name: GIA Power

Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

**WO#: 266100**

Tracking #: \_\_\_\_\_

PM: BM Due Date: 07/13/18

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

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 0.7

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 6/14/18 MA

Temp should be above freezing to 6°C

Comments: \_\_\_\_\_

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

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Field Data Required? Y N

**Project Manager Review:** \_\_\_\_\_

Date: \_\_\_\_\_

November 02, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2610850

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 26, 2018. 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: Maria Padilla, Georgia Power  
Rhonda Quinn, Norfolk Southern\_Wood E&I Solutions, Inc.  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610850

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### 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

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610850

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2610850001	PZ 2D	Water	10/24/18 16:35	10/26/18 09:15
2610850002	Dup	Water	10/24/18 12:00	10/26/18 09:15
2610850003	FB 01	Water	10/24/18 14:00	10/26/18 09:15
2610850004	EB 01	Water	10/24/18 14:10	10/26/18 09:15

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610850

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2610850001	PZ 2D	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610850002	Dup	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610850003	FB 01	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2610850004	EB 01	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2610850

Sample: PZ 2D		Lab ID: 2610850001		Collected: 10/24/18 16:35		Received: 10/26/18 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	<b>0.00087J</b>	mg/L	0.0030	0.00078	1	10/30/18 12:07	10/31/18 15:08	7440-36-0	
Arsenic	<b>0.00068J</b>	mg/L	0.0050	0.00057	1	10/30/18 12:07	10/31/18 15:08	7440-38-2	
Barium	<b>0.0059J</b>	mg/L	0.010	0.00078	1	10/30/18 12:07	10/31/18 15:08	7440-39-3	
Beryllium	<b>0.000060J</b>	mg/L	0.0030	0.000050	1	10/30/18 12:07	10/31/18 15:08	7440-41-7	
Boron	<b>0.018J</b>	mg/L	0.040	0.0039	1	10/30/18 12:07	10/31/18 15:08	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/30/18 12:07	10/31/18 15:08	7440-43-9	
Calcium	<b>23.8</b>	mg/L	2.5	0.069	5	10/30/18 12:07	11/01/18 14:50	7440-70-2	
Chromium	<b>0.0058J</b>	mg/L	0.010	0.0016	1	10/30/18 12:07	10/31/18 15:08	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	10/30/18 12:07	10/31/18 15:08	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	10/30/18 12:07	10/31/18 15:08	7439-92-1	
Lithium	<b>0.0021J</b>	mg/L	0.050	0.00097	1	10/30/18 12:07	10/31/18 15:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/30/18 12:07	10/31/18 15:08	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	10/30/18 12:07	10/31/18 15:08	7782-49-2	
Thallium	<b>0.00016J</b>	mg/L	0.0010	0.00014	1	10/30/18 12:07	10/31/18 15:08	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	<b>0.000052J</b>	mg/L	0.00050	0.000036	1	10/29/18 11:30	10/30/18 10:14	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>110</b>	mg/L	25.0	10.0	1		10/29/18 16:06		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>2.8</b>	mg/L	0.25	0.024	1		11/01/18 20:28	16887-00-6	
Fluoride	<b>0.29J</b>	mg/L	0.30	0.029	1		11/01/18 20:28	16984-48-8	
Sulfate	<b>6.2</b>	mg/L	1.0	0.017	1		11/01/18 20:28	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610850

Sample: Dup		Lab ID: 2610850002		Collected: 10/24/18 12:00		Received: 10/26/18 09:15		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	<b>0.0012J</b>	mg/L	0.0030	0.00078	1	10/30/18 12:07	10/31/18 16:34	7440-36-0		
Arsenic	<b>0.00068J</b>	mg/L	0.0050	0.00057	1	10/30/18 12:07	10/31/18 16:34	7440-38-2		
Barium	<b>0.0059J</b>	mg/L	0.010	0.00078	1	10/30/18 12:07	10/31/18 16:34	7440-39-3		
Beryllium	<b>0.000075J</b>	mg/L	0.0030	0.000050	1	10/30/18 12:07	10/31/18 16:34	7440-41-7		
Boron	<b>0.016J</b>	mg/L	0.040	0.0039	1	10/30/18 12:07	10/31/18 16:34	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	10/30/18 12:07	10/31/18 16:34	7440-43-9		
Calcium	<b>24.7</b>	mg/L	2.5	0.069	5	10/30/18 12:07	11/01/18 14:56	7440-70-2		
Chromium	<b>0.0062J</b>	mg/L	0.010	0.0016	1	10/30/18 12:07	10/31/18 16:34	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	10/30/18 12:07	10/31/18 16:34	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	10/30/18 12:07	10/31/18 16:34	7439-92-1		
Lithium	<b>0.0021J</b>	mg/L	0.050	0.00097	1	10/30/18 12:07	10/31/18 16:34	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	10/30/18 12:07	10/31/18 16:34	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	10/30/18 12:07	10/31/18 16:34	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	10/30/18 12:07	10/31/18 16:34	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<b>0.000058J</b>	mg/L	0.00050	0.000036	1	10/29/18 11:30	10/30/18 10:17	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>102</b>	mg/L	25.0	10.0	1		10/29/18 16:07			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>2.7</b>	mg/L	0.25	0.024	1		11/01/18 20:50	16887-00-6		
Fluoride	<b>0.091J</b>	mg/L	0.30	0.029	1		11/01/18 20:50	16984-48-8		
Sulfate	<b>5.8</b>	mg/L	1.0	0.017	1		11/01/18 20:50	14808-79-8		

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610850

Sample: <b>FB 01</b>		Lab ID: <b>2610850003</b>		Collected: 10/24/18 14:00	Received: 10/26/18 09:15	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	10/30/18 12:07	10/31/18 16:52	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	10/30/18 12:07	10/31/18 16:52	7440-38-2		
Barium	ND	mg/L	0.010	0.00078	1	10/30/18 12:07	10/31/18 16:52	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	10/30/18 12:07	10/31/18 16:52	7440-41-7		
Boron	ND	mg/L	0.040	0.0039	1	10/30/18 12:07	10/31/18 16:52	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	10/30/18 12:07	10/31/18 16:52	7440-43-9		
Calcium	ND	mg/L	0.50	0.014	1	10/30/18 12:07	10/31/18 16:52	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	10/30/18 12:07	10/31/18 16:52	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	10/30/18 12:07	10/31/18 16:52	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	10/30/18 12:07	10/31/18 16:52	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	10/30/18 12:07	10/31/18 16:52	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	10/30/18 12:07	10/31/18 16:52	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	10/30/18 12:07	10/31/18 16:52	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	10/30/18 12:07	10/31/18 16:52	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<b>0.000053J</b>	mg/L	0.00050	0.000036	1	10/29/18 11:30	10/30/18 10:19	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>15.0J</b>	mg/L	25.0	10.0	1		10/29/18 16:07			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>0.070J</b>	mg/L	0.25	0.024	1		10/30/18 16:47	16887-00-6	B	
Fluoride	ND	mg/L	0.30	0.029	1		10/30/18 16:47	16984-48-8		
Sulfate	ND	mg/L	1.0	0.017	1		10/30/18 16:47	14808-79-8		

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610850

**Sample: EB 01**      **Lab ID: 2610850004**      Collected: 10/24/18 14:10      Received: 10/26/18 09:15      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020B MET ICPMS</b> Analytical Method: EPA 6020B      Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.0030	0.00078	1	10/30/18 12:07	10/31/18 16:57	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	10/30/18 12:07	10/31/18 16:57	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	10/30/18 12:07	10/31/18 16:57	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	10/30/18 12:07	10/31/18 16:57	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	10/30/18 12:07	10/31/18 16:57	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	10/30/18 12:07	10/31/18 16:57	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	10/30/18 12:07	10/31/18 16:57	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	10/30/18 12:07	10/31/18 16:57	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	10/30/18 12:07	10/31/18 16:57	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	10/30/18 12:07	10/31/18 16:57	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	10/30/18 12:07	10/31/18 16:57	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	10/30/18 12:07	10/31/18 16:57	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	10/30/18 12:07	10/31/18 16:57	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/30/18 12:07	10/31/18 16:57	7440-28-0	
<b>7470 Mercury</b> Analytical Method: EPA 7470A      Preparation Method: EPA 7470A									
Mercury	<b>0.000052J</b>	mg/L	0.00050	0.000036	1	10/29/18 11:30	10/30/18 10:26	7439-97-6	
<b>2540C Total Dissolved Solids</b> Analytical Method: SM 2540C									
Total Dissolved Solids	<b>14.0J</b>	mg/L	25.0	10.0	1		10/29/18 16:07		
<b>300.0 IC Anions 28 Days</b> Analytical Method: EPA 300.0									
Chloride	<b>0.12J</b>	mg/L	0.25	0.024	1		10/30/18 17:10	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		10/30/18 17:10	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		10/30/18 17:10	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2610850

QC Batch: 16129 Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury  
Associated Lab Samples: 2610850001, 2610850002, 2610850003, 2610850004

METHOD BLANK: 72261 Matrix: Water  
Associated Lab Samples: 2610850001, 2610850002, 2610850003, 2610850004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	10/30/18 09:58	

LABORATORY CONTROL SAMPLE: 72262

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0027	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 72263 72264

Parameter	Units	2610849001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	0.000068J	.0025	.0025	0.0026	0.0026	101	103	75-125	2	20	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2610850

QC Batch: 16225 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 2610850001, 2610850002, 2610850003, 2610850004

METHOD BLANK: 72585 Matrix: Water  
Associated Lab Samples: 2610850001, 2610850002, 2610850003, 2610850004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	10/31/18 14:56	
Arsenic	mg/L	ND	0.0050	0.00057	10/31/18 14:56	
Barium	mg/L	ND	0.010	0.00078	10/31/18 14:56	
Beryllium	mg/L	ND	0.0030	0.000050	10/31/18 14:56	
Boron	mg/L	ND	0.040	0.0039	10/31/18 14:56	
Cadmium	mg/L	ND	0.0010	0.000093	10/31/18 14:56	
Calcium	mg/L	ND	0.50	0.014	10/31/18 14:56	
Chromium	mg/L	ND	0.010	0.0016	10/31/18 14:56	
Cobalt	mg/L	ND	0.010	0.00052	10/31/18 14:56	
Lead	mg/L	ND	0.0050	0.00027	10/31/18 14:56	
Lithium	mg/L	ND	0.050	0.00097	10/31/18 14:56	
Molybdenum	mg/L	ND	0.010	0.0019	10/31/18 14:56	
Selenium	mg/L	ND	0.010	0.0014	10/31/18 14:56	
Thallium	mg/L	ND	0.0010	0.00014	10/31/18 14:56	

LABORATORY CONTROL SAMPLE: 72586

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.11	109	80-120	
Arsenic	mg/L	.1	0.097	97	80-120	
Barium	mg/L	.1	0.10	100	80-120	
Beryllium	mg/L	.1	0.11	107	80-120	
Boron	mg/L	1	1.1	110	80-120	
Cadmium	mg/L	.1	0.097	97	80-120	
Calcium	mg/L	1	1.0	100	80-120	
Chromium	mg/L	.1	0.10	104	80-120	
Cobalt	mg/L	.1	0.10	101	80-120	
Lead	mg/L	.1	0.098	98	80-120	
Lithium	mg/L	.1	0.11	107	80-120	
Molybdenum	mg/L	.1	0.099	99	80-120	
Selenium	mg/L	.1	0.095	95	80-120	
Thallium	mg/L	.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 72587 72588

Parameter	Units	2610850001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result	MSD Result					
Antimony	mg/L	0.00087J	.1	0.11	0.11	0.11	106	106	75-125	0	20

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610850

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 72587		72588		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		2610850001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	mg/L	0.00068J	.1	.1	0.097	0.097	96	97	75-125	0	20		
Barium	mg/L	0.0059J	.1	.1	0.10	0.10	96	98	75-125	2	20		
Beryllium	mg/L	0.000060J	.1	.1	0.10	0.11	103	106	75-125	4	20		
Boron	mg/L	0.018J	1	1	1.1	1.1	104	105	75-125	1	20		
Cadmium	mg/L	ND	.1	.1	0.096	0.098	96	98	75-125	3	20		
Calcium	mg/L	23.8	1	1	25.9	25.2	204	137	75-125	3	20	M6	
Chromium	mg/L	0.0058J	.1	.1	0.11	0.11	103	104	75-125	1	20		
Cobalt	mg/L	ND	.1	.1	0.10	0.10	100	100	75-125	0	20		
Lead	mg/L	ND	.1	.1	0.097	0.097	97	97	75-125	0	20		
Lithium	mg/L	0.0021J	.1	.1	0.10	0.11	100	106	75-125	6	20		
Molybdenum	mg/L	ND	.1	.1	0.10	0.10	100	101	75-125	1	20		
Selenium	mg/L	ND	.1	.1	0.10	0.095	101	95	75-125	5	20		
Thallium	mg/L	0.00016J	.1	.1	0.097	0.097	97	96	75-125	0	20		

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2610850

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QC Batch: 16153 Analysis Method: SM 2540C  
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids  
Associated Lab Samples: 2610850001, 2610850002, 2610850003, 2610850004

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LABORATORY CONTROL SAMPLE: 72353

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	414	104	84-108	

SAMPLE DUPLICATE: 72354

Parameter	Units	2610850001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	110	114	4	10	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610850

QC Batch: 16208 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 2610850001, 2610850002, 2610850003, 2610850004

METHOD BLANK: 72482 Matrix: Water  
 Associated Lab Samples: 2610850001, 2610850002, 2610850003, 2610850004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.064J	0.25	0.024	10/30/18 13:42	
Fluoride	mg/L	ND	0.30	0.029	10/30/18 13:42	
Sulfate	mg/L	ND	1.0	0.017	10/30/18 13:42	

LABORATORY CONTROL SAMPLE: 72483

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.4	104	90-110	
Fluoride	mg/L	10	10.6	106	90-110	
Sulfate	mg/L	10	10.9	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 73493 73494

Parameter	Units	2610849002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	7.9	20	20	27.3	27.3	97	97	90-110	0	15	
Fluoride	mg/L	4.8	20	20	23.0	23.8	91	95	90-110	3	15	
Sulfate	mg/L	1130	20	20	1070	1070	-303	-305	90-110	0	15	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

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610850

---

### 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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610850

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2610850001	PZ 2D	EPA 3005A	16225	EPA 6020B	16274
2610850002	Dup	EPA 3005A	16225	EPA 6020B	16274
2610850003	FB 01	EPA 3005A	16225	EPA 6020B	16274
2610850004	EB 01	EPA 3005A	16225	EPA 6020B	16274
2610850001	PZ 2D	EPA 7470A	16129	EPA 7470A	16170
2610850002	Dup	EPA 7470A	16129	EPA 7470A	16170
2610850003	FB 01	EPA 7470A	16129	EPA 7470A	16170
2610850004	EB 01	EPA 7470A	16129	EPA 7470A	16170
2610850001	PZ 2D	SM 2540C	16153		
2610850002	Dup	SM 2540C	16153		
2610850003	FB 01	SM 2540C	16153		
2610850004	EB 01	SM 2540C	16153		
2610850001	PZ 2D	EPA 300.0	16208		
2610850002	Dup	EPA 300.0	16208		
2610850003	FB 01	EPA 300.0	16208		
2610850004	EB 01	EPA 300.0	16208		

### REPORT OF LABORATORY ANALYSIS

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A**  
 Required Client Information:  
 Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Maner Road  
 Atlanta, GA 30339  
 Email: jbraham@southernco.com  
 Phone: (404)506-7239  
 Requested Due Date:

**Section B**  
 Required Project Information:  
 Report To: Joji Abraham  
 Copy To: Wood PLC  
 Purchase Order #: SCS10348606  
 Project Name: Plant Mitchell CCR  
 Project #:

**Section C**  
 Invoice Information:  
 Attention: scsinvoices@southernco.com  
 Company Name:  
 Address:  
 Pace Project Manager: betsy.mcdaniel@paceelabs.com  
 Pace Profile #: 333  
 Regulatory Agency:  
 State / Location: GA

ITEM #	MATRIX CODE (see valid codes to left)	MATRIX TYPE (e-GRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES				ANALYSES TEST Y/N	REQUESTED ANALYSES FILTERED (Y/N)	
			START DATE	END DATE			H2SO4	HNO3	HCl	Na2SO3			Methanol
1	PZ-2D	WTG	10/14/18	16:35									
2	DUP	WTG	12:00										
3	FB01	WTG	14:00										
4	EB01	WTG	14:10										
5													
6													
7													
8													
9													
10													
11													
12													

NO#: 2610850



2610850

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP °C	Received on (Y/N)	Sealed (Y/N)	Cooled (Y/N)	Samples Intact (Y/N)
	Paul J. Wood	10/25/18	17:15	Betsy Daniel - Pace	10/25/18	17:15					
	Paul J. Wood	10/26/18	9:15	Ms. L. Luman	10/26/18	09:15	2.5	F	F	F	F



Sample Condition Upon Receipt

Client Name: GAPower

Project # \_\_\_\_\_

WO#: **2610850**

PM: **BM** Due Date: **11/02/18**  
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 23 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 2.5 Biological Tissue is Frozen: Yes No  Date and Initials of person examining contents: 10/26/18 MR  
Temp should be above freezing to 6°C

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

**Client Notification/ Resolution:** \_\_\_\_\_

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Field Data Required? Y / N

**Project Manager Review:** \_\_\_\_\_ **Date:** \_\_\_\_\_

November 27, 2018

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2610851

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 26, 2018. 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: Maria Padilla, Georgia Power  
Rhonda Quinn, Norfolk Southern\_Wood E&I Solutions, Inc.  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610851

---

### 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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610851

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2610851001	PZ 2D	Water	10/24/18 16:35	10/26/18 09:15
2610851002	Dup	Water	10/24/18 12:00	10/26/18 09:15
2610851003	FB 01	Water	10/24/18 14:00	10/26/18 09:15
2610851004	EB 01	Water	10/24/18 14:10	10/26/18 09:15

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610851

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2610851001	PZ 2D	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610851002	Dup	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610851003	FB 01	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2610851004	EB 01	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610851

**Sample: PZ 2D**      **Lab ID: 2610851001**      Collected: 10/24/18 16:35      Received: 10/26/18 09:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	<b>0.000 ± 0.400 (0.819)</b> C:NA T:83%	pCi/L	11/16/18 20:09	13982-63-3	
Radium-228	EPA 904.0	<b>0.441 ± 0.355 (0.704)</b> C:71% T:86%	pCi/L	11/20/18 15:01	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.441 ± 0.755 (1.52)</b>	pCi/L	11/21/18 14:29	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610851

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	<b>0.0500 ± 0.294 (0.600)</b> C:NA T:96%	pCi/L	11/16/18 20:09	13982-63-3	
Radium-228	EPA 904.0	<b>0.156 ± 0.460 (1.03)</b> C:71% T:81%	pCi/L	11/20/18 15:00	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.206 ± 0.754 (1.63)</b>	pCi/L	11/21/18 14:29	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610851

**Sample: FB 01**      **Lab ID: 2610851003**      Collected: 10/24/18 14:00      Received: 10/26/18 09:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	<b>0.308 ± 0.378 (0.616)</b> C:NA T:93%	pCi/L	11/16/18 20:09	13982-63-3	
Radium-228	EPA 904.0	<b>0.256 ± 0.368 (0.792)</b> C:75% T:82%	pCi/L	11/20/18 15:00	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.564 ± 0.746 (1.41)</b>	pCi/L	11/21/18 14:29	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610851

**Sample: EB 01**      **Lab ID: 2610851004**      Collected: 10/24/18 14:10      Received: 10/26/18 09:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	<b>0.155 ± 0.393 (0.730)</b> C:NA T:87%	pCi/L	11/16/18 20:09	13982-63-3	
Radium-228	EPA 904.0	<b>0.443 ± 0.379 (0.763)</b> C:72% T:84%	pCi/L	11/20/18 15:00	15262-20-1	
Total Radium	Total Radium Calculation	<b>0.598 ± 0.772 (1.49)</b>	pCi/L	11/21/18 14:29	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610851

---

QC Batch:	319278	Analysis Method:	EPA 904.0
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radium 228
Associated Lab Samples:	2610851001, 2610851002, 2610851003, 2610851004		

---

METHOD BLANK:	1557163	Matrix:	Water
Associated Lab Samples:	2610851001, 2610851002, 2610851003, 2610851004		

---

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.290 ± 0.335 (0.703) C:79% T:78%	pCi/L	11/20/18 15:00	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610851

---

QC Batch:	319177	Analysis Method:	EPA 903.1
QC Batch Method:	EPA 903.1	Analysis Description:	903.1 Radium-226
Associated Lab Samples:	2610851001, 2610851002, 2610851003, 2610851004		

---

METHOD BLANK:	1556889	Matrix:	Water
Associated Lab Samples:	2610851001, 2610851002, 2610851003, 2610851004		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.231 ± 0.328 (0.555) C:NA T:96%	pCi/L	11/16/18 19:49	

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.

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610851

---

### 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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2610851

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2610851001	PZ 2D	EPA 903.1	319177		
2610851002	Dup	EPA 903.1	319177		
2610851003	FB 01	EPA 903.1	319177		
2610851004	EB 01	EPA 903.1	319177		
2610851001	PZ 2D	EPA 904.0	319278		
2610851002	Dup	EPA 904.0	319278		
2610851003	FB 01	EPA 904.0	319278		
2610851004	EB 01	EPA 904.0	319278		
2610851001	PZ 2D	Total Radium Calculation	321532		
2610851002	Dup	Total Radium Calculation	321532		
2610851003	FB 01	Total Radium Calculation	321532		
2610851004	EB 01	Total Radium Calculation	321532		

### REPORT OF LABORATORY ANALYSIS

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Page : 1 Of 1</b>	
<b>Section A</b>	<b>Section C</b>
<b>Required Client Information:</b>	
Company: Georgia Power - Coal Combustion Residuals	Invoice Information:
Address: 2480 Maner Road	Attention: SCSinvoicas@southernco.com
Atlanta, GA 30339	Company Name:
Email: jabraham@southernco.com	Pace Quots:
Phone: (404)506-7239	Pace Project Manager: betsy.mcdaniel@pacebios.com
Requested Due Date:	Pace Profile #: 333
	Regulatory Agency:
	State / Location:
	GA

#	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES	ANALYSES TEST	Requested Analysis Filtered (Y/N)																																														
			START DATE	END DATE					Chloride, Fluoride, Sulfate	TDS by 2540C	App. III & App IV Metals	Radum 226/228	Unpreserved	H2SO4	HNO3	HCl	NaOH	MnSO4	Methanol	Other																																			
1	PZ-2D	WTG	10/14/18	16:35				X	X	X	X																																												
2	DVP	WTG	1200					X	X	X	X																																												
3	FB 01	WTG	1400					X	X	X	X																																												
4	EB 01	WTG	1410					X	X	X	X																																												
5																																																							
6																																																							
7																																																							
8																																																							
9																																																							
10																																																							
11																																																							
12																																																							

W04: 2610851

2610851

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS	TEMP in C	Received on	Is (Y/N)	Custody Sealed (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)
	<i>Paul Gazzo</i>	10/25/18	17:15	<i>Paul Gazzo - Pace</i>	10/25/18	17:15							
	<i>Paul Gazzo</i>	10/25/18	9:15	<i>Madalman</i>	10/26/18	09:15							
								2.5					

**Sample Condition Upon Receipt**



Client Name: GIA Power

Project # \_\_\_\_\_

**WO#: 2610851**

PM: **BM**

Due Date: **11/27/18**

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

Cooler Temperature 2.5 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 10/26/18 MR

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

**Client Notification/ Resolution:** \_\_\_\_\_

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

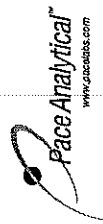
Comments/ Resolution: \_\_\_\_\_

Field Data Required? Y / N

**Project Manager Review:** \_\_\_\_\_ **Date:** \_\_\_\_\_



# Quality Control Sample Performance Assessment



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

Test: Ra-226  
Analyst: MK1  
Date: 11/16/2018  
Worklist: 44621  
Matrix: DW

Method Blank Assessment	
MB Sample ID	1556889
MB concentration:	0.231
M/B Counting Uncertainty:	0.327
MB MDC:	0.555
MB Numerical Performance Indicator:	8.32
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	11/16/2018
Spike I.D.:	LCSD44621
Spike Concentration (pCi/mL):	80.332
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.515
Target Conc. (pCi/L, g, F):	15.806
Uncertainty (Calculated):	0.733
Result (pCi/L, g, F):	15.664
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.756
Numerical Performance Indicator:	0.06
Percent Recovery:	100.37%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30270379002
Duplicate Sample I.D.:	30270379002DUP
Duplicate Result (pCi/L, g, F):	0.100
Sample Result Counting Uncertainty (pCi/L, g, F):	0.278
Sample Duplicate Result (pCi/L, g, F):	0.404
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.343
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	126.66%
Duplicate RPD:	34.7
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

*results < 5 x mdc, NI < 2 acceptable*  
*Multiplx*

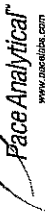
\*\*\*Batch must be re-supplied due to unacceptable precision.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	10/24/2018
Sample I.D.:	30270379003
Sample MS I.D.:	30270379003MS
Sample MSD I.D.:	18-029
Spike I.D.:	80.334
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	0.20
Spike Volume Used in MS (mL):	0.513
Spike Volume Used in MSD (mL):	31.298
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	1.471
Sample Result:	0.412
Sample Result Counting Uncertainty (pCi/L, g, F):	0.378
Sample Matrix Spike Result:	37.989
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	3.017
Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result:	
MS Numerical Performance Indicator:	3.643
MS Percent Recovery:	120.06%
MSD Percent Recovery:	N/A
MS Status vs Numerical Indicator:	N/A
MSD Status vs Numerical Indicator:	Pass
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

*11-16-18*

## Quality Control Sample Performance Assessment



Test: Ra-228  
Analyst: VAL  
Date: 11/8/2018  
Worklist: 44652  
Matrix: DW

<b>Method Blank Assessment</b>	
MB Sample ID	1557163
MB Concentration:	0.290
M/B Counting Uncertainty:	0.331
MB MDC:	0.703
MB Numerical Performance Indicator:	1.72
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

<b>Laboratory Control Sample Assessment</b>	
<b>LCS (Y or N)?</b>	N
<b>LCS#</b>	LCSD44652
<b>Count Date:</b>	11/20/2018
<b>Spike I.D.:</b>	18-026
<b>Spike Concentration (pCi/mL):</b>	39.018
<b>Volume Used (mL):</b>	0.20
<b>Aliquot Volume (L, g, F):</b>	0.804
<b>Target Conc. (pCi/L, g, F):</b>	9.703
<b>Uncertainty (Calculated):</b>	0.475
<b>Result (pCi/L, g, F):</b>	9.684
<b>LCS/LCSD Counting Uncertainty (pCi/L, g, F):</b>	0.884
<b>Numerical Performance Indicator:</b>	-0.04
<b>Percent Recovery:</b>	99.81%
<b>Status vs Numerical Indicator:</b>	N/A
<b>Status vs Recovery:</b>	Pass

<b>Duplicate Sample Assessment</b>	
<b>Sample I.D.:</b>	30270492001
<b>Duplicate Sample I.D.:</b>	30270492001DUP
<b>Sample Result (pCi/L, g, F):</b>	0.871
<b>Sample Result Counting Uncertainty (pCi/L, g, F):</b>	0.384
<b>Sample Duplicate Result (pCi/L, g, F):</b>	0.868
<b>Sample Duplicate Counting Uncertainty (pCi/L, g, F):</b>	0.412
<b>Are sample and/or duplicate results below MDC?</b>	See Below ##
<b>Duplicate Numerical Performance Indicator:</b>	0.012
<b>Duplicate RPD:</b>	0.39%
<b>Duplicate Status vs Numerical Indicator:</b>	N/A
<b>Duplicate Status vs RPD:</b>	Pass

<b>Sample Matrix Spike Control Assessment</b>	
<b>Sample Collection Date:</b>	10/24/2018
<b>Sample I.D.:</b>	30270494001
<b>Sample MSD I.D.:</b>	30270494001MS
<b>Spike I.D.:</b>	18-026
<b>MS/MSD Decay Corrected Spike Concentration (pCi/mL):</b>	39.370
<b>Spike Volume Used in MS (mL):</b>	0.30
<b>Spike Volume Used in MSD (mL):</b>	0.812
<b>MS Aliquot (L, g, F):</b>	14.544
<b>MSD Aliquot (L, g, F):</b>	
<b>MSD Target Conc. (pCi/L, g, F):</b>	
<b>Spike uncertainty (calculated):</b>	0.713
<b>Sample Result:</b>	0.477
<b>Sample Result Counting Uncertainty (pCi/L, g, F):</b>	0.412
<b>Sample Matrix Spike Result:</b>	16.316
<b>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</b>	1.109
<b>Sample Matrix Spike Duplicate Result:</b>	
<b>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</b>	
<b>MS Numerical Performance Indicator:</b>	1.838
<b>MSD Numerical Performance Indicator:</b>	108.91%
<b>MS Percent Recovery:</b>	N/A
<b>MSD Percent Recovery:</b>	N/A
<b>MS Status vs Numerical Indicator:</b>	Pass
<b>MSD Status vs Numerical Indicator:</b>	
<b>MS Status vs Recovery:</b>	
<b>MSD Status vs Recovery:</b>	

<b>Matrix Spike/Matrix Spike Duplicate Sample Assessment</b>	
<b>Sample I.D.:</b>	
<b>Sample MS I.D.:</b>	
<b>Sample MSD I.D.:</b>	
<b>Sample Matrix Spike Result:</b>	
<b>Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):</b>	
<b>Sample Matrix Spike Duplicate Result:</b>	
<b>Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):</b>	
<b>Duplicate Numerical Performance Indicator:</b>	
<b>(Based on the Percent Recoveries) MS/MSD Duplicate RPD:</b>	
<b>MS/MSD Duplicate Status vs Numerical Indicator:</b>	
<b>MS/MSD Duplicate Status vs RPD:</b>	

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

Comments:

*0110111711111111111111*

*JJF-als*

April 07, 2019

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2616689

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on March 28, 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: Rhonda Quinn, Wood E&I Solutions, Inc. - Kennesaw  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

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### 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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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2616689

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2616689001	PZ-1D	Water	03/26/19 14:40	03/28/19 09:10
2616689002	PZ-31	Water	03/26/19 16:15	03/28/19 09:10
2616689003	PZ-2S	Water	03/26/19 16:05	03/28/19 09:10
2616689004	FB-01	Water	03/27/19 09:10	03/28/19 09:10
2616689005	PZ-2D	Water	03/27/19 11:36	03/28/19 09:10
2616689006	PZ-32	Water	03/27/19 13:09	03/28/19 09:10
2616689007	PZ-25	Water	03/27/19 14:49	03/28/19 09:10
2616689008	PZ-14	Water	03/27/19 11:00	03/28/19 09:10
2616689009	PZ-23	Water	03/27/19 12:50	03/28/19 09:10
2616689010	PZ-16	Water	03/27/19 15:05	03/28/19 09:10
2616689011	EB-01	Water	03/27/19 15:30	03/28/19 09:10
2616689012	PZ-18	Water	03/27/19 16:25	03/28/19 09:10

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2616689001	PZ-1D	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616689002	PZ-31	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616689003	PZ-2S	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616689004	FB-01	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616689005	PZ-2D	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616689006	PZ-32	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616689007	PZ-25	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616689008	PZ-14	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616689009	PZ-23	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616689010	PZ-16	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616689011	EB-01	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616689012	PZ-18	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

Sample: PZ-1D		Lab ID: 2616689001		Collected: 03/26/19 14:40		Received: 03/28/19 09:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Boron	<b>0.0082J</b>	mg/L	0.040	0.0039	1	04/01/19 15:22	04/03/19 04:19	7440-42-8	
Calcium	<b>43.3</b>	mg/L	25.0	0.69	50	04/01/19 15:22	04/03/19 04:25	7440-70-2	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>334</b>	mg/L	25.0	10.0	1		04/02/19 19:22		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>3.3</b>	mg/L	0.25	0.024	1		04/04/19 17:22	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		04/04/19 17:22	16984-48-8	
Sulfate	<b>2.7</b>	mg/L	1.0	0.017	1		04/04/19 17:22	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

Sample: PZ-31		Lab ID: 2616689002		Collected: 03/26/19 16:15		Received: 03/28/19 09:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Boron	<b>0.0076J</b>	mg/L	0.040	0.0039	1	04/01/19 15:22	04/03/19 04:30	7440-42-8	
Calcium	<b>87.3</b>	mg/L	25.0	0.69	50	04/01/19 15:22	04/03/19 04:36	7440-70-2	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>253</b>	mg/L	25.0	10.0	1		04/02/19 19:22		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>3.8</b>	mg/L	0.25	0.024	1		04/04/19 18:33	16887-00-6	
Fluoride	<b>ND</b>	mg/L	0.30	0.029	1		04/04/19 18:33	16984-48-8	
Sulfate	<b>1.6</b>	mg/L	1.0	0.017	1		04/04/19 18:33	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

Sample: PZ-2S		Lab ID: 2616689003		Collected: 03/26/19 16:05	Received: 03/28/19 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	<b>0.0092J</b>	mg/L	0.040	0.0039	1	04/01/19 15:22	04/03/19 04:42	7440-42-8		
Calcium	<b>44.6</b>	mg/L	25.0	0.69	50	04/01/19 15:22	04/03/19 04:48	7440-70-2		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>144</b>	mg/L	25.0	10.0	1		04/02/19 19:22			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>2.9</b>	mg/L	0.25	0.024	1		04/04/19 18:57	16887-00-6		
Fluoride	<b>ND</b>	mg/L	0.30	0.029	1		04/04/19 18:57	16984-48-8		
Sulfate	<b>1.4</b>	mg/L	1.0	0.017	1		04/04/19 18:57	14808-79-8		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

Sample: <b>FB-01</b>		Lab ID: <b>2616689004</b>		Collected: 03/27/19 09:10	Received: 03/28/19 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	ND	mg/L	0.040	0.0039	1	04/01/19 15:22	04/03/19 04:59	7440-42-8		
Calcium	ND	mg/L	0.50	0.014	1	04/01/19 15:22	04/03/19 04:59	7440-70-2		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>10.0J</b>	mg/L	25.0	10.0	1		04/03/19 18:50			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	ND	mg/L	0.25	0.024	1		04/04/19 19:20	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		04/04/19 19:20	16984-48-8		
Sulfate	ND	mg/L	1.0	0.017	1		04/04/19 19:20	14808-79-8		

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

Sample: PZ-2D		Lab ID: 2616689005		Collected: 03/27/19 11:36		Received: 03/28/19 09:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Boron	<b>0.016J</b>	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 18:20	7440-42-8	
Calcium	<b>26.1</b>	mg/L	25.0	0.69	50	04/01/19 18:00	04/03/19 18:26	7440-70-2	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>87.0</b>	mg/L	25.0	10.0	1		04/03/19 18:50		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>2.5</b>	mg/L	0.25	0.024	1		04/04/19 19:44	16887-00-6	
Fluoride	<b>0.040J</b>	mg/L	0.30	0.029	1		04/04/19 19:44	16984-48-8	
Sulfate	<b>3.7</b>	mg/L	1.0	0.017	1		04/04/19 19:44	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

Sample: PZ-32		Lab ID: 2616689006		Collected: 03/27/19 13:09		Received: 03/28/19 09:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Boron	<b>0.012J</b>	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 18:31	7440-42-8	
Calcium	<b>54.6</b>	mg/L	25.0	0.69	50	04/01/19 18:00	04/03/19 18:37	7440-70-2	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>167</b>	mg/L	25.0	10.0	1		04/03/19 18:50		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>3.1</b>	mg/L	0.25	0.024	1		04/04/19 20:08	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		04/04/19 20:08	16984-48-8	
Sulfate	<b>2.4</b>	mg/L	1.0	0.017	1		04/04/19 20:08	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

Sample: PZ-25		Lab ID: 2616689007		Collected: 03/27/19 14:49		Received: 03/28/19 09:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Boron	<b>0.22</b>	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 18:43	7440-42-8	
Calcium	<b>95.2</b>	mg/L	25.0	0.69	50	04/01/19 18:00	04/03/19 18:49	7440-70-2	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>287</b>	mg/L	25.0	10.0	1		04/03/19 18:50		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>2.4</b>	mg/L	0.25	0.024	1		04/04/19 20:32	16887-00-6	
Fluoride	<b>0.37</b>	mg/L	0.30	0.029	1		04/04/19 20:32	16984-48-8	
Sulfate	<b>43.7</b>	mg/L	1.0	0.017	1		04/04/19 20:32	14808-79-8	

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### ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

Sample: PZ-14		Lab ID: 2616689008		Collected: 03/27/19 11:00		Received: 03/28/19 09:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Boron	<b>0.023J</b>	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 18:54	7440-42-8	
Calcium	<b>105</b>	mg/L	25.0	0.69	50	04/01/19 18:00	04/03/19 19:00	7440-70-2	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>281</b>	mg/L	25.0	10.0	1		04/03/19 18:50		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>5.2</b>	mg/L	0.25	0.024	1		04/04/19 20:55	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		04/04/19 20:55	16984-48-8	
Sulfate	<b>8.2</b>	mg/L	1.0	0.017	1		04/04/19 20:55	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

Sample: PZ-23		Lab ID: 2616689009		Collected: 03/27/19 12:50		Received: 03/28/19 09:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Boron	<b>0.18</b>	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 19:17	7440-42-8	
Calcium	<b>152</b>	mg/L	25.0	0.69	50	04/01/19 18:00	04/03/19 19:23	7440-70-2	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>410</b>	mg/L	25.0	10.0	1		04/03/19 18:50		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>4.7</b>	mg/L	0.25	0.024	1		04/04/19 22:54	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		04/04/19 22:54	16984-48-8	
Sulfate	<b>41.9</b>	mg/L	1.0	0.017	1		04/04/19 22:54	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

Sample: PZ-16		Lab ID: 2616689010		Collected: 03/27/19 15:05		Received: 03/28/19 09:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Boron	<b>0.21</b>	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 19:29	7440-42-8	
Calcium	<b>90.5</b>	mg/L	25.0	0.69	50	04/01/19 18:00	04/03/19 19:34	7440-70-2	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>277</b>	mg/L	25.0	10.0	1		04/03/19 18:50		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>7.3</b>	mg/L	0.25	0.024	1		04/04/19 23:18	16887-00-6	
Fluoride	<b>ND</b>	mg/L	0.30	0.029	1		04/04/19 23:18	16984-48-8	
Sulfate	<b>46.5</b>	mg/L	1.0	0.017	1		04/04/19 23:18	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

Sample: <b>EB-01</b>		Lab ID: <b>2616689011</b>		Collected: 03/27/19 15:30	Received: 03/28/19 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	ND	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 19:40	7440-42-8		
Calcium	<b>0.028J</b>	mg/L	0.50	0.014	1	04/01/19 18:00	04/03/19 19:40	7440-70-2		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		04/03/19 18:50			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	ND	mg/L	0.25	0.024	1		04/05/19 00:05	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		04/05/19 00:05	16984-48-8		
Sulfate	ND	mg/L	1.0	0.017	1		04/05/19 00:05	14808-79-8		

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

Sample: PZ-18		Lab ID: 2616689012		Collected: 03/27/19 16:25		Received: 03/28/19 09:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Boron	<b>0.41</b>	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 19:46	7440-42-8	
Calcium	<b>134</b>	mg/L	25.0	0.69	50	04/01/19 18:00	04/03/19 19:52	7440-70-2	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>408</b>	mg/L	25.0	10.0	1		04/03/19 18:51		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>6.5</b>	mg/L	0.25	0.024	1		04/05/19 00:29	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		04/05/19 00:29	16984-48-8	
Sulfate	<b>111</b>	mg/L	10.0	0.17	10		04/06/19 20:21	14808-79-8	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

QC Batch: 25536 Analysis Method: EPA 6020B

QC Batch Method: EPA 3005A Analysis Description: 6020B MET

Associated Lab Samples: 2616689001, 2616689002, 2616689003, 2616689004

METHOD BLANK: 115226 Matrix: Water

Associated Lab Samples: 2616689001, 2616689002, 2616689003, 2616689004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	0.0039	04/03/19 00:01	
Calcium	mg/L	ND	0.50	0.014	04/03/19 00:01	

LABORATORY CONTROL SAMPLE: 115227

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.94	94	80-120	
Calcium	mg/L	1	0.95	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 115228 115229

Parameter	Units	2616666009		115228		115229		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Boron	mg/L	0.35	0.35	1	1	1.4	1.3	100	96	75-125	3	20	
Calcium	mg/L	2.4	2.4	1	1	3.5	3.3	110	90	75-125	6	20	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2616689

QC Batch: 25576 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 2616689005, 2616689006, 2616689007, 2616689008, 2616689009, 2616689010, 2616689011, 2616689012

METHOD BLANK: 115310 Matrix: Water  
Associated Lab Samples: 2616689005, 2616689006, 2616689007, 2616689008, 2616689009, 2616689010, 2616689011, 2616689012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	0.0039	04/03/19 18:09	
Calcium	mg/L	ND	0.50	0.014	04/03/19 18:09	

LABORATORY CONTROL SAMPLE: 115311

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.0	105	80-120	
Calcium	mg/L	1	1.1	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 115312 115313

Parameter	Units	2616740003 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	MS Result	MSD Result						
Boron	mg/L	0.089	1	1	1.1	1.1	99	98	75-125	1	20	
Calcium	mg/L	25.1	1	1	25.6	24.9J	58	-14	75-125	3	20 M6	

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**QUALITY CONTROL DATA**

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

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QC Batch:	25629	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
Associated Lab Samples:	2616689001, 2616689002, 2616689003		

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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	

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SAMPLE DUPLICATE: 115528

Parameter	Units	2616666007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	292	305	4	10	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

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QC Batch:	25700	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
Associated Lab Samples:	2616689004, 2616689005, 2616689006, 2616689007, 2616689008, 2616689009, 2616689010, 2616689011, 2616689012		

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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	

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SAMPLE DUPLICATE: 115941

Parameter	Units	2616689004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	10.0J	ND		10	

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2616689

QC Batch: 25743 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 2616689001, 2616689002, 2616689003, 2616689004, 2616689005, 2616689006, 2616689007, 2616689008, 2616689009, 2616689010, 2616689011, 2616689012

METHOD BLANK: 116167 Matrix: Water  
Associated Lab Samples: 2616689001, 2616689002, 2616689003, 2616689004, 2616689005, 2616689006, 2616689007, 2616689008, 2616689009, 2616689010, 2616689011, 2616689012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	04/04/19 16:34	
Fluoride	mg/L	ND	0.30	0.029	04/04/19 16:34	
Sulfate	mg/L	ND	1.0	0.017	04/04/19 16:34	

LABORATORY CONTROL SAMPLE: 116168

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.4	104	90-110	
Fluoride	mg/L	10	10.4	104	90-110	
Sulfate	mg/L	10	10.3	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 116169 116170

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2616689001 Result	Spike Conc.	Spike Conc.	MS Result						
Chloride	mg/L	3.3	10	10	13.1	13.2	99	99	90-110	0	15
Fluoride	mg/L	ND	10	10	10	10.1	100	101	90-110	1	15
Sulfate	mg/L	2.7	10	10	12.0	12.0	93	93	90-110	0	15

MATRIX SPIKE SAMPLE: 116171

Parameter	Units	2616689002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	3.8	10	14.2	104	90-110	
Fluoride	mg/L	ND	10	10.8	108	90-110	
Sulfate	mg/L	1.6	10	11.5	99	90-110	

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

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### 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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616689

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2616689001	PZ-1D	EPA 3005A	25536	EPA 6020B	25547
2616689002	PZ-31	EPA 3005A	25536	EPA 6020B	25547
2616689003	PZ-2S	EPA 3005A	25536	EPA 6020B	25547
2616689004	FB-01	EPA 3005A	25536	EPA 6020B	25547
2616689005	PZ-2D	EPA 3005A	25576	EPA 6020B	25607
2616689006	PZ-32	EPA 3005A	25576	EPA 6020B	25607
2616689007	PZ-25	EPA 3005A	25576	EPA 6020B	25607
2616689008	PZ-14	EPA 3005A	25576	EPA 6020B	25607
2616689009	PZ-23	EPA 3005A	25576	EPA 6020B	25607
2616689010	PZ-16	EPA 3005A	25576	EPA 6020B	25607
2616689011	EB-01	EPA 3005A	25576	EPA 6020B	25607
2616689012	PZ-18	EPA 3005A	25576	EPA 6020B	25607
2616689001	PZ-1D	SM 2540C	25629		
2616689002	PZ-31	SM 2540C	25629		
2616689003	PZ-2S	SM 2540C	25629		
2616689004	FB-01	SM 2540C	25700		
2616689005	PZ-2D	SM 2540C	25700		
2616689006	PZ-32	SM 2540C	25700		
2616689007	PZ-25	SM 2540C	25700		
2616689008	PZ-14	SM 2540C	25700		
2616689009	PZ-23	SM 2540C	25700		
2616689010	PZ-16	SM 2540C	25700		
2616689011	EB-01	SM 2540C	25700		
2616689012	PZ-18	SM 2540C	25700		
2616689001	PZ-1D	EPA 300.0	25743		
2616689002	PZ-31	EPA 300.0	25743		
2616689003	PZ-2S	EPA 300.0	25743		
2616689004	FB-01	EPA 300.0	25743		
2616689005	PZ-2D	EPA 300.0	25743		
2616689006	PZ-32	EPA 300.0	25743		
2616689007	PZ-25	EPA 300.0	25743		
2616689008	PZ-14	EPA 300.0	25743		
2616689009	PZ-23	EPA 300.0	25743		
2616689010	PZ-16	EPA 300.0	25743		
2616689011	EB-01	EPA 300.0	25743		
2616689012	PZ-18	EPA 300.0	25743		

### REPORT OF LABORATORY ANALYSIS

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A**  
**Required Client Information:**  
 Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Maner Road  
 Atlanta, GA 30339  
 Email: jabraham@southernco.com  
 Phone: (404) 506-7239  
 Requested Due Date: Standard

**Section B**  
**Required Project Information:**  
 Report To: Jopi Abraham  
 Copy To: Wood PLC  
 Purchase Order #: SCS10348606  
 Project Name: Plant Mitchell CCR  
 Project #: 6122160170

**Section C**  
**Invoice Information:**  
 Attention: SCSInvoices@southernco.com  
 Company Name:  
 Address:  
 Pace Quarter:  
 Pace Project Manager: betsy.mcdaniel@pace.com  
 Pace Profile #: 333  
 State / Location: GA  
 Regulatory Agency:

Page: 1 of 1

ITEM #	MATRIX	MATRIX CODE (see valid codes to left)	COLLECTED		SAMPLE TYPE (G-GRAB C-COMP)	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	Preservatives				Analyses Test Y/N	Medium 220/222-DH	App. III & App. IV Metals	TDS, Cl, F, SO4	Requested Analysis Filtrated (Y/N)	Residual Chlorine (Y/N)
			START DATE	END DATE					H2SO4	HNO3	HCl	Na2SO3						
1	Drinking Water	DW	3/21/19	3/21/19 1440	W G		2	X										
2	Water	WT	3/21/19	3/21/19 1615	W G		2	X										
3	Waste Water	WW	3/21/19	3/21/19 1605	W G		2	X										
4	Product	P	3/21/19	3/21/19 0910	W G		2	X										
5	Sew/Solid	SL			W G		2	X										
6	Oil	OL			W G		2	X										
7	Wipe	WP			W G		2	X										
8	Air	AR			W G		2	X										
9	Other	OT			W G		2	X										
10	Tissue	TS			W G		2	X										
11					W G		2	X										
12					W G		2	X										

NO# : 2616689

**ADDITIONAL COMMENTS:**  
 See attachment for analyses and reporting limits

**PERMANENT BY / AFFILIATION:**  
 Daniel Howard / Wood

**DATE:** 3/27/19

**TIME:** 1745

**POSTED BY / AFFILIATION:**  
 Yda Loman - 03/28/19 0910

**DATE:**

**TIME:**

**SAMPLE CONDITIONS:**

Received on	TEMP in C	Ice (Y/N)	Custody (Y/N)	Sealed (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)

**SAMPLER NAME AND SIGNATURE:**  
 PRINT Name of SAMPLER: Daniel Howard  
 SIGNATURE of SAMPLER:

**DATE Signed:** 3/27/19



Sample Condition Upon Receipt

Client Name: GIA Power

Project # \_\_\_\_\_

WO#: **2616689**

PM: **BM**

Due Date: **04/04/19**

CLIENT: **GAPower-CCR**

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 812193945120

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 2.5

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 3/28/19 MR

Temp should be above freezing to 6°C

Comments:

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

Client Notification/ Resolution:

Field Data Required? 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)

April 07, 2019

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

RE: Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2616747

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: Rhonda Quinn, Wood E&I Solutions, Inc. - Kennesaw  
Rebecca Thornton, Pace Analytical Atlanta  
Greg Wrenn, Wood PLC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616747

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### 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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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2616747

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2616747001	EB-02	Water	03/28/19 08:55	03/29/19 09:00
2616747002	PZ-17	Water	03/28/19 10:45	03/29/19 09:00
2616747003	PZ-19	Water	03/28/19 12:49	03/29/19 09:00
2616747004	Dup-01	Water	03/28/19 00:00	03/29/19 09:00
2616747005	PZ-7D	Water	03/28/19 10:45	03/29/19 09:00
2616747006	PZ-15	Water	03/28/19 13:40	03/29/19 09:00
2616747007	PZ-33	Water	03/28/19 15:15	03/29/19 09:00
2616747008	Dup-02	Water	03/28/19 00:00	03/29/19 09:00

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### SAMPLE ANALYTE COUNT

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616747

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2616747001	EB-02	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616747002	PZ-17	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616747003	PZ-19	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616747004	Dup-01	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616747005	PZ-7D	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616747006	PZ-15	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616747007	PZ-33	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616747008	Dup-02	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616747

Sample: EB-02		Lab ID: 2616747001		Collected: 03/28/19 08:55	Received: 03/29/19 09:00	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	<b>0.0046J</b>	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 21:40	7440-42-8		
Calcium	<b>0.053J</b>	mg/L	0.50	0.014	1	04/01/19 18:00	04/03/19 21:40	7440-70-2		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		04/03/19 18:41			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	ND	mg/L	0.25	0.024	1		04/05/19 00:53	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		04/05/19 00:53	16984-48-8		
Sulfate	ND	mg/L	1.0	0.017	1		04/05/19 00:53	14808-79-8		

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616747

Sample: PZ-17		Lab ID: 2616747002		Collected: 03/28/19 10:45	Received: 03/29/19 09:00	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	<b>0.34</b>	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 21:46	7440-42-8		
Calcium	<b>123</b>	mg/L	25.0	0.69	50	04/01/19 18:00	04/03/19 21:52	7440-70-2		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>420</b>	mg/L	25.0	10.0	1		04/03/19 18:41			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>7.3</b>	mg/L	0.25	0.024	1		04/05/19 01:17	16887-00-6		
Fluoride	<b>0.15J</b>	mg/L	0.30	0.029	1		04/05/19 01:17	16984-48-8		
Sulfate	<b>94.7</b>	mg/L	10.0	0.17	10		04/06/19 20:42	14808-79-8		

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616747

Sample: PZ-19		Lab ID: 2616747003		Collected: 03/28/19 12:49		Received: 03/29/19 09:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Boron	<b>0.70</b>	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 21:57	7440-42-8	
Calcium	<b>164</b>	mg/L	25.0	0.69	50	04/01/19 18:00	04/03/19 22:03	7440-70-2	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>378</b>	mg/L	25.0	10.0	1		04/03/19 18:41		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>6.4</b>	mg/L	0.25	0.024	1		04/05/19 01:40	16887-00-6	
Fluoride	<b>0.074J</b>	mg/L	0.30	0.029	1		04/05/19 01:40	16984-48-8	
Sulfate	<b>83.5</b>	mg/L	10.0	0.17	10		04/06/19 21:03	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616747

Sample: Dup-01		Lab ID: 2616747004		Collected: 03/28/19 00:00	Received: 03/29/19 09:00	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Boron	<b>0.67</b>	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 22:09	7440-42-8	
Calcium	<b>156</b>	mg/L	25.0	0.69	50	04/01/19 18:00	04/03/19 22:15	7440-70-2	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>513</b>	mg/L	25.0	10.0	1		04/03/19 18:41		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>6.3</b>	mg/L	0.25	0.024	1		04/05/19 02:04	16887-00-6	
Fluoride	<b>0.14J</b>	mg/L	0.30	0.029	1		04/05/19 02:04	16984-48-8	
Sulfate	<b>84.1</b>	mg/L	10.0	0.17	10		04/06/19 21:23	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616747

Sample: PZ-7D		Lab ID: 2616747005		Collected: 03/28/19 10:45	Received: 03/29/19 09:00	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	<b>0.33</b>	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 22:32	7440-42-8		
Calcium	<b>124</b>	mg/L	25.0	0.69	50	04/01/19 18:00	04/03/19 22:38	7440-70-2		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>365</b>	mg/L	25.0	10.0	1		04/03/19 18:41			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>6.4</b>	mg/L	0.25	0.024	1		04/05/19 02:28	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		04/05/19 02:28	16984-48-8		
Sulfate	<b>59.6</b>	mg/L	10.0	0.17	10		04/06/19 21:44	14808-79-8		

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616747

Sample: PZ-15		Lab ID: 2616747006		Collected: 03/28/19 13:40		Received: 03/29/19 09:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Boron	<b>0.22</b>	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 22:43	7440-42-8	
Calcium	<b>100</b>	mg/L	25.0	0.69	50	04/01/19 18:00	04/03/19 22:49	7440-70-2	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C							
Total Dissolved Solids	<b>337</b>	mg/L	25.0	10.0	1		04/03/19 18:41		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Chloride	<b>7.4</b>	mg/L	0.25	0.024	1		04/05/19 04:27	16887-00-6	
Fluoride	<b>0.10J</b>	mg/L	0.30	0.029	1		04/05/19 04:27	16984-48-8	
Sulfate	<b>90.3</b>	mg/L	10.0	0.17	10		04/06/19 22:05	14808-79-8	

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616747

Sample: PZ-33		Lab ID: 2616747007		Collected: 03/28/19 15:15	Received: 03/29/19 09:00	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	<b>0.39</b>	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 22:55	7440-42-8		
Calcium	<b>117</b>	mg/L	25.0	0.69	50	04/01/19 18:00	04/03/19 23:00	7440-70-2		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>405</b>	mg/L	25.0	10.0	1		04/03/19 18:42			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>4.8</b>	mg/L	0.25	0.024	1		04/05/19 04:51	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		04/05/19 04:51	16984-48-8		
Sulfate	<b>76.7</b>	mg/L	10.0	0.17	10		04/06/19 22:26	14808-79-8		

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## ANALYTICAL RESULTS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616747

Sample: Dup-02		Lab ID: 2616747008		Collected: 03/28/19 00:00	Received: 03/29/19 09:00	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6020B MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	<b>0.38</b>	mg/L	0.040	0.0039	1	04/03/19 11:25	04/04/19 18:48	7440-42-8		
Calcium	<b>114</b>	mg/L	25.0	0.69	50	04/03/19 11:25	04/04/19 18:54	7440-70-2		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C								
Total Dissolved Solids	<b>384</b>	mg/L	25.0	10.0	1		04/03/19 18:42			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Chloride	<b>4.8</b>	mg/L	0.25	0.024	1		04/05/19 05:15	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		04/05/19 05:15	16984-48-8		
Sulfate	<b>76.8</b>	mg/L	10.0	0.17	10		04/06/19 22:46	14808-79-8		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2616747

QC Batch: 25576 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020B MET  
Associated Lab Samples: 2616747001, 2616747002, 2616747003, 2616747004, 2616747005, 2616747006, 2616747007

METHOD BLANK: 115310 Matrix: Water  
Associated Lab Samples: 2616747001, 2616747002, 2616747003, 2616747004, 2616747005, 2616747006, 2616747007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	0.0039	04/03/19 18:09	
Calcium	mg/L	ND	0.50	0.014	04/03/19 18:09	

LABORATORY CONTROL SAMPLE: 115311

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.0	105	80-120	
Calcium	mg/L	1	1.1	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 115312 115313

Parameter	Units	2616740003 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Boron	mg/L	0.089	1	1	1.1	1.1	99	98	75-125	1	20	
Calcium	mg/L	25.1	1	1	25.6	24.9J	58	-14	75-125	3	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 Mitchell Ash Ponds

Pace Project No.: 2616747

QC Batch: 25683	Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A	Analysis Description: 6020B MET
Associated Lab Samples: 2616747008	

METHOD BLANK: 115845 Matrix: Water

Associated Lab Samples: 2616747008

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		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result	% Rec	% Rec							
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		

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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616747

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QC Batch:	25701	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
Associated Lab Samples:	2616747001, 2616747002, 2616747003, 2616747004, 2616747005, 2616747006, 2616747007, 2616747008		

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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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### QUALITY CONTROL DATA

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2616747

QC Batch: 25743 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 2616747001, 2616747002, 2616747003, 2616747004, 2616747005, 2616747006, 2616747007, 2616747008

METHOD BLANK: 116167 Matrix: Water  
Associated Lab Samples: 2616747001, 2616747002, 2616747003, 2616747004, 2616747005, 2616747006, 2616747007, 2616747008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	04/04/19 16:34	
Fluoride	mg/L	ND	0.30	0.029	04/04/19 16:34	
Sulfate	mg/L	ND	1.0	0.017	04/04/19 16:34	

LABORATORY CONTROL SAMPLE: 116168

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.4	104	90-110	
Fluoride	mg/L	10	10.4	104	90-110	
Sulfate	mg/L	10	10.3	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 116169 116170

Parameter	Units	2616689001		2616689002		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Chloride	mg/L	3.3	10	10	13.1	13.2	99	99	90-110	0	15		
Fluoride	mg/L	ND	10	10	10	10.1	100	101	90-110	1	15		
Sulfate	mg/L	2.7	10	10	12.0	12.0	93	93	90-110	0	15		

MATRIX SPIKE SAMPLE: 116171

Parameter	Units	2616689002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	3.8	10	14.2	104	90-110	
Fluoride	mg/L	ND	10	10.8	108	90-110	
Sulfate	mg/L	1.6	10	11.5	99	90-110	

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## QUALIFIERS

Project: Plant Mitchell Ash Ponds

Pace Project No.: 2616747

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### 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

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: Plant Mitchell Ash Ponds  
Pace Project No.: 2616747

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2616747001	EB-02	EPA 3005A	25576	EPA 6020B	25607
2616747002	PZ-17	EPA 3005A	25576	EPA 6020B	25607
2616747003	PZ-19	EPA 3005A	25576	EPA 6020B	25607
2616747004	Dup-01	EPA 3005A	25576	EPA 6020B	25607
2616747005	PZ-7D	EPA 3005A	25576	EPA 6020B	25607
2616747006	PZ-15	EPA 3005A	25576	EPA 6020B	25607
2616747007	PZ-33	EPA 3005A	25576	EPA 6020B	25607
2616747008	Dup-02	EPA 3005A	25683	EPA 6020B	25758
2616747001	EB-02	SM 2540C	25701		
2616747002	PZ-17	SM 2540C	25701		
2616747003	PZ-19	SM 2540C	25701		
2616747004	Dup-01	SM 2540C	25701		
2616747005	PZ-7D	SM 2540C	25701		
2616747006	PZ-15	SM 2540C	25701		
2616747007	PZ-33	SM 2540C	25701		
2616747008	Dup-02	SM 2540C	25701		
2616747001	EB-02	EPA 300.0	25743		
2616747002	PZ-17	EPA 300.0	25743		
2616747003	PZ-19	EPA 300.0	25743		
2616747004	Dup-01	EPA 300.0	25743		
2616747005	PZ-7D	EPA 300.0	25743		
2616747006	PZ-15	EPA 300.0	25743		
2616747007	PZ-33	EPA 300.0	25743		
2616747008	Dup-02	EPA 300.0	25743		

**REPORT OF LABORATORY ANALYSIS**

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Section A</b>		<b>Section B</b>		<b>Section C</b>	
<b>Required Client Information:</b>		<b>Required Project Information:</b>		<b>Invoice Information:</b>	
Company: Georgia Power - Coal Combustion Residuals	Report To: Jigar Abraham	Report To: Jigar Abraham	Company Name: SCSInvoices@southernco.com	Attention: SCSInvoices@southernco.com	Company Name: SCSInvoices@southernco.com
Address: 2480 Maner Road	Copy To: Wood PLC	Copy To: Wood PLC	Address:	Address:	Address:
Email: jabraham@southernco.com	Purchase Order #: SCS10348006	Purchase Order #: SCS10348006	Plant Mitchell CCR	Plant Mitchell CCR	Plant Mitchell CCR
Phone: (404)506-7299	Project #: 6122160170	Project #: 6122160170	Peace Profile # 333	Peace Profile # 333	Peace Profile # 333
Requested Due Date: Stand by					

Page: 1 Of 1

ITEM #	MATRIX CODE (see valid codes to left)	MATRIX	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	SAMPLE TEMP AT COLLECTION		# OF CONTAINERS	PRESERVATIVES		ANALYSES TEST Y/N	REQUESTED ANALYSES FILTERED (Y/N)		Residual Chlorine (Y/N)
			START DATE	END DATE		START TIME	END TIME		H2SO4	HNO3		HCl	NaOH	
1	WTG	Drinking Water	3/28/19	0855	2	X	X	X	X	X	X	X	X	
2	WTG	Waste Water	1045		2	X	X	X	X	X	X	X	X	
3	WTG	Waste Water	1249		2	X	X	X	X	X	X	X	X	
4	WTG	Product	-		2	X	X	X	X	X	X	X	X	
5	WTG	Product	1045		2	X	X	X	X	X	X	X	X	
6	WTG	Product	1340		2	X	X	X	X	X	X	X	X	
7	WTG	Product	1515		2	X	X	X	X	X	X	X	X	
8	WTG	Product	-		2	X	X	X	X	X	X	X	X	
9														
10														
11														
12														

WO# : 2616747

<b>ADDITIONAL COMMENTS</b>		<b>RELINQUISHED BY / AFFILIATION</b>		<b>ACCEPTED BY / AFFILIATION</b>		<b>SAMPLE CONDITIONS</b>	
See attachment for analyses and reporting limits		Daniel Howard / Wood 3/28/19 1700		M. Abman 3/28/19 0900		Received on	
						TEMP in C	
						Ice (Y/N)	
						Sealed (Y/N)	
						Cooler (Y/N)	
						Samples Intact (Y/N)	
						DATE Signed: 3/28/19	
						SIGNATURE OF SAMPLER: Daniel Howard	
						PRINT Name of SAMPLER: Daniel Howard	
						SAMPLER NAME AND SIGNATURE	



Sample Condition Upon Receipt

Client Name: GIA POWER

Project # \_\_\_\_\_

WO#: **2616747**

PM: **BM** Due Date: **04/05/19**  
CLIENT: **GRPOWER-CCR**

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 812193945742

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

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used 83 Type of Ice:  Wet  Blue  None

Cooler Temperature 2.5 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: 3/29/19 MK

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

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? 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: 2016-08-30 13:41:16

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Georgia Power  
Site Name PZ-1D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407444  
Turbidity Make/Model Hach 2100 Q 15030C040048

Pump Information:

Pump Model/Type QED bladder  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 82 ft

Pump placement from TOC 78 ft

Well Information:

Well ID PZ-1D  
Well diameter 2 in  
Well Total Depth 83 ft  
Screen Length 10 ft  
Depth to Water 55.13 ft

Pumping Information:

Final Pumping Rate 225 mL/min  
Total System Volume 0.5560007 L  
Calculated Sample Rate 148 sec  
Stabilization Drawdown 12.72 in  
Total Volume Pumped 22.7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.3	+/- 0
Last 5	13:27:50	6807.75	21.56	7.63	233.90	4.57	57.62	3.18	280.79
Last 5	13:30:18	6955.75	21.68	7.63	236.17	4.73	57.63	3.19	280.13
Last 5	13:32:46	7103.75	21.69	7.63	234.32	4.87	57.63	3.14	278.27
Last 5	13:35:17	7254.75	21.69	7.62	236.72	3.86	57.64	3.14	276.31
Last 5	13:37:45	7402.75	21.55	7.62	233.75	4.14	57.65	3.18	276.59
Variance 0			0.01	-0.00	-1.85			-0.04	-1.86
Variance 1			0.00	-0.00	2.40			-0.01	-1.96
Variance 2			-0.14	0.00	-2.97			0.04	0.27

Notes

Turbidity last to stabilize.

Grab Samples



Product Name: Low-Flow System

Date: 2016-08-30 12:44:33

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II  
Site Name PZ-2S  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 408206  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder pump  
Tubing Type PE  
Tubing Diameter .17 in  
Tubing Length 59 ft

Pump placement from TOC 53.5 ft

Well Information:

Well ID PZ-2S  
Well diameter 2 in  
Well Total Depth 57.95 ft  
Screen Length 10 ft  
Depth to Water 39.64 ft

Pumping Information:

Final Pumping Rate 0 mL/min  
Total System Volume 0.453342 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.36 in  
Total Volume Pumped 14.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	12:22:46	2699.90	21.15	7.85	237.41	7.21	39.92	4.73	378.80
Last 5	12:27:46	2999.90	21.30	7.82	242.98	7.1	39.92	4.91	385.42
Last 5	12:32:46	3299.90	21.33	7.79	248.52	7.03	39.92	4.98	392.16
Last 5	12:37:46	3599.90	21.46	7.78	250.96	6.0	39.92	5.02	398.50
Last 5	12:42:46	3899.90	21.25	7.76	253.55	5.44	39.92	5.10	400.08
Variance 0			0.03	-0.02	5.55			0.08	6.74
Variance 1			0.13	-0.02	2.43			0.04	6.34
Variance 2			-0.21	-0.02	2.60			0.07	1.58

Notes

Grab Samples: Sample was collected after purging well an additional 32 min. when turbidity was below 5 NTU.  
Final turbidity 4.24 NTU, Time: 13:14

Product Name: Low-Flow System

Date: 2016-08-31 16:28:21

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II  
Site Name PZ-6S  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 408206  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump  
Tubing Type PE  
Tubing Diameter 0.170 in  
Tubing Length 55 ft

Pump placement from TOC 46 ft

Well Information:

Well ID PZ-6S  
Well diameter 2 in  
Well Total Depth 50.95 ft  
Screen Length 10 ft  
Depth to Water 27.64 ft

Pumping Information:

Final Pumping Rate 50 mL/min  
Total System Volume 0.4354883 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 252.12 in  
Total Volume Pumped 23 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	15:54:00	22527.28	22.97	6.24	276.44	244.00	47.71	1.45	263.00
Last 5	15:59:00	22827.28	23.14	6.28	286.75	0.00	0.00	1.46	258.72
Last 5	16:04:00	23127.28	23.12	6.28	286.06	848.00	48.15	1.48	251.33
Last 5	16:09:06	23433.28	22.95	6.32	302.97	0.00	0.00	1.53	240.26
Last 5	16:14:06	23733.28	22.95	6.37	323.13	1000.00	48.65	1.61	239.82
Variance 0			-0.02	-0.00	-0.69			0.02	-7.39
Variance 1			-0.17	0.05	16.91			0.05	-11.07
Variance 2			-0.00	0.04	20.17			0.08	-0.43

Notes

Water level was not stable. Turbidity did not go below 18. Drew well down to 48.65 ft (252.12in). Will let recharge over night and then sample.

\*\* Brad Filipovich with GA Power instructed us that we will redevelop well PZ-6S.

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-01 13:48:25

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II  
Site Name PZ-7D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 408206  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Sample Pro Bladder Pump  
Tubing Type PE  
Tubing Diameter 0.170 in  
Tubing Length 61 ft

Pump placement from TOC 55.5 ft

Well Information:

Well ID PZ-7D  
Well diameter 2 in  
Well Total Depth 60.37 ft  
Screen Length 10 ft  
Depth to Water 37.20 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.4622688 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 26.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	13:25:40	10809.02	23.79	7.07	641.43	5.77	37.20	0.20	53.83
Last 5	13:30:40	11109.02	23.80	7.07	642.02	5.53	37.20	0.20	55.26
Last 5	13:35:40	11409.02	23.81	7.07	640.77	5.20	37.20	0.20	54.73
Last 5	13:40:40	11709.02	23.75	7.07	641.94	5.06	37.20	0.20	58.10
Last 5	13:45:40	12009.09	23.88	7.07	642.97	4.88	37.20	0.19	58.14
Variance 0			0.01	0.00	-1.26			-0.00	-0.53
Variance 1			-0.06	-0.00	1.17			-0.00	3.37
Variance 2			0.14	0.00	1.03			-0.00	0.04

Notes

Grab Samples: One additional turbidity reading was taken after disconnecting the flow through cell. Final Turbidity 4.80 NTU

Product Name: Low-Flow System

Date: 2016-08-31 15:36:30

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II  
Site Name PZ-14  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407444  
Turbidity Make/Model Hach 2100Q S/N 15030C040048

Pump Information:

Pump Model/Type QED SamplePro Bladder Pump  
Tubing Type PE  
Tubing Diameter 0.170 in  
Tubing Length 56 ft

Pump placement from TOC 50.84 ft

Well Information:

Well ID PZ-14  
Well diameter 2 in  
Well Total Depth 53.2 ft  
Screen Length 10 ft  
Depth to Water 46.98 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4399517 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.37 in  
Total Volume Pumped 11.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	15:12:55	3600.58	22.76	6.97	518.89	5.21	47.35	2.00	149.76
Last 5	15:17:55	3900.58	22.63	6.97	519.01	4.72	47.35	1.99	149.87
Last 5	15:22:55	4200.58	22.72	6.97	516.94	4.23	47.35	1.97	151.97
Last 5	15:27:56	4501.58	22.99	6.97	514.56	3.63	47.35	1.94	151.27
Last 5	15:32:56	4801.57	22.67	6.97	514.47	3.13	47.35	1.97	153.34
Variance 0			0.09	-0.00	-2.08			-0.01	2.10
Variance 1			0.27	-0.00	-2.38			-0.03	-0.69
Variance 2			-0.31	0.00	-0.09			0.03	2.07

Notes

Static water level was 3.78 ft. Below top of screen. Removed 3 well volumes.

Grab Samples

PZ-14  
Groundwater

Product Name: Low-Flow System

Date: 2016-09-01 14:40:19

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II  
Site Name PZ-15  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407444  
Turbidity Make/Model Hach 2100Q S/N 15030C040048

Pump Information:

Pump Model/Type QED SamplePro Bladder Pump  
Tubing Type PE  
Tubing Diameter 0.170 in  
Tubing Length 84 ft

Pump placement from TOC 78.5 ft

Well Information:

Well ID PZ-15  
Well diameter 2 in  
Well Total Depth 83.5 ft  
Screen Length 10 ft  
Depth to Water 34.67 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 0.5649276 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 54 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	14:16:03	1500.02	24.09	7.21	480.76	4.91	34.67	0.10	-97.85
Last 5	14:21:03	1800.02	24.06	7.21	480.95	4.90	34.67	0.10	-98.02
Last 5	14:26:03	2100.03	24.02	7.21	480.47	4.90	34.67	0.10	-97.05
Last 5	14:31:03	2400.02	24.08	7.21	480.39	4.63	34.67	0.10	-97.91
Last 5	14:36:03	2700.03	24.11	7.21	479.87	--	--	0.10	-97.80
Variance 0			-0.04	0.00	-0.49			0.00	0.97
Variance 1			0.06	-0.00	-0.08			-0.00	-0.86
Variance 2			0.02	-0.00	-0.52			0.00	0.11

Notes

There are 2 logs for this well because the iPod battery died around 13:05 and I had to create a new log to finish. Also collected Dup-01 from

Grab Samples

PZ-15  
Groundwater.

Product Name: Low-Flow System

Date: 2016-09-06 16:35:58

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II  
Site Name PZ-16  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407444  
Turbidity Make/Model Hach 2100Q S/N 15030C040048

Pump Information:

Pump Model/Type QED SamplePro Bladder Pump  
Tubing Type PE  
Tubing Diameter 0.170 in  
Tubing Length 54.6 ft

Pump placement from TOC 49.5 ft

Well Information:

Well ID PZ-16  
Well diameter 2 in  
Well Total Depth 53.5 ft  
Screen Length 10 ft  
Depth to Water 37.38 ft

Pumping Information:

Final Pumping Rate 125 mL/min  
Total System Volume 0.4337029 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.12 in  
Total Volume Pumped 27.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	16:08:00	8412.80	22.29	7.24	454.43	6.05	37.51	0.14	27.35
Last 5	16:13:00	8712.80	22.63	7.23	455.01	5.12	37.50	0.15	20.38
Last 5	16:18:00	9012.80	22.54	7.23	453.73	4.32	37.49	0.15	21.69
Last 5	16:23:00	9312.80	22.49	7.23	454.04	4.43	37.50	0.15	20.56
Last 5	16:28:00	9612.80	22.56	7.23	452.07	3.74	37.50	0.16	14.70
Variance 0			-0.09	-0.00	-1.28			0.00	1.31
Variance 1			-0.04	0.00	0.30			0.00	-1.12
Variance 2			0.07	-0.00	-1.97			0.01	-5.86

Notes

Sampled at 16:35. Also collected Dup-02. Clear, sunny, 88 degrees F.

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-07 10:31:46

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II  
Site Name PZ-17  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407444  
Turbidity Make/Model Hach 2100Q S/N 15030C040048

Pump Information:

Pump Model/Type QED SamplePro Bladder Pump  
Tubing Type PE  
Tubing Diameter 0.170 in  
Tubing Length 63 ft

Pump placement from TOC 57.75 ft

Well Information:

Well ID PZ-17  
Well diameter 2 in  
Well Total Depth 62.75 ft  
Screen Length 10 ft  
Depth to Water 35.98 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4711957 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.15 in  
Total Volume Pumped 13.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	10:08:15	3000.03	21.57	7.02	650.35	6.75	36.13	0.45	-54.74
Last 5	10:13:16	3300.89	21.65	7.02	650.38	5.42	36.13	0.39	-52.95
Last 5	10:18:16	3600.89	21.69	7.02	649.27	4.81	36.13	0.40	-50.82
Last 5	10:23:16	3900.89	21.69	7.02	653.02	4.32	36.13	0.60	-50.80
Last 5	10:28:16	4200.89	21.74	7.02	652.97	3.84	36.13	0.45	-49.67
Variance 0			0.04	-0.00	-1.10			0.01	2.13
Variance 1			0.00	0.00	3.75			0.20	0.02
Variance 2			0.04	0.00	-0.05			-0.15	1.13

Notes

Clear, sunny 68 degrees F. Sample collected at 10:35.

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-07 14:38:30

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II  
Site Name PZ-18  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407444  
Turbidity Make/Model Hach 2100Q S/N 15030C040048

Pump Information:

Pump Model/Type QED SamplePro Bladder Pump  
Tubing Type PE  
Tubing Diameter 0.170 in  
Tubing Length 63 ft

Pump placement from TOC 58.4 ft

Well Information:

Well ID PZ-18  
Well diameter 2 in  
Well Total Depth 63.4 ft  
Screen Length 10 ft  
Depth to Water 33.40 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4711957 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.11 in  
Total Volume Pumped 22.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	14:14:05	4799.81	24.54	6.93	649.68	5.67	33.51	0.10	-62.78
Last 5	14:19:05	5099.81	24.79	6.93	649.34	5.22	33.51	0.10	-59.56
Last 5	14:24:05	5399.81	24.61	6.92	646.63	4.54	33.51	0.10	-55.41
Last 5	14:29:05	5699.81	24.63	6.92	645.93	3.81	33.51	0.09	-52.92
Last 5	14:34:05	5999.81	24.79	6.92	642.47	3.54	33.51	0.09	-50.85
Variance 0			-0.18	-0.00	-2.70			-0.00	4.15
Variance 1			0.02	0.00	-0.71			-0.00	2.49
Variance 2			0.16	-0.00	-3.46			-0.00	2.07

Notes

Clear, sunny, 88 degrees F. Collect Samples at 14:40.

Grab Samples



Product Name: Low-Flow System

Date: 2016-09-07 15:53:46

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II  
Site Name PZ-19  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 408206  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Sample Pro Bladder Pump  
Tubing Type PE  
Tubing Diameter 0.170 in  
Tubing Length 69 ft

Pump placement from TOC 57.5 ft

Well Information:

Well ID PZ-19  
Well diameter 2 in  
Well Total Depth 62.7 ft  
Screen Length 10 ft  
Depth to Water 35.27 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.4979762 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.24 in  
Total Volume Pumped 17 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	15:32:22	8403.97	25.05	6.71	852.18	5.93	35.29	0.15	-41.78
Last 5	15:37:22	8703.97	24.81	6.71	852.16	5.29	35.29	0.15	-40.71
Last 5	15:42:22	9003.97	24.78	6.71	850.77	4.63	35.29	0.15	-40.79
Last 5	15:47:22	9303.97	24.96	6.71	852.73	4.16	35.29	0.15	-40.86
Last 5	15:52:25	9606.97	24.94	6.71	852.86	4.62	35.29	0.15	-39.83
Variance 0			-0.02	-0.00	-1.39			-0.00	-0.08
Variance 1			0.18	0.00	1.97			-0.00	-0.07
Variance 2			-0.03	-0.00	0.13			0.00	1.04

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-31 11:18:00

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II  
Site Name PZ-23  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407444  
Turbidity Make/Model Hach 2100Q S/N 15030C040048

Pump Information:

Pump Model/Type QED SamplePro Bladder Pump  
Tubing Type PE  
Tubing Diameter 0.170 in  
Tubing Length 63 ft  
Pump placement from TOC 58.6 ft

Well Information:

Well ID PZ-23  
Well diameter 2 in  
Well Total Depth 63.6 ft  
Screen Length 10 ft  
Depth to Water 53.56 ft

Pumping Information:

Final Pumping Rate 50 mL/min  
Total System Volume 0.4711957 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.02 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	10:51:31	4802.93	23.88	6.75	715.87	4.74	53.62	1.28	87.56
Last 5	10:56:31	5102.93	23.89	6.75	714.27	4.85	53.60	1.30	90.70
Last 5	11:01:31	5402.99	23.85	6.75	714.09	3.95	53.58	1.31	92.64
Last 5	11:06:31	5702.94	24.02	6.75	712.60	3.98	53.58	1.32	92.59
Last 5	11:11:31	6002.93	24.13	6.75	714.31	3.62	53.57	1.33	94.10
Variance 0			-0.05	-0.00	-0.19			0.01	1.94
Variance 1			0.17	-0.00	-1.49			0.00	-0.05
Variance 2			0.11	-0.00	1.71			0.02	1.51

Notes

Static water level 0.04' above screen. Had to reduce flow from initial 100ml/min to 50 ml/minute to return water level to within 0.02' of static.

Grab Samples

PZ-23  
Groundwater

Product Name: Low-Flow System

Date: 2016-09-08 15:33:16

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II  
Site Name PZ-24  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 408206  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Sample Pro Bladder Pump  
Tubing Type PE  
Tubing Diameter 0.170 in  
Tubing Length 73 ft

Pump placement from TOC 68 ft

Well Information:

Well ID PZ-24  
Well diameter 2 in  
Well Total Depth 73.07 ft  
Screen Length 10 ft  
Depth to Water 57.39 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.51583 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 5 in  
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	15:08:31	1800.07	22.67	7.05	602.77	8.13	57.80	0.45	88.67
Last 5	15:13:31	2100.07	22.72	7.05	599.36	5.93	57.80	0.43	73.65
Last 5	15:18:31	2400.07	22.88	7.06	594.70	4.92	57.80	0.45	61.65
Last 5	15:23:31	2700.07	22.94	7.06	589.98	4.82	57.80	0.47	54.13
Last 5	15:28:31	3000.07	22.94	7.06	586.70	3.68	57.80	0.50	47.64
Variance 0			0.15	0.01	-4.67			0.02	-12.01
Variance 1			0.06	0.01	-4.72			0.02	-7.51
Variance 2			0.00	0.00	-3.28			0.02	-6.49

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-08 10:50:15

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II  
Site Name PZ-25  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407444  
Turbidity Make/Model Hach 2100Q S/N 15030C040048

Pump Information:

Pump Model/Type QED SamplePro Bladder Pump  
Tubing Type PE  
Tubing Diameter 0.170 in  
Tubing Length 63 ft

Pump placement from TOC 58.3 ft

Well Information:

Well ID PZ-25  
Well diameter 2 in  
Well Total Depth 63.3 ft  
Screen Length 10 ft  
Depth to Water 34.17 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4711957 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.06 in  
Total Volume Pumped 16.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	10:25:23	3900.50	21.87	7.11	513.46	5.45	34.23	0.12	-132.45
Last 5	10:30:23	4200.50	21.91	7.11	512.80	5.28	34.23	0.12	-131.97
Last 5	10:35:23	4500.50	22.01	7.11	513.49	4.72	34.23	0.12	-131.59
Last 5	10:40:23	4800.50	22.28	7.10	513.14	4.09	34.23	0.11	-131.20
Last 5	10:45:23	5100.50	22.47	7.10	510.77	3.59	34.23	0.11	-130.47
Variance 0			0.09	-0.00	0.68			-0.00	0.37
Variance 1			0.27	-0.00	-0.35			-0.00	0.40
Variance 2			0.20	-0.00	-2.37			-0.00	0.72

Notes

Clear, sunny, light breeze from N, 75 degrees F. Collected groundwater samples at 10:55.

Grab Samples

PZ-25  
Groundwater

Product Name: Low-Flow System

Date: 2016-10-18 10:52:22

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II CCR  
Site Name PZ-31  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369550  
Turbidity Make/Model Hach 2100Q S/N 12110C021366

Pump Information:

Pump Model/Type QED Sample Pro bladder  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 60 ft

Pump placement from TOC 52 ft

Well Information:

Well ID PZ-31  
Well diameter 2 in  
Well Total Depth 57 ft  
Screen Length 10 ft  
Depth to Water 43.46 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4578054 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	10:16:51	2699.98	21.66	7.13	475.13	5.02	44.02	1.74	129.42
Last 5	10:21:51	2999.98	21.66	7.13	474.45	5.10	44.02	1.74	122.14
Last 5	10:26:51	3299.98	21.80	7.14	474.39	4.50	44.02	1.81	120.87
Last 5	10:31:51	3599.98	21.89	7.15	476.78	4.45	44.02	1.86	119.25
Last 5	10:36:51	3899.98	21.89	7.15	474.14	0.00	44.02	1.94	119.88
Variance 0			0.14	0.00	-0.06			0.07	-1.27
Variance 1			0.09	0.01	2.39			0.05	-1.62
Variance 2			-0.00	0.00	-2.64			0.08	0.63

Notes

All parameters metals,

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-18 15:33:11

Project Information:

Operator Name DHoward/FMayila  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II CCR  
Site Name PZ-32  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369550  
Turbidity Make/Model Hach 2100Q S/N 12110C021366

Pump Information:

Pump Model/Type QED Sample Pro bladder  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 65 ft

Pump placement from TOC 57 ft

Well Information:

Well ID PZ-32  
Well diameter 2 in  
Well Total Depth 62 ft  
Screen Length 10 ft  
Depth to Water 42.02 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4801225 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.01 in  
Total Volume Pumped 14.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	15:08:52	3600.23	20.31	7.46	325.99	5.51	42.04	0.57	-12.59
Last 5	15:13:52	3900.23	20.04	7.46	324.54	5.32	42.04	0.58	21.35
Last 5	15:18:52	4200.23	20.02	7.46	323.81	3.57	42.04	0.57	-2.02
Last 5	15:23:52	4500.23	19.99	7.45	323.67	4.59	42.04	0.60	-6.17
Last 5	15:28:52	4800.23	20.02	7.45	323.82	3.44	42.04	0.58	-8.08
Variance 0			-0.02	-0.00	-0.73			-0.01	-23.37
Variance 1			-0.03	-0.01	-0.14			0.03	-4.14
Variance 2			0.02	0.00	0.14			-0.02	-1.91

Notes

Full analyses

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-06 15:13:17

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II CCR GW  
Site Name PZ-1D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 408206  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump  
Tubing Type HDPE  
Tubing Diameter 0.17 in  
Tubing Length 82 ft

Pump placement from TOC 76 ft

Well Information:

Well ID PZ-1D  
Well diameter 2.0 in  
Well Total Depth 81.5 ft  
Screen Length 10 ft  
Depth to Water 53.75 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.5560007 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.5 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	14:49:27	1500.02	20.48	7.57	257.16	6.68	54.66	2.94	243.90
Last 5	14:54:27	1799.95	20.51	7.57	257.15	5.74	54.65	2.92	237.84
Last 5	14:59:27	2099.95	20.43	7.57	256.24	3.79	54.65	2.93	233.68
Last 5	15:04:27	2399.95	20.35	7.57	255.16	3.31	54.65	2.90	229.80
Last 5	15:09:27	2699.95	20.31	7.57	255.27	2.60	54.65	2.89	226.93
Variance 0			-0.08	-0.00	-0.91			0.01	-4.16
Variance 1			-0.09	-0.00	-1.09			-0.03	-3.88
Variance 2			-0.04	0.00	0.12			-0.00	-2.87

Notes

Collect PZ-1D time 1510. Weather partly cloudy temp 70F.

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-15 15:26:23

Project Information:

Operator Name Terrell Parker  
Company Name Amec. Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-2S  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 352760  
Turbidity Make/Model Hach 2100 Q S/N 16040C049793

Pump Information:

Pump Model/Type QED Sample Pro w/PE bladder  
Tubing Type PE  
Tubing Diameter 0.170 in  
Tubing Length 56.6 ft  
Pump placement from TOC 53.6 ft

Well Information:

Well ID PZ-2S  
Well diameter 2 in  
Well Total Depth 58.62 ft  
Screen Length 10 ft  
Depth to Water 35.31 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4426298 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.28 in  
Total Volume Pumped 13 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	15:01:58	2100.02	18.08	7.78	249.75	5.89	35.59	4.16	56.26
Last 5	15:06:58	2400.03	18.12	7.72	253.60	5.21	35.59	4.18	56.87
Last 5	15:11:58	2700.02	18.16	7.69	256.26	4.42	35.59	4.20	56.92
Last 5	15:16:58	3000.02	18.18	7.67	257.73	4.50	35.59	4.19	57.28
Last 5	15:21:58	3300.02	18.18	7.64	258.88	4.39	35.59	4.21	57.28
Variance 0			0.04	-0.03	2.66			0.01	0.05
Variance 1			0.02	-0.02	1.47			-0.00	0.35
Variance 2			-0.01	-0.03	1.15			0.02	0.00

Notes

Clear, sunny, 58 degrees F. Sample time: 15:25.

Grab Samples

PZ-2S  
Groundwater



Product Name: Low-Flow System

Date: 2016-12-07 13:53:41

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II CCR GW  
Site Name PZ-6S  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 408206  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump  
Tubing Type HDPE  
Tubing Diameter 0.17 in  
Tubing Length 56 ft

Pump placement from TOC 46 ft

Well Information:

Well ID PZ-6S  
Well diameter 2 in  
Well Total Depth 51.4 ft  
Screen Length 10 ft  
Depth to Water 15.41 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.4399517 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 60 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	13:27:07	2400.02	19.55	5.37	160.12	5.05	19.39	0.67	241.81
Last 5	13:32:07	2699.95	19.68	5.36	158.21	4.12	19.89	0.64	244.10
Last 5	13:37:07	2999.95	19.59	5.34	157.31	3.97	20.28	0.63	246.37
Last 5	13:42:07	3299.95	19.43	5.34	158.01	3.56	20.77	0.64	247.87
Last 5	13:47:07	3599.95	19.45	5.34	157.90	3.82	21.13	0.61	246.22
Variance 0			-0.09	-0.01	-0.91			-0.01	2.27
Variance 1			-0.16	-0.00	0.70			0.01	1.50
Variance 2			0.02	0.00	-0.11			-0.02	-1.65

Notes

PZ-6S Sample time 1350. Weather overcast, temp 60F

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-07 10:35:04

Project Information:

Operator Name Terrell Parker  
Company Name Amex Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-7D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 352760  
Turbidity Make/Model Hach 2100 Q S/N 16040C049793

Pump Information:

Pump Model/Type QED Sample Pro w/PE bladder  
Tubing Type PE  
Tubing Diameter 0.170 in  
Tubing Length 58.5 ft  
Pump placement from TOC 55.5 ft

Well Information:

Well ID PZ-7D  
Well diameter 2 in  
Well Total Depth 60.37 ft  
Screen Length 10 ft  
Depth to Water 32.53 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4511102 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.12 in  
Total Volume Pumped 17 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:09:04	3300.37	19.94	6.85	630.61	5.75	32.65	0.27	-24.63
Last 5	10:14:04	3600.37	19.90	6.85	630.38	5.24	32.65	0.24	-22.67
Last 5	10:19:04	3900.37	19.94	6.85	630.45	4.65	32.65	0.21	-25.07
Last 5	10:24:04	4200.37	19.97	6.85	630.30	4.10	32.65	0.19	-26.97
Last 5	10:29:04	4500.37	19.94	6.85	629.51	3.55	32.65	0.17	-27.27
Variance 0			0.04	0.00	0.07			-0.03	-2.40
Variance 1			0.02	0.00	-0.15			-0.02	-1.91
Variance 2			-0.03	-0.00	-0.79			-0.02	-0.30

Notes

Overcast, light breeze from S, 62 deg. F. Sample time: 10:30 + Dup-01.

Grab Samples

PZ-7D  
Groundwater  
Dup-01  
Groundwater  
PZ-7D  
Groundwater

Product Name: Low-Flow System

Date: 2016-12-07 13:17:36

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-14  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 352760  
Turbidity Make/Model Hach 2100 Q S/N 16040C049793

Pump Information:

Pump Model/Type QED Sample Pro w/PE bladder  
Tubing Type PE  
Tubing Diameter 0.170 in  
Tubing Length 56 ft  
Pump placement from TOC 50.8 ft

Well Information:

Well ID PZ-14  
Well diameter 2 in  
Well Total Depth 53.2 ft  
Screen Length 10 ft  
Depth to Water 45.55 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4399517 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.31 in  
Total Volume Pumped 14.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:52:51	2400.02	19.96	6.84	510.69	4.80	45.86	0.39	-28.16
Last 5	12:57:51	2700.10	19.94	6.85	510.41	4.49	45.86	0.41	-25.86
Last 5	13:02:51	3000.10	19.93	6.85	510.30	4.13	45.86	0.42	-23.44
Last 5	13:07:51	3300.10	19.94	6.84	510.55	4.07	45.86	0.43	-22.91
Last 5	13:12:51	3600.10	20.00	6.85	509.53	3.54	45.86	0.44	-21.47
Variance 0			-0.02	-0.00	-0.11			0.01	2.41
Variance 1			0.02	-0.00	0.24			0.01	0.53
Variance 2			0.05	0.00	-1.01			0.01	1.45

Notes

Overcast, light breeze from S, 65 deg. F. Collect samples at 13:15.

Grab Samples

PZ-14  
Groundwater

Product Name: Low-Flow System

Date: 2016-12-07 13:14:05

Project Information:

Operator Name EVER GUILLEN  
Company Name AMEC FOSTER WHEELER  
Project Name MITCHELL PHASE II CCR GW  
Site Name PZ-15  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369807  
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED BLADDER  
Tubing Type HDPE  
Tubing Diameter 0.17 in  
Tubing Length 86 ft

Pump placement from TOC 78 ft

Well Information:

Well ID PZ-15  
Well diameter 2 in  
Well Total Depth 83.5 ft  
Screen Length 10 ft  
Depth to Water 29.74 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.5738544 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.16 in  
Total Volume Pumped 37 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	12:45:08	9906.73	21.45	7.12	472.07	5.64	29.90	0.08	-72.08
Last 5	12:50:08	10206.74	21.37	7.13	472.55	5.20	29.90	0.08	-70.87
Last 5	12:55:08	10506.73	21.33	7.13	472.55	4.86	29.90	0.08	-70.38
Last 5	13:00:08	10806.73	21.33	7.13	473.12	4.74	29.90	0.08	-70.88
Last 5	13:05:08	11106.73	21.30	7.13	472.84	4.73	29.90	0.08	-71.01
Variance 0			-0.04	-0.00	0.00			-0.00	0.50
Variance 1			-0.00	-0.00	0.57			0.00	-0.50
Variance 2			-0.02	0.00	-0.28			-0.00	-0.13

Notes

Sample time = 1310 weather = cold, humid, cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-07 17:21:44

Project Information:

Operator Name EVER GUILLEN  
Company Name AMEC FOSTER WHEELER  
Project Name MITCHELL CCR GW  
Site Name PZ-16  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369807  
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED BLADDER  
Tubing Type HDPE  
Tubing Diameter 0.17 in  
Tubing Length 58 ft

Pump placement from TOC 48.5 ft

Well Information:

Well ID PZ-16  
Well diameter 2 in  
Well Total Depth 53.5 ft  
Screen Length 10 ft  
Depth to Water 34.31 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4488785 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 30 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	16:54:02	7799.78	19.92	7.31	445.18	5.84	34.31	5.42	-1.75
Last 5	16:59:02	8099.78	19.86	7.30	445.00	5.07	34.31	5.48	-2.29
Last 5	17:04:02	8399.78	19.86	7.30	446.08	4.81	34.31	5.39	-3.17
Last 5	17:09:02	8699.66	19.86	7.30	444.52	4.99	34.31	5.50	-3.05
Last 5	17:14:02	8999.66	19.86	7.30	445.48	4.72	34.31	5.46	-3.34
Variance 0			0.00	-0.00	1.08			-0.09	-0.87
Variance 1			0.00	0.00	-1.56			0.11	0.12
Variance 2			-0.00	-0.00	0.97			-0.05	-0.29

Notes

Weather = cool, humid, cloudy - sample time =1720

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-08 10:51:58

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II CCR GW  
Site Name PZ-17  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 408206  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump  
Tubing Type HDPE  
Tubing Diameter 0.17 in  
Tubing Length 63 ft

Pump placement from TOC 57.3 ft

Well Information:

Well ID PZ-17  
Well diameter 2 in  
Well Total Depth 62.65 ft  
Screen Length 10 ft  
Depth to Water 32.79 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4711957 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	10:26:06	2400.03	20.24	6.95	651.96	8.48	32.87	0.13	-145.21
Last 5	10:31:06	2699.94	20.04	6.95	655.57	6.06	32.87	0.12	-163.88
Last 5	10:36:06	2999.94	19.83	6.95	654.50	4.85	32.87	0.12	-166.42
Last 5	10:41:06	3299.94	20.10	6.95	653.23	4.28	32.87	0.10	-153.44
Last 5	10:46:06	3599.94	20.21	6.95	654.11	3.60	32.87	0.10	-150.46
Variance 0			-0.22	0.00	-1.06			0.00	-2.54
Variance 1			0.28	-0.00	-1.28			-0.02	12.98
Variance 2			0.10	0.00	0.89			-0.00	2.98

Notes

DUP-2 collected.  
Sample PZ-17 time 1048. Partly sunny, temp 55C.

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-08 14:49:17

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II CCR  
Site Name PZ-18  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 408206  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump  
Tubing Type HDPE  
Tubing Diameter 0.17 in  
Tubing Length 64 ft

Pump placement from TOC 58.2 ft

Well Information:

Well ID PZ-18  
Well diameter 2 in  
Well Total Depth 63.18 ft  
Screen Length 10 ft  
Depth to Water 29.24 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4756591 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 21 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	14:23:59	5099.95	21.00	6.90	669.38	6.73	29.30	0.08	-102.60
Last 5	14:28:59	5399.95	20.84	6.90	669.12	5.46	29.30	0.08	-100.72
Last 5	14:33:59	5699.95	20.88	6.91	670.34	4.67	29.30	0.08	-99.76
Last 5	14:38:59	5999.95	20.83	6.90	669.94	4.32	29.30	0.07	-98.11
Last 5	14:43:59	6300.02	20.84	6.90	669.96	3.96	29.30	0.07	-96.71
Variance 0			0.05	0.00	1.22			-0.00	0.96
Variance 1			-0.05	-0.00	-0.40			-0.01	1.64
Variance 2			0.00	-0.00	0.02			0.00	1.40

Notes

PZ-18 Sample time 1445. Weather partly sunny, temp 60F.

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-08 11:54:28

Project Information:

Operator Name EVER GUILLEN  
Company Name AMEC FOSTER WHEELER  
Project Name MITCHELL PHASE II CCR GW  
Site Name PZ-19  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369807  
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED BLADDER  
Tubing Type HDPE  
Tubing Diameter 0.17 in  
Tubing Length 67 ft

Pump placement from TOC 57.5 ft

Well Information:

Well ID PZ-19  
Well diameter 2 in  
Well Total Depth 62.7 ft  
Screen Length 10 ft  
Depth to Water 31.94 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4890493 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 24 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	11:30:03	6002.58	20.23	6.62	847.36	5.81	31.94	3.64	293.58
Last 5	11:35:03	6302.58	20.24	6.61	849.67	5.32	31.94	3.63	210.13
Last 5	11:40:03	6602.58	20.50	6.61	851.95	4.94	31.94	3.51	170.98
Last 5	11:45:03	6902.58	20.39	6.61	852.61	4.59	31.94	3.50	158.39
Last 5	11:50:03	7202.65	20.35	6.61	852.89	4.17	31.94	3.67	125.14
Variance 0			0.26	-0.00	2.28			-0.12	-39.15
Variance 1			-0.11	0.00	0.66			-0.01	-12.59
Variance 2			-0.04	-0.00	0.28			0.17	-33.25

Notes

Weather = cold, humid, clear-sample time = 1155

Grab Samples



Product Name: Low-Flow System

Date: 2016-12-07 15:43:17

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-23  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 352760  
Turbidity Make/Model Hach 2100 Q S/N 16040C049793

Pump Information:

Pump Model/Type QED Sample Pro w/PE bladder  
Tubing Type PE  
Tubing Diameter 0.170 in  
Tubing Length 62.5 ft

Pump placement from TOC 58.6 ft

Well Information:

Well ID PZ-23  
Well diameter 2 in  
Well Total Depth 63.6 ft  
Screen Length 10 ft  
Depth to Water 53.18 ft

Pumping Information:

Final Pumping Rate 80 mL/min  
Total System Volume 0.4689639 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.22 in  
Total Volume Pumped 4.7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	15:19:07	2100.02	19.34	6.64	696.17	5.74	53.40	0.58	30.32
Last 5	15:24:07	2400.02	19.41	6.64	695.94	4.68	53.40	0.58	30.03
Last 5	15:29:07	2700.03	19.41	6.64	694.94	4.54	53.40	0.58	29.99
Last 5	15:34:07	3000.02	19.37	6.64	692.90	4.50	53.40	0.57	30.68
Last 5	15:39:08	3300.82	19.29	6.64	694.70	4.40	53.40	0.58	31.30
Variance 0			-0.00	-0.00	-0.99			-0.00	-0.04
Variance 1			-0.04	0.00	-2.04			-0.01	0.69
Variance 2			-0.08	-0.00	1.80			0.01	0.62

Notes

Overcast, light breeze from S, 68 deg. F. Sample time:15:45.

Grab Samples

PZ-23  
Groundwater

Product Name: Low-Flow System

Date: 2016-12-08 14:16:27

Project Information:

Operator Name EVER GUILLEN  
Company Name AMEC FOSTER WHEELER  
Project Name MITCHELL PHASE II CCR GW  
Site Name PZ-25  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369807  
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED BLADDER  
Tubing Type HDPE  
Tubing Diameter 0.17 in  
Tubing Length 68 ft

Pump placement from TOC 58.0 ft

Well Information:

Well ID PZ-25  
Well diameter 2 in  
Well Total Depth 63.3 ft  
Screen Length 10 ft  
Depth to Water 28.55 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4935128 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.19 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	13:52:03	600.03	20.35	7.00	521.88	2.90	28.74	0.20	-82.73
Last 5	13:57:03	899.90	20.25	6.99	521.58	2.18	28.74	0.17	-83.85
Last 5	14:02:03	1199.90	20.26	6.98	522.62	1.72	28.74	0.15	-85.45
Last 5	14:07:03	1499.90	20.48	6.98	523.48	1.96	28.74	0.14	-87.24
Last 5	14:12:04	1800.90	20.35	6.98	523.21	1.28	28.74	0.12	-88.23
Variance 0			0.01	-0.01	1.04			-0.02	-1.60
Variance 1			0.22	-0.00	0.87			-0.01	-1.79
Variance 2			-0.13	-0.00	-0.27			-0.01	-0.99

Notes

Weather = cold, humid, clear - sample time = 1415

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-06 14:23:14

Project Information:

Operator Name Terrell Parker  
Company Name Amex Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-31  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 352760  
Turbidity Make/Model Hach 2100 Q S/N 16040C049793

Pump Information:

Pump Model/Type QED Sample Pro w/PE bladder  
Tubing Type PE  
Tubing Diameter 0.170 in  
Tubing Length 62 ft  
Pump placement from TOC 56.60 ft

Well Information:

Well ID PZ-31  
Well diameter 2 in  
Well Total Depth 61.60 ft  
Screen Length 10 ft  
Depth to Water 40.50 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4667322 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.39 in  
Total Volume Pumped 23.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:59:41	4799.89	21.10	7.04	459.31	5.11	40.89	0.23	-51.95
Last 5	14:04:41	5099.90	21.06	7.04	459.59	5.16	40.89	0.23	-51.20
Last 5	14:09:41	5399.89	20.99	7.04	459.10	4.84	40.89	0.24	-50.15
Last 5	14:14:41	5699.89	21.10	7.04	459.00	3.70	40.89	0.24	-50.06
Last 5	14:19:41	5999.89	21.08	7.04	458.50	3.12	40.89	0.25	-48.69
Variance 0			-0.07	-0.00	-0.50			0.01	1.05
Variance 1			0.11	0.00	-0.10			0.00	0.09
Variance 2			-0.02	0.00	-0.49			0.00	1.37

Notes

Clear, sunny, windy, 78 degrees F. Sample time: 14:20.

Grab Samples

PZ-31  
Groundwater

Product Name: Low-Flow System

Date: 2016-12-07 10:52:07

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Mitchell Phase II CCR  
Site Name PZ-32  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 408206  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump  
Tubing Type HDPE  
Tubing Diameter 0.17 in  
Tubing Length 66 ft

Pump placement from TOC 60 ft

Well Information:

Well ID PZ-32  
Well diameter 2 in  
Well Total Depth 65.3 ft  
Screen Length 10 ft  
Depth to Water 30.48 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4845859 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.1 in  
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	10:18:29	2700.02	17.90	7.28	324.32	6.10	30.51	1.01	-69.23
Last 5	10:23:29	2999.95	17.90	7.28	324.48	5.30	30.51	0.99	-70.39
Last 5	10:28:29	3299.95	17.84	7.28	324.13	4.54	30.51	0.99	-71.65
Last 5	10:38:30	3900.95	17.90	7.29	323.84	4.03	30.51	0.97	-74.21
Last 5	10:43:33	4203.95	17.86	7.29	324.01	3.76	30.51	0.97	-74.01
Variance 0			-0.06	-0.00	-0.34			-0.00	-1.26
Variance 1			0.06	0.01	-0.29			-0.02	-2.56
Variance 2			-0.04	0.00	0.17			-0.00	0.19

Notes

Sample PZ-32 time 1045. Weather overcast, temp 60F.

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-08 11:27:01

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-33  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 352760  
Turbidity Make/Model Hach 2100 Q S/N 16040C049793

Pump Information:

Pump Model/Type QED Sample Pro S/N 12785  
Tubing Type PE  
Tubing Diameter 0.170 in  
Tubing Length 73 ft  
Pump placement from TOC 68.6 ft

Well Information:

Well ID PZ-33  
Well diameter 2 in  
Well Total Depth 73.60 ft  
Screen Length 10 ft  
Depth to Water 50.31 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.51583 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.27 in  
Total Volume Pumped 12.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:01:27	2100.02	20.57	6.86	723.74	7.20	50.58	0.16	-103.21
Last 5	11:06:27	2400.02	20.66	6.86	721.96	6.16	50.58	0.16	-100.35
Last 5	11:11:27	2700.08	20.63	6.86	721.90	4.57	50.58	0.15	-97.98
Last 5	11:16:28	3001.05	20.68	6.86	721.85	3.73	50.58	0.14	-95.39
Last 5	11:21:28	3300.90	20.58	6.86	721.49	2.97	50.58	0.13	-92.32
Variance 0			-0.03	-0.00	-0.07			-0.01	2.36
Variance 1			0.06	-0.00	-0.04			-0.01	2.59
Variance 2			-0.10	-0.00	-0.37			-0.01	3.07

Notes

Clear, sunny, light breeze, 62 degrees F. Sample time: 11:25

Grab Samples

PZ-33  
Groundwater

Product Name: Low-Flow System

Date: 2017-03-21 12:46:31

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-1D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micropurge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 73.7 ft

Pump placement from TOC 76.7 ft

Well Information:

Well ID PZ-1D  
Well diameter .25 in  
Well Total Depth 81.71 ft  
Screen Length 10 ft  
Depth to Water 50.83 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.191406 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.01 in  
Total Volume Pumped 2.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	12:21:29	2100.02	20.25	7.52	236.16	2.52	52.07	3.34	154.26
Last 5	12:26:30	2401.02	20.25	7.52	236.42	2.23	52.07	3.39	152.27
Last 5	12:31:30	2701.02	20.30	7.53	238.15	1.66	52.07	3.69	153.71
Last 5	12:36:30	3000.95	20.32	7.53	239.56	1.68	52.07	3.53	159.17
Last 5	12:41:30	3300.95	20.38	7.54	237.41	1.48	52.07	3.31	159.79
Variance 0			0.05	0.01	1.72			0.30	1.44
Variance 1			0.02	-0.00	1.41			-0.16	5.45
Variance 2			0.06	0.01	-2.15			-0.22	0.63

Notes

Sample PZ-1D time 1242

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-21 13:11:11

Project Information:

Operator Name Terrell Parker  
Company Name Amex Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-2S  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100Q s/n 13060C026218

Pump Information:

Pump Model/Type QED dedicated bladder pump  
Tubing Type PE  
Tubing Diameter .25 in  
Tubing Length 53.83 ft

Pump placement from TOC 48.83 ft

Well Information:

Well ID PZ-2S  
Well diameter 2 in  
Well Total Depth 57.83 ft  
Screen Length 10 ft  
Depth to Water 34.47 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.9996065 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.44 in  
Total Volume Pumped 18.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:46:07	2400.02	19.33	8.04	253.32	2.06	34.91	5.75	26.97
Last 5	12:51:07	2700.02	19.41	7.98	254.12	2.08	34.91	5.76	27.42
Last 5	12:56:07	3000.02	19.46	7.95	254.43	2.00	34.91	5.72	27.82
Last 5	13:01:07	3299.90	19.53	7.92	253.83	1.76	34.91	5.79	28.22
Last 5	13:06:07	3599.90	19.61	7.88	254.94	1.47	34.91	5.79	28.75
Variance 0			0.04	-0.04	0.31			-0.04	0.39
Variance 1			0.07	-0.02	-0.60			0.07	0.40
Variance 2			0.08	-0.04	1.12			0.00	0.54

Notes

Sample time = 13:07

Grab Samples

PZ-2S  
Groundwater

Product Name: Low-Flow System

Date: 2017-03-22 11:06:32

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-6S  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micropurge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 43.4 ft

Pump placement from TOC 46.4 ft

Well Information:

Well ID PZ-6S  
Well diameter .25 in  
Well Total Depth 51.40 ft  
Screen Length 10 ft  
Depth to Water 15.77 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.8989286 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 9.84 in  
Total Volume Pumped 3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	10:35:16	900.02	19.99	5.26	151.55	7.73	18.61	0.87	253.11
Last 5	10:40:16	1200.02	20.08	5.22	149.06	4.62	19.04	0.71	250.54
Last 5	10:45:16	1500.03	20.07	5.21	148.52	3.39	19.38	0.77	250.62
Last 5	10:50:16	1800.02	20.04	5.22	146.78	2.38	19.79	0.69	259.05
Last 5	10:55:16	2100.02	20.08	5.24	148.64	2.49	20.20	0.69	270.63
Variance 0			-0.01	-0.01	-0.55			0.05	0.08
Variance 1			-0.03	0.01	-1.74			-0.08	8.42
Variance 2			0.04	0.02	1.87			0.00	11.58

Notes

PZ-6S time 1056

Grab Samples



Product Name: Low-Flow System

Date: 2017-03-22 14:08:47

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-7D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100Q s/n 13060C026218

Pump Information:

Pump Model/Type QED dedicated bladder pump  
Tubing Type PE  
Tubing Diameter .25 in  
Tubing Length 57.4 ft  
Pump placement from TOC 53.4 ft

Well Information:

Well ID PZ-7D  
Well diameter 2 in  
Well Total Depth 60.37 ft  
Screen Length 10 ft  
Depth to Water 33.52 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 1.034067 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.11 in  
Total Volume Pumped 9.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:45:40	900.03	21.64	7.03	614.04	5.62	33.63	0.18	-64.56
Last 5	13:50:40	1200.03	21.49	7.02	614.36	4.03	33.63	0.18	-61.71
Last 5	13:55:40	1500.02	21.42	7.01	614.07	3.19	33.63	0.19	-59.58
Last 5	14:00:40	1800.02	21.55	7.00	614.66	3.48	33.63	0.18	-57.48
Last 5	14:05:40	2100.03	21.45	6.99	614.31	2.86	33.63	0.18	-55.50
Variance 0			-0.07	-0.01	-0.28			0.00	2.13
Variance 1			0.13	-0.01	0.59			-0.00	2.10
Variance 2			-0.09	-0.00	-0.35			0.00	1.97

Notes

Sample time = 14:08

Grab Samples

PZ-7D  
Groundwater

Product Name: Low-Flow System

Date: 2017-03-21 12:45:06

Project Information:

Operator Name Ever Guillen  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369807  
Turbidity Make/Model Hach 2100 Q s/n 18136

Pump Information:

Pump Model/Type QED  
Tubing Type PE  
Tubing Diameter .25 in  
Tubing Length 45.2 ft

Pump placement from TOC 48.2 ft

Well Information:

Well ID PZ-14  
Well diameter 2 in  
Well Total Depth 53.2 ft  
Screen Length 10 ft  
Depth to Water 43.03 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.9163035 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.24 in  
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:21:18	1800.02	20.81	7.05	450.30	2.06	43.27	1.13	134.17
Last 5	12:26:18	2100.02	20.88	7.04	450.92	1.32	43.27	1.04	119.99
Last 5	12:31:18	2400.02	20.98	7.03	450.55	1.19	43.27	0.97	115.82
Last 5	12:36:18	2700.02	20.97	7.03	450.10	1.05	43.27	0.92	105.94
Last 5	12:41:18	2999.93	21.06	7.04	450.74	1.02	43.27	0.90	89.13
Variance 0			0.10	-0.00	-0.37			-0.08	-4.16
Variance 1			-0.01	-0.00	-0.45			-0.05	-9.88
Variance 2			0.09	0.00	0.64			-0.02	-16.81

Notes

Sampled @ 1245

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-22 14:11:38

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-15  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micropurge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 75.22 ft

Pump placement from TOC 78.22 ft

Well Information:

Well ID PZ-15  
Well diameter .25 in  
Well Total Depth 83.22 ft  
Screen Length 10 ft  
Depth to Water 30.75 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.206079 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	13:45:13	1500.10	24.32	7.03	521.55	6.89	31.29	0.19	-90.75
Last 5	13:50:13	1800.10	24.41	7.03	519.72	5.45	31.29	0.19	-90.36
Last 5	13:55:13	2100.10	24.46	7.04	518.82	4.73	31.29	0.19	-86.31
Last 5	14:00:13	2400.11	24.58	7.04	514.60	4.45	31.29	0.21	-84.89
Last 5	14:05:13	2700.10	24.43	7.04	515.96	4.47	31.29	0.23	-77.08
Variance 0			0.05	0.01	-0.89			-0.00	4.06
Variance 1			0.13	-0.00	-4.22			0.01	1.41
Variance 2			-0.15	0.00	1.36			0.02	7.81

Notes

PZ-15 time1406. Also collected DUP-01

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-22 11:19:03

Project Information:

Operator Name Ever Guillen  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369807  
Turbidity Make/Model Hach 2100 Q s/n 18136

Pump Information:

Pump Model/Type QED  
Tubing Type PE  
Tubing Diameter .25 in  
Tubing Length 45.19 ft

Pump placement from TOC 49.19 ft

Well Information:

Well ID PZ-16  
Well diameter 2 in  
Well Total Depth 53.19 ft  
Screen Length 10 ft  
Depth to Water 34.17 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.9162069 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.16 in  
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:52:50	1501.03	21.09	7.16	437.99	2.33	34.33	0.44	41.23
Last 5	10:57:50	1801.03	21.06	7.17	437.92	1.87	34.33	0.41	33.29
Last 5	11:02:50	2101.03	21.15	7.19	437.74	1.71	34.33	0.39	25.46
Last 5	11:07:50	2401.03	21.19	7.19	438.37	1.08	34.33	0.37	19.99
Last 5	11:12:51	2702.02	21.23	7.20	437.92	0.68	34.33	0.37	15.47
Variance 0			0.09	0.02	-0.18			-0.02	-7.83
Variance 1			0.04	0.00	0.63			-0.02	-5.47
Variance 2			0.03	0.01	-0.45			-0.00	-4.52

Notes

Sampled @ 1115

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-22 10:46:17

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-17  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100Q s/n 13060C026218

Pump Information:

Pump Model/Type QED dedicated bladder pump  
Tubing Type PE  
Tubing Diameter .25 in  
Tubing Length 49.7 ft  
Pump placement from TOC 57.7 ft

Well Information:

Well ID PZ-17  
Well diameter 2 in  
Well Total Depth 62.70 ft  
Screen Length 10 ft  
Depth to Water 32.83 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.9597408 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.1 in  
Total Volume Pumped 9.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:23:09	900.02	20.21	7.08	648.23	1.96	32.93	0.17	-135.47
Last 5	10:28:09	1200.02	20.22	7.06	648.51	1.42	32.93	0.17	-138.65
Last 5	10:33:09	1500.02	20.30	7.06	648.59	1.25	32.93	0.18	-141.51
Last 5	10:38:09	1800.02	20.30	7.06	648.79	0.97	32.93	0.19	-143.90
Last 5	10:43:09	2100.02	20.35	7.05	648.46	0.78	32.93	0.19	-147.35
Variance 0			0.08	-0.01	0.07			0.01	-2.87
Variance 1			0.00	-0.00	0.20			0.01	-2.38
Variance 2			0.05	-0.00	-0.33			0.01	-3.45

Notes

Sample time = 10:44

Grab Samples

PZ-17  
Groundwater

Product Name: Low-Flow System

Date: 2017-03-22 12:03:11

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-18  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100Q s/n 13060C026218

Pump Information:

Pump Model/Type QED dedicated bladder pump  
Tubing Type PE  
Tubing Diameter .25 in  
Tubing Length 58.18 ft

Pump placement from TOC 55.18 ft

Well Information:

Well ID PZ-18  
Well diameter 2 in  
Well Total Depth 63.18 ft  
Screen Length 10 ft  
Depth to Water 30.13 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.041596 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.14 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:39:20	600.03	22.04	7.01	669.62	9.50	30.23	0.31	-109.03
Last 5	11:44:20	900.02	22.10	7.00	670.99	6.52	30.24	0.25	-111.57
Last 5	11:49:20	1200.03	22.11	7.00	670.68	4.78	30.24	0.24	-112.94
Last 5	11:54:20	1500.02	22.13	7.00	671.13	3.19	30.24	0.23	-112.50
Last 5	11:59:20	1800.02	22.27	7.00	671.09	2.10	30.24	0.22	-111.71
Variance 0			0.01	-0.00	-0.30			-0.01	-1.37
Variance 1			0.02	-0.00	0.45			-0.01	0.44
Variance 2			0.14	-0.00	-0.04			-0.01	0.80

Notes

Sample time = 12:00

Grab Samples

PZ-18  
Groundwater

Product Name: Low-Flow System

Date: 2017-03-23 10:06:16

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-19  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micropurge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 64.63 ft

Pump placement from TOC 67.63 ft

Well Information:

Well ID PZ-19  
Well diameter .25 in  
Well Total Depth 62.63 ft  
Screen Length 10 ft  
Depth to Water 31.75 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.103856 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5%	+/- 0.1	+/- 5%	+/- 0		+/- 0.2	+/- 0
Last 5	09:41:28	1200.02	20.12	6.71	789.09	6.94	32.33	0.37	3.58
Last 5	09:46:28	1500.03	20.20	6.70	792.69	5.84	32.33	0.31	5.84
Last 5	09:51:28	1800.02	20.13	6.69	795.58	4.45	32.33	0.26	5.77
Last 5	09:56:28	2100.02	20.12	6.69	797.92	3.25	32.33	0.23	7.11
Last 5	10:01:28	2400.03	20.15	6.69	800.85	2.08	32.33	0.22	5.41
Variance 0			-0.07	-0.00	2.89			-0.05	-0.08
Variance 1			-0.01	-0.00	2.34			-0.03	1.34
Variance 2			0.03	-0.00	2.93			-0.01	-1.71

Notes

PZ-19 time1002

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-21 16:32:35

Project Information:

Operator Name Ever Guillen  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-23  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369807  
Turbidity Make/Model Hach 2100 Q s/n 18136

Pump Information:

Pump Model/Type QED  
Tubing Type PE  
Tubing Diameter .25 in  
Tubing Length 55.7 ft

Pump placement from TOC 58.6 ft

Well Information:

Well ID PZ-23  
Well diameter 2 in  
Well Total Depth 63.6 ft  
Screen Length 10 ft  
Depth to Water 49.10 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 1.017657 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.33 in  
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	16:06:06	1200.08	24.96	6.74	655.29	6.53	49.37	1.49	87.49
Last 5	16:11:06	1500.04	24.93	6.73	653.12	4.41	49.39	1.44	91.66
Last 5	16:16:06	1800.02	24.50	6.73	655.76	2.72	49.39	1.32	93.23
Last 5	16:21:06	2100.02	24.34	6.72	649.11	1.31	49.41	1.29	94.81
Last 5	16:26:06	2400.02	24.38	6.73	644.29	1.63	49.43	1.28	94.28
Variance 0			-0.43	-0.01	2.64			-0.12	1.56
Variance 1			-0.16	-0.00	-6.65			-0.03	1.59
Variance 2			0.05	0.01	-4.82			-0.00	-0.53

Notes

Sampled @ 1630

Grab Samples



Product Name: Low-Flow System

Date: 2017-03-22 14:40:04

Project Information:

Operator Name Ever Guillen  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369807  
Turbidity Make/Model Hach 2100 Q s/n 18136

Pump Information:

Pump Model/Type QED  
Tubing Type PE  
Tubing Diameter .25 in  
Tubing Length 55.10 ft

Pump placement from TOC 58.19 ft

Well Information:

Well ID PZ-25  
Well diameter 2 in  
Well Total Depth 63.19 ft  
Screen Length 10 ft  
Depth to Water 30.88 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.011865 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.18 in  
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	14:13:08	1500.03	21.91	7.17	469.14	14.30	31.06	1.11	-127.06
Last 5	14:18:08	1800.03	22.07	7.16	470.72	9.13	31.06	0.91	-128.64
Last 5	14:23:08	2100.70	22.03	7.16	471.78	7.32	31.06	0.80	-129.44
Last 5	14:28:08	2400.70	21.95	7.16	467.70	4.85	31.06	0.61	-130.15
Last 5	14:33:09	2701.70	22.09	7.16	466.22	1.32	31.06	0.52	-130.80
Variance 0			-0.04	0.00	1.06			-0.11	-0.80
Variance 1			-0.07	0.00	-4.08			-0.18	-0.71
Variance 2			0.13	-0.00	-1.48			-0.09	-0.66

Notes

Sampled@ 1435

Grab Samples

PZ-25  
Groundwater

Product Name: Low-Flow System

Date: 2017-03-21 15:29:49

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-31  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micropurge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 53.6 ft

Pump placement from TOC 56.6 ft

Well Information:

Well ID PZ-31  
Well diameter .25 in  
Well Total Depth 61.6 ft  
Screen Length 10 ft  
Depth to Water 37.01 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.9973864 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	15:03:47	2100.02	21.37	7.02	460.79	6.86	37.59	2.58	144.10
Last 5	15:08:47	2399.96	21.36	7.02	461.79	5.21	37.59	2.59	150.53
Last 5	15:13:47	2699.96	21.50	7.02	461.93	4.89	37.59	2.59	145.12
Last 5	15:18:47	2999.96	21.44	7.01	461.55	3.78	37.59	2.58	122.60
Last 5	15:23:47	3299.96	21.43	7.01	459.99	3.46	37.59	2.57	116.25
Variance 0			0.13	-0.00	0.14			0.00	-5.40
Variance 1			-0.05	-0.00	-0.38			-0.01	-22.53
Variance 2			-0.01	0.00	-1.56			-0.01	-6.35

Notes

PZ-31 time 1524

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-23 12:14:15

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-32  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100Q s/n 13060C026218

Pump Information:

Pump Model/Type QED dedicated bladder pump  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 65 ft  
Pump placement from TOC 60.3 ft

Well Information:

Well ID PZ-32  
Well diameter 2 in  
Well Total Depth 65.30 ft  
Screen Length 10 ft  
Depth to Water 37.04 ft

Pumping Information:

Final Pumping Rate 225 mL/min  
Total System Volume 0.4801225 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.02 in  
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:51:14	3300.07	18.35	7.27	318.75	3.23	37.06	1.00	28.57
Last 5	11:56:14	3600.07	18.34	7.27	318.99	4.46	37.06	1.07	28.84
Last 5	12:01:14	3900.07	18.39	7.26	319.18	2.97	37.06	1.10	29.33
Last 5	12:06:14	4200.07	18.42	7.27	319.13	1.81	37.06	1.16	29.43
Last 5	12:11:14	4500.06	18.43	7.26	319.16	2.95	37.06	1.26	29.61
Variance 0			0.04	-0.00	0.19			0.03	0.49
Variance 1			0.03	0.00	-0.05			0.06	0.10
Variance 2			0.02	-0.00	0.03			0.10	0.18

Notes

Sample time = 12:12

Grab Samples

PZ-32  
Groundwater

Product Name: Low-Flow System

Date: 2017-03-23 15:18:50

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-33  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100Q s/n 13060C026218

Pump Information:

Pump Model/Type QED Sample Pro  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 73 ft

Pump placement from TOC 68.6 ft

Well Information:

Well ID PZ-33  
Well diameter 2 in  
Well Total Depth 73.60 ft  
Screen Length 10 ft  
Depth to Water 49.13 ft

Pumping Information:

Final Pumping Rate 225 mL/min  
Total System Volume 0.51583 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.17 in  
Total Volume Pumped 15 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	14:55:45	2700.03	20.21	6.90	721.62	7.38	49.30	0.11	-71.60
Last 5	15:00:45	3000.03	20.19	6.90	721.29	5.21	49.30	0.11	-72.66
Last 5	15:05:45	3300.03	20.16	6.90	720.57	4.41	49.30	0.10	-73.22
Last 5	15:10:45	3600.34	20.15	6.90	720.08	4.35	49.30	0.10	-74.16
Last 5	15:15:45	3900.34	20.17	6.90	719.39	3.85	49.30	0.10	-73.91
Variance 0			-0.02	-0.00	-0.72			-0.01	-0.56
Variance 1			-0.01	-0.00	-0.49			-0.00	-0.94
Variance 2			0.02	0.00	-0.69			-0.00	0.25

Notes

Sample time = 15:20

Grab Samples

PZ-33  
Groundwater

Product Name: Low-Flow System

Date: 2017-07-11 09:36:00

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell - Phase II CCR  
Site Name PZ-1D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100 Q S/N 12080C019573

Pump Information:

Pump Model/Type QED dedicated bladder  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 75 ft

Pump placement from TOC 71.71 ft

Well Information:

Well ID PZ-1D  
Well diameter 2 in  
Well Total Depth 81.71 ft  
Screen Length 10 ft  
Depth to Water 52.86 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.8147567 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 21.24 in  
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.1	+/- 5%	+/- 5		+/- 0.3	+/- 10
Last 5	09:11:14	600.03	21.19	7.29	231.51	0.87	54.63	2.99	55.20
Last 5	09:16:14	900.02	21.15	7.34	234.56	0.88	54.63	3.03	55.12
Last 5	09:21:14	1200.02	21.22	7.39	236.78	0.67	54.63	3.07	56.64
Last 5	09:26:14	1500.02	21.30	7.39	237.91	0.51	54.63	3.09	55.08
Last 5	09:31:14	1800.02	21.32	7.43	239.45	0.67	54.63	3.10	55.66
Variance 0			0.07	0.04	2.21			0.04	1.52
Variance 1			0.08	0.00	1.13			0.02	-1.56
Variance 2			0.02	0.04	1.54			0.01	0.58

Notes

Sample time: 09:32

Grab Samples

PZ-1D  
Groundwater

Product Name: Low-Flow System

Date: 2017-07-11 13:01:20

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell - Phase II CCR  
Site Name PZ-2S  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100 Q S/N 12080C019573

Pump Information:

Pump Model/Type QED dedicated bladder  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 52 ft  
Pump placement from TOC 47.83 ft

Well Information:

Well ID OZ-2S  
Well diameter 2 in  
Well Total Depth 57.83 ft  
Screen Length 10 ft  
Depth to Water 36.12 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.712098 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 6.84 in  
Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.1	+/- 5%	+/- 5		+/- 0.3	+/- 10
Last 5	12:39:29	3000.02	20.70	8.03	257.35	0.85	36.69	5.81	58.34
Last 5	12:44:29	3300.22	20.78	7.96	257.35	0.84	36.69	5.83	58.21
Last 5	12:49:29	3600.22	20.65	7.89	258.17	0.85	36.69	5.87	59.41
Last 5	12:54:29	3900.23	20.74	7.86	258.84	0.69	36.69	5.92	58.44
Last 5	12:59:29	4200.22	20.82	7.82	259.53	0.79	35.69	5.95	58.61
Variance 0			-0.12	-0.07	0.82			0.04	1.21
Variance 1			0.09	-0.03	0.67			0.05	-0.97
Variance 2			0.08	-0.05	0.69			0.03	0.17

Notes

Sample time: 13:04

Grab Samples

PZ-2S  
Groundwater

Product Name: Low-Flow System

Date: 2017-07-12 09:45:40

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell CCR GW Phase II  
Site Name PZ-7D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369549  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micropurge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 55.5 ft

Pump placement from TOC 55.4 ft

Well Information:

Well ID PZ-7D  
Well diameter 2 in  
Well Total Depth 60.37 ft  
Screen Length 10 ft  
Depth to Water 33.11 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.015727 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	09:21:49	600.06	22.69	6.83	623.33	1.91	33.81	0.20	84.86
Last 5	09:26:49	900.02	22.66	6.83	622.63	1.66	33.81	0.15	76.83
Last 5	09:31:49	1200.03	22.51	6.83	622.78	1.18	33.81	0.14	71.89
Last 5	09:36:49	1500.03	22.42	6.83	623.20	0.82	33.81	0.14	66.63
Last 5	09:41:49	1800.03	22.51	6.83	623.83	1.00	33.81	0.15	63.59
Variance 0			-0.16	0.00	0.15			-0.01	-4.94
Variance 1			-0.08	-0.00	0.42			-0.00	-5.26
Variance 2			0.09	0.00	0.63			0.01	-3.04

Notes

Sample time 0942. Purge vol 6L

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 14:19:20

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell CCR GW Phase II  
Site Name PZ-14  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369549  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micropurge  
Tubing Type HDPE  
Tubing Diameter .17 in  
Tubing Length 48.2 ft

Pump placement from TOC 48.2 ft

Well Information:

Well ID PZ-14  
Well diameter 2 in  
Well Total Depth 53.2 ft  
Screen Length 10 ft  
Depth to Water 43.53 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.695137 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3 in  
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	13:55:03	1500.03	23.37	6.90	515.06	0.47	44.09	0.61	73.72
Last 5	14:00:03	1800.03	23.64	6.89	513.52	0.20	44.09	0.53	55.74
Last 5	14:05:03	2100.04	23.66	6.89	512.81	0.32	44.10	0.48	25.23
Last 5	14:10:03	2400.03	24.19	6.88	512.48	0.28	44.10	0.46	8.31
Last 5	14:15:03	2700.03	24.37	6.88	510.79	0.27	44.10	0.45	4.13
Variance 0			0.02	-0.01	-0.71			-0.04	-30.52
Variance 1			0.53	-0.01	-0.33			-0.03	-16.91
Variance 2			0.18	-0.00	-1.69			-0.01	-4.18

Notes

Sample time 1416. Vol 9L

Grab Samples



Product Name: Low-Flow System

Date: 2017-07-12 08:44:38

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell - Phase II CCR  
Site Name PZ-15  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100 Q S/N 12080C019573

Pump Information:

Pump Model/Type QED dedicated bladder  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 79 ft  
Pump placement from TOC 78.2 ft

Well Information:

Well ID PZ-15  
Well diameter 2 in  
Well Total Depth 84.22 ft  
Screen Length 10 ft  
Depth to Water 31.34 ft

Pumping Information:

Final Pumping Rate 225 mL/min  
Total System Volume 0.8326105 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.017 in  
Total Volume Pumped 8.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.3	+/- 10
Last 5	08:22:12	600.03	23.12	7.10	503.60	1.64	31.55	0.17	-145.45
Last 5	08:27:12	900.03	23.26	7.08	503.54	1.57	31.54	0.16	-141.66
Last 5	08:32:12	1200.03	23.41	7.12	502.08	2.18	31.54	0.15	-139.58
Last 5	08:37:12	1500.03	23.44	7.12	503.52	2.22	31.54	0.15	-135.00
Last 5	08:42:12	1800.02	23.52	7.09	505.78	1.91	31.54	0.16	-130.21
Variance 0			0.15	0.04	-1.46			-0.01	2.07
Variance 1			0.03	-0.00	1.44			0.00	4.58
Variance 2			0.08	-0.03	2.26			0.01	4.79

Notes

Sample time: 8:45

Grab Samples

PZ-15  
Groundwater

Product Name: Low-Flow System

Date: 2017-07-11 14:49:28

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell - Phase II CCR  
Site Name PZ-16  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100 Q S/N 12080C019573

Pump Information:

Pump Model/Type QED dedicated bladder  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 57 ft

Pump placement from TOC 46.8 ft

Well Information:

Well ID PZ-16  
Well diameter 2 in  
Well Total Depth 53.19 ft  
Screen Length 10 ft  
Depth to Water 34.58 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.7344151 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.008 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.1	+/- 5%	+/- 5		+/- 0.3	+/- 10
Last 5	14:26:06	600.03	23.30	7.34	458.04	0.27	34.68	0.32	33.84
Last 5	14:31:06	900.03	23.02	7.33	459.28	0.28	34.68	0.31	35.56
Last 5	14:36:06	1200.02	23.15	7.33	461.35	0.31	34.58	0.31	35.33
Last 5	14:41:06	1500.03	23.29	7.33	460.56	0.22	34.68	0.30	34.85
Last 5	14:46:06	1800.02	23.04	7.31	460.42	0.27	34.68	0.31	35.11
Variance 0			0.13	0.00	2.06			0.00	-0.23
Variance 1			0.13	-0.01	-0.78			-0.00	-0.47
Variance 2			-0.24	-0.01	-0.15			0.00	0.25

Notes

Sample time: 14:45 collected Dup-02

Grab Samples

PZ-16  
Groundwater  
Dup-02  
Groundwater

Product Name: Low-Flow System

Date: 2017-07-12 10:05:22

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell - Phase II CCR  
Site Name PZ-17  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100 Q S/N 12080C019573

Pump Information:

Pump Model/Type QED dedicated bladder  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 58 ft  
Pump placement from TOC 57.7 ft

Well Information:

Well ID PZ-17  
Well diameter 2 in  
Well Total Depth 62.70 ft  
Screen Length 10 ft  
Depth to Water 33.33 ft

Pumping Information:

Final Pumping Rate 225 mL/min  
Total System Volume 0.7388785 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.09 in  
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.3	+/- 10
Last 5	09:43:21	600.03	23.03	7.07	633.44	0.35	33.44	0.35	-118.81
Last 5	09:48:21	900.03	23.06	7.07	633.15	0.30	33.44	0.29	-113.98
Last 5	09:53:21	1200.03	22.83	7.06	635.42	0.27	33.44	0.27	-109.30
Last 5	09:58:21	1500.03	22.65	7.06	635.94	0.32	33.44	0.25	-107.15
Last 5	10:03:21	1800.03	22.59	7.06	636.05	0.23	33.44	0.23	-110.08
Variance 0			-0.23	-0.01	2.27			-0.03	4.68
Variance 1			-0.19	-0.00	0.52			-0.02	2.15
Variance 2			-0.06	0.00	0.12			-0.02	-2.93

Notes

Sample time: 10:05

Grab Samples

PZ-17  
Groundwater

Product Name: Low-Flow System

Date: 2017-07-12 12:25:53

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell - Phase II CCR  
Site Name PZ-18  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100 Q S/N 12080C019573

Pump Information:

Pump Model/Type QED dedicated bladder  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 58.6 ft  
Pump placement from TOC 54.6 ft

Well Information:

Well ID PZ-18  
Well diameter 2 in  
Well Total Depth 63.18 ft  
Screen Length 10 ft  
Depth to Water 30.78 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.7415566 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.009 in  
Total Volume Pumped 10.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.3	+/- 10
Last 5	12:02:21	900.03	23.48	6.94	656.98	0.34	30.89	0.16	-72.87
Last 5	12:07:21	1200.03	23.65	6.94	658.30	0.39	30.89	0.15	-71.15
Last 5	12:12:21	1500.03	23.64	6.92	656.03	0.38	30.89	0.16	-68.44
Last 5	12:17:21	1800.03	23.60	6.95	655.21	0.32	30.89	0.16	-66.68
Last 5	12:22:21	2100.03	23.45	6.95	655.22	0.28	30.89	0.17	-63.94
Variance 0			-0.01	-0.01	-2.27			0.01	2.71
Variance 1			-0.04	0.02	-0.82			0.00	1.76
Variance 2			-0.16	0.00	0.01			0.01	2.73

Notes

Sample time: 12:25

Grab Samples

PZ-18  
Groundwater

Product Name: Low-Flow System

Date: 2017-07-12 14:20:16

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell CCR GW Phase II  
Site Name PZ-19  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369549  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micropurge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 57.6 ft

Pump placement from TOC 57.6 ft

Well Information:

Well ID PZ-19  
Well diameter 2 in  
Well Total Depth 62.63 ft  
Screen Length 10 ft  
Depth to Water 31.98 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.035997 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	13:56:37	900.03	23.60	6.76	793.21	0.60	32.70	0.50	-81.25
Last 5	14:01:37	1200.03	23.63	6.75	794.28	0.35	32.70	0.39	-76.26
Last 5	14:06:37	1500.03	23.73	6.73	802.06	0.32	32.70	0.34	-73.30
Last 5	14:11:37	1800.30	23.36	6.71	809.48	0.63	32.70	0.29	-67.98
Last 5	14:16:37	2100.30	23.27	6.69	817.47	0.24	32.70	0.25	-64.57
Variance 0			0.10	-0.02	7.78			-0.05	2.96
Variance 1			-0.37	-0.02	7.42			-0.05	5.33
Variance 2			-0.09	-0.02	7.99			-0.04	3.41

Notes

Sample time 1417. Vol 7L

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 15:53:34

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell CCR GW Phase II  
Site Name PZ-23  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369549  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micropurge  
Tubing Type HDPE  
Tubing Diameter .17 in  
Tubing Length 58.6 ft

Pump placement from TOC 48.2 ft

Well Information:

Well ID PZ-23  
Well diameter 2 in  
Well Total Depth 63.6 ft  
Screen Length 10 ft  
Depth to Water 50.76 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.7415566 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3 in  
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	15:30:01	600.03	24.67	6.67	740.62	4.67	51.24	1.74	91.85
Last 5	15:35:01	900.03	24.64	6.66	737.66	2.09	51.24	1.64	91.68
Last 5	15:40:01	1200.03	24.52	6.66	739.56	1.21	51.24	1.61	94.00
Last 5	15:45:01	1500.03	24.42	6.66	737.99	0.80	51.24	1.58	94.87
Last 5	15:50:01	1800.03	24.49	6.66	737.59	1.69	51.24	1.54	95.12
Variance 0			-0.12	-0.01	1.90			-0.03	2.32
Variance 1			-0.10	-0.00	-1.57			-0.03	0.87
Variance 2			0.07	-0.00	-0.40			-0.04	0.25

Notes

Sample time 1551. Vol 3L

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 16:39:21

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell - Phase II CCR  
Site Name PZ-25  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100 Q S/N 12080C019573

Pump Information:

Pump Model/Type QED dedicated bladder  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 57 ft  
Pump placement from TOC 56.79 ft

Well Information:

Well ID PZ-25  
Well diameter 2 in  
Well Total Depth 63.19 ft  
Screen Length 10 ft  
Depth to Water 31.57 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.7344151 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.007 in  
Total Volume Pumped 9.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.3	+/- 10
Last 5	16:17:10	600.03	23.61	7.15	489.90	0.46	31.65	0.23	-124.31
Last 5	16:22:10	900.02	23.14	7.13	492.17	0.36	31.65	0.21	-124.53
Last 5	16:27:10	1200.03	23.15	7.15	491.90	0.28	31.65	0.19	-124.69
Last 5	16:32:10	1500.03	23.30	7.16	492.87	0.26	31.65	0.17	-124.47
Last 5	16:37:10	1800.03	23.04	7.15	494.64	0.25	31.65	0.18	-124.09
Variance 0			0.01	0.01	-0.27			-0.02	-0.15
Variance 1			0.15	0.02	0.97			-0.02	0.22
Variance 2			-0.26	-0.01	1.77			0.00	0.37

Notes

Sample time: 16:40

Grab Samples

PZ-25  
Groundwater

Product Name: Low-Flow System

Date: 2017-07-11 11:14:16

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR GW  
Site Name PZ-31  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369549  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micropurge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 53 ft

Pump placement from TOC 53 ft

Well Information:

Well ID PZ-31  
Well diameter 2 in  
Well Total Depth 61.6 ft  
Screen Length 10 ft  
Depth to Water 39.5 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.9915947 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	10:50:02	900.03	22.22	6.95	480.08	5.91	40.15	2.17	10.92
Last 5	10:55:02	1200.02	22.07	6.95	478.88	4.89	40.15	2.09	18.46
Last 5	11:00:02	1500.02	21.98	6.95	478.99	3.30	40.15	2.04	31.12
Last 5	11:05:02	1800.03	22.02	6.96	478.77	3.13	40.15	2.01	37.50
Last 5	11:10:02	2100.02	22.11	6.96	478.48	2.08	40.15	2.00	46.11
Variance 0			-0.09	-0.01	0.11			-0.04	12.66
Variance 1			0.04	0.01	-0.21			-0.03	6.38
Variance 2			0.09	0.00	-0.29			-0.01	8.61

Notes

Sample time 1111. Vol 8L

Grab Samples



Product Name: Low-Flow System

Date: 2017-07-11 11:05:20

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell - Phase II CCR  
Site Name PZ-32  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100 Q S/N 12080C019573

Pump Information:

Pump Model/Type QED dedicated bladder  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 67 ft  
Pump placement from TOC 55.3 ft

Well Information:

Well ID PZ-32  
Well diameter 2 in  
Well Total Depth 65.30 ft  
Screen Length 10 ft  
Depth to Water 38.37 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.7790493 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.1	+/- 5%	+/- 5		+/- 0.3	+/- 10
Last 5	10:40:01	1200.02	19.71	7.33	316.79	2.19	38.38	0.67	26.65
Last 5	10:45:01	1500.03	19.67	7.35	315.96	2.20	38.38	0.75	26.63
Last 5	10:50:01	1800.02	19.70	7.35	315.73	1.29	38.38	0.86	27.67
Last 5	10:55:01	2100.02	19.72	7.32	314.49	1.55	38.38	0.98	30.51
Last 5	11:00:01	2400.02	19.72	7.31	313.54	1.25	38.38	1.10	31.58
Variance 0			0.02	-0.00	-0.22			0.11	1.04
Variance 1			0.02	-0.03	-1.24			0.12	2.84
Variance 2			0.00	-0.01	-0.95			0.12	1.07

Notes

Sample time: 11:00

Grab Samples

PZ-32  
Groundwater

Product Name: Low-Flow System

Date: 2017-07-12 11:52:06

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell CCR GW Phase II  
Site Name PZ-33  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369549  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micropurge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 68.6 ft

Pump placement from TOC 68.6 ft

Well Information:

Well ID PZ-33  
Well diameter 2 in  
Well Total Depth 73.6 ft  
Screen Length 10 ft  
Depth to Water 49.22 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.142177 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	11:27:26	1200.03	22.34	6.82	728.62	10.80	49.96	0.16	-85.56
Last 5	11:32:26	1500.03	22.07	6.81	727.68	7.13	49.96	0.14	-84.69
Last 5	11:37:26	1800.00	22.06	6.81	726.38	4.88	49.96	0.15	-84.59
Last 5	11:42:26	2100.00	22.08	6.81	728.50	3.79	49.96	0.15	-84.59
Last 5	11:47:26	2400.00	22.12	6.81	728.79	2.19	49.96	0.15	-85.24
Variance 0			-0.00	-0.00	-1.30			0.01	0.10
Variance 1			0.02	-0.00	2.12			0.00	0.00
Variance 2			0.04	-0.00	0.29			-0.00	-0.65

Notes

Sample time 1148. Volume 8L. DUP-01 also collected

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-17 12:49:44

Project Information:

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell Phase 2 CCR  
Site Name PZ-1D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100q

Pump Information:

Pump Model/Type QED MICROPURGE  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 81.5 ft

Pump placement from TOC 76.5 ft

Well Information:

Well ID PZ-1D  
Well diameter 2 in  
Well Total Depth 81.50 ft  
Screen Length 10 ft  
Depth to Water 55.09 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.266698 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 4 in  
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	12:24:24	2399.89	21.96	7.55	245.53	3.79	55.39	3.49	59.31
Last 5	12:29:24	2699.89	21.94	7.60	245.90	--	--	3.52	59.02
Last 5	12:34:24	2999.89	22.04	7.64	245.57	--	--	3.48	59.30
Last 5	12:39:24	3299.89	22.11	7.67	246.32	3.24	55.39	3.48	59.18
Last 5	12:44:24	3599.89	22.17	7.70	246.37	2.57	55.39	3.44	59.58
Variance 0			0.10	0.04	-0.32			-0.04	0.28
Variance 1			0.07	0.03	0.75			0.01	-0.12
Variance 2			0.05	0.03	0.05			-0.04	0.40

Notes

Collected sample @ 12:50

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-17 14:44:08

Project Information:

Operator Name Daniel Howard  
Company Name Wood  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-2S  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 516400  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micro  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 57.8 ft

Pump placement from TOC 52.8 ft

Well Information:

Well ID PZ-2S  
Well diameter 2 in  
Well Total Depth 57.83 ft  
Screen Length 10 ft  
Depth to Water 38.35 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.037928 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	13:59:01	3029.02	19.48	8.64	231.34	1.33	38.61	5.08	50.49
Last 5	14:14:02	3930.02	19.44	8.10	255.89	0.94	38.61	5.55	61.89
Last 5	14:19:02	4230.03	19.57	7.95	261.95	0.81	38.61	5.64	73.53
Last 5	14:24:02	4530.02	19.50	7.87	265.44	0.90	38.61	5.65	58.44
Last 5	14:29:02	4830.02	19.51	7.81	268.44	0.66	38.61	5.77	59.80
Variance 0			0.13	-0.15	6.05			0.09	11.64
Variance 1			-0.07	-0.08	3.50			0.01	-15.10
Variance 2			0.01	-0.06	2.99			0.12	1.36

Notes

Ipod stop collecting data. I will re start

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-17 15:11:40

Project Information:

Operator Name Daniel Howard  
Company Name Wood  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-2S  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 516400  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micro  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 65.3 ft

Pump placement from TOC 60.3 ft

Well Information:

Well ID PZ-2S  
Well diameter 2 in  
Well Total Depth 65.3 ft  
Screen Length 10 ft  
Depth to Water 40.39 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.110323 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 23 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	14:52:33	300.03	19.48	7.66	275.41	0.70	38.61	5.84	61.57
Last 5	15:02:33	900.03	19.57	7.62	275.85	0.59	38.61	5.91	64.65
Last 5	15:07:33	1200.03	19.69	7.61	277.05	0.68	38.61	5.93	64.61
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.09	-0.04	0.44			0.06	3.08
Variance 2			0.12	-0.01	1.21			0.02	-0.04

Notes

Sample PZ-2S. Time 1608

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-19 11:12:57

Project Information:

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell Phase 2 CCR  
Site Name PZ-7D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100q

Pump Information:

Pump Model/Type QED MICROPURGE  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 60.37 ft

Pump placement from TOC 55.37 ft

Well Information:

Well ID PZ-7D  
Well diameter 2 in  
Well Total Depth 60.37 ft  
Screen Length 10 ft  
Depth to Water 35.13 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.062735 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 4 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	10:50:01	1200.03	20.87	6.81	611.25	1.00	36.44	0.17	82.71
Last 5	10:55:01	1500.03	20.86	6.84	611.40	0.51	36.44	0.17	82.49
Last 5	11:00:01	1800.03	20.91	6.90	611.34	0.21	36.44	0.16	78.15
Last 5	11:05:01	2099.91	20.94	6.92	611.35	0.32	36.44	0.16	71.05
Last 5	11:10:01	2399.92	20.98	6.91	611.43	0.38	36.44	0.16	66.63
Variance 0			0.05	0.05	-0.06			-0.01	-4.34
Variance 1			0.03	0.02	0.02			-0.00	-7.10
Variance 2			0.04	-0.00	0.08			-0.00	-4.42

Notes

Sample time = 11:15

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-18 09:25:42

Project Information:

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell Phase 2 CCR  
Site Name PZ-14  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN (null)  
Turbidity Make/Model Hach 2100q

Pump Information:

Pump Model/Type QED MICROPURGE  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 53.2 ft

Pump placement from TOC 48.2 ft

Well Information:

Well ID PZ-14  
Well diameter 2 in  
Well Total Depth 53.20 ft  
Screen Length 10 ft  
Depth to Water 45.70 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.266698 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 4 in  
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	1035	1500	19.95	6.70	522.10	0.37	46.72	1.23	163.40
Last 5	1040	1800	20.04	6.75	522.00	0.33	46.72	1.19	152.40
Last 5	1045	2100	20.12	6.77	521.40	0.42	46.72	1.18	147.40
Last 5	1050	2400	20.12	6.80	520.80	0.34	46.72	1.19	143.40
Last 5	1055	2700	20.12	6.77	520.70	0.31	46.72	1.17	135.50
Variance 0			0.00	0.00	0.00			0.00	0.00
Variance 1			0.00	0.00	0.00			0.00	0.00
Variance 2			0.00	0.00	0.00			0.00	0.00

Notes Sample time 11:00

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-18 15:58:24

Project Information:

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell Phase 2 CCR  
Site Name PZ-15  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100q

Pump Information:

Pump Model/Type QED MICROPURGE  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 83.22 ft

Pump placement from TOC 78.22 ft

Well Information:

Well ID PZ-15  
Well diameter 2 in  
Well Total Depth 83.22 ft  
Screen Length 10 ft  
Depth to Water 32.74 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.2833 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 4 in  
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	15:35:25	1200.02	23.60	7.25	520.56	2.35	34.33	0.34	-129.52
Last 5	15:40:25	1499.90	23.38	7.23	523.07	1.70	34.33	0.26	-122.98
Last 5	15:45:25	1799.91	23.30	7.22	521.11	1.52	34.33	0.23	-119.25
Last 5	15:50:25	2099.90	23.29	7.21	520.96	1.55	34.33	0.21	-115.73
Last 5	15:55:25	2399.91	23.30	7.20	522.12	1.46	34.33	0.21	-112.05
Variance 0			-0.08	-0.01	-1.96			-0.04	3.73
Variance 1			-0.01	-0.00	-0.15			-0.02	3.52
Variance 2			0.01	-0.02	1.16			-0.01	3.68

Notes

Sample time = 16:00

Grab Samples



Product Name: Low-Flow System

Date: 2017-10-18 13:07:24

Project Information:

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell Phase 2 CCR  
Site Name PZ-16  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100q

Pump Information:

Pump Model/Type QED MICROPURGE  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 53.19 ft

Pump placement from TOC 48.19 ft

Well Information:

Well ID PZ-16  
Well diameter 2 in  
Well Total Depth 53.19 ft  
Screen Length 10 ft  
Depth to Water 36.17 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.9934288 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 4 in  
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	12:42:33	900.02	21.43	7.24	491.39	1.70	37.11	0.36	65.83
Last 5	12:47:33	1200.02	21.50	7.25	491.86	0.89	37.11	0.31	62.00
Last 5	12:52:33	1500.03	21.50	7.27	491.91	0.62	37.11	0.30	58.38
Last 5	12:57:33	1800.03	21.48	7.25	492.25	0.47	37.11	0.30	59.04
Last 5	13:02:33	2100.02	21.54	7.28	492.48	0.42	37.11	0.29	59.08
Variance 0			0.00	0.02	0.04			-0.01	-3.62
Variance 1			-0.03	-0.02	0.34			-0.00	0.66
Variance 2			0.07	0.03	0.23			-0.00	0.04

Notes

Sample time = 13:07

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-18 14:23:39

Project Information:

Operator Name Daniel Howard  
Company Name Wood  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-17  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 516400  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micro  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 62.7 ft

Pump placement from TOC 57.7 ft

Well Information:

Well ID PZ-17  
Well diameter 2 in  
Well Total Depth 62.70 ft  
Screen Length 10 ft  
Depth to Water 34.86 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.085226 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	13:59:26	600.03	23.79	7.01	676.96	1.96	35.71	0.40	-121.69
Last 5	14:04:26	900.03	23.59	7.00	677.23	1.13	35.71	0.37	-111.93
Last 5	14:09:26	1200.02	23.54	7.00	676.89	0.73	35.71	0.30	-106.57
Last 5	14:14:26	1500.03	23.43	6.99	677.19	0.51	35.71	0.27	-105.01
Last 5	14:19:26	1800.11	23.45	6.99	676.79	0.40	35.71	0.26	-101.87
Variance 0			-0.04	-0.00	-0.34			-0.07	5.36
Variance 1			-0.12	-0.00	0.30			-0.03	1.57
Variance 2			0.02	-0.00	-0.40			-0.01	3.14

Notes

PZ-17. Sample time 1520.

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-18 14:36:30

Project Information:

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell Phase 2 CCR  
Site Name PZ-18  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100q

Pump Information:

Pump Model/Type QED MICROPURGE  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 63.18 ft

Pump placement from TOC 58.18 ft

Well Information:

Well ID PZ- 18  
Well diameter 2 in  
Well Total Depth 63.18 ft  
Screen Length 10 ft  
Depth to Water 32.02 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.08986 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 4 in  
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	14:13:27	900.03	22.64	6.92	672.19	6.58	33.45	0.20	-46.04
Last 5	14:18:27	1200.02	22.61	6.91	671.51	5.84	33.45	0.17	-50.86
Last 5	14:23:27	1500.03	22.52	6.90	672.03	3.04	33.45	0.17	-52.35
Last 5	14:28:27	1800.03	22.57	6.88	672.64	1.97	33.45	0.17	-52.64
Last 5	14:33:27	2100.02	22.48	6.88	672.35	1.50	33.45	0.17	-51.74
Variance 0			-0.09	-0.01	0.52			-0.00	-1.48
Variance 1			0.05	-0.02	0.61			-0.00	-0.30
Variance 2			-0.09	-0.00	-0.30			0.00	0.90

Notes

Sample time = 14:35

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-19 12:48:24

Project Information:

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell Phase 2 CCR  
Site Name PZ-19  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100q

Pump Information:

Pump Model/Type QED MICROPURGE  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 62.63 ft

Pump placement from TOC 57.63 ft

Well Information:

Well ID PZ-19  
Well diameter 2 in  
Well Total Depth 62.63 ft  
Screen Length 10 ft  
Depth to Water 34.02 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.08455 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 4 in  
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	12:24:56	900.03	22.34	6.90	798.75	5.38	35.09	0.32	-14.48
Last 5	12:29:56	1200.03	22.34	6.88	799.37	3.72	35.09	0.26	-15.88
Last 5	12:34:56	1500.03	22.35	6.86	801.10	2.32	35.09	0.22	-18.73
Last 5	12:39:56	1800.03	22.30	6.85	802.52	1.94	35.09	0.20	-20.88
Last 5	12:44:56	2100.03	22.38	6.85	803.29	1.38	35.09	0.19	-22.55
Variance 0			0.00	-0.02	1.74			-0.04	-2.85
Variance 1			-0.04	-0.01	1.41			-0.01	-2.15
Variance 2			0.08	-0.01	0.77			-0.01	-1.67

Notes

SAMPLE TIME =12:50. Also collected DUP-02

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-18 10:42:13

Project Information:

Operator Name Daniel Howard  
Company Name Wood  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-23  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 516400  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micro  
Tubing Type HDPE  
Tubing Diameter .17 in  
Tubing Length 63.6 ft

Pump placement from TOC 58.6 ft

Well Information:

Well ID PZ-23  
Well diameter 2 in  
Well Total Depth 63.6 ft  
Screen Length 10 ft  
Depth to Water 52.84 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.7638736 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	10:18:49	300.14	20.48	6.72	731.76	0.46	53.84	3.23	137.49
Last 5	10:23:49	600.03	20.73	6.72	730.71	0.45	53.74	3.22	113.09
Last 5	10:28:49	900.02	20.86	6.73	730.48	0.36	53.71	3.17	97.50
Last 5	10:33:49	1200.02	20.75	6.73	731.41	0.19	53.71	3.14	97.60
Last 5	10:38:49	1500.03	20.72	6.73	732.71	0.36	53.71	3.17	91.39
Variance 0			0.13	0.00	-0.23			-0.06	-15.59
Variance 1			-0.10	0.00	0.93			-0.03	0.10
Variance 2			-0.03	0.00	1.30			0.03	-6.20

Notes

PZ-23. Sample time 1139

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-18 12:44:20

Project Information:

Operator Name Daniel Howard  
Company Name Wood  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-25  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 516400  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micro  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 63.2 ft

Pump placement from TOC 58.19 ft

Well Information:

Well ID PZ-25  
Well diameter 2 in  
Well Total Depth 63.19 ft  
Screen Length 10 ft  
Depth to Water 33.60 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.090053 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	12:21:06	600.03	22.77	7.08	515.06	2.19	33.62	0.46	-96.00
Last 5	12:26:06	900.02	22.67	7.08	514.13	1.02	33.62	0.35	-94.74
Last 5	12:31:06	1200.03	22.56	7.09	515.32	0.57	33.62	0.34	-93.43
Last 5	12:36:06	1500.02	22.45	7.09	518.84	0.48	33.62	0.33	-93.12
Last 5	12:41:06	1800.03	22.33	7.09	519.30	0.57	33.62	0.32	-91.31
Variance 0			-0.11	0.00	1.19			-0.02	1.31
Variance 1			-0.11	0.00	3.53			-0.00	0.31
Variance 2			-0.12	0.00	0.46			-0.01	1.81

Notes

PZ-25. Sample time 1342.

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-17 14:42:42

Project Information:

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell Phase 2 CCR  
Site Name PZ-31  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369557  
Turbidity Make/Model Hach 2100q

Pump Information:

Pump Model/Type QED MICROPURGE  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 61.6 ft

Pump placement from TOC 56.6 ft

Well Information:

Well ID PZ-31  
Well diameter 2 in  
Well Total Depth 61.60 ft  
Screen Length 10 ft  
Depth to Water 41.69 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.074608 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 4 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	14:20:21	1200.02	21.90	7.36	464.44	1.55	42.17	3.11	39.41
Last 5	14:25:21	1499.90	21.90	7.34	465.25	0.90	42.17	3.14	41.67
Last 5	14:30:21	1799.90	21.82	7.34	463.37	0.82	42.17	3.16	42.93
Last 5	14:35:22	2100.90	21.92	7.34	464.05	0.59	42.17	3.17	44.57
Last 5	14:40:22	2400.90	21.82	7.31	463.82	0.64	42.17	3.18	46.25
Variance 0			-0.08	0.00	-1.88			0.02	1.26
Variance 1			0.09	-0.00	0.68			0.02	1.65
Variance 2			-0.10	-0.02	-0.23			0.00	1.68

Notes

Sample time =14:45

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-17 11:20:02

Project Information:

Operator Name Daniel Howard  
Company Name Wood  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-32  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 516400  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micro  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 65.3 ft

Pump placement from TOC 60.3 ft

Well Information:

Well ID PZ-32  
Well diameter 2 in  
Well Total Depth 65.3 ft  
Screen Length 10 ft  
Depth to Water 40.39 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.110323 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.15 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	10:51:45	900.02	18.95	7.25	336.78	9.51	40.54	1.53	54.67
Last 5	11:01:45	1500.02	18.90	7.28	336.81	4.46	40.54	1.32	55.46
Last 5	11:06:45	1800.02	18.88	7.28	336.85	2.98	40.54	1.26	63.71
Last 5	11:11:45	2100.02	18.90	7.28	336.72	2.38	40.54	1.23	54.44
Last 5	11:16:45	2400.03	18.86	7.29	336.70	2.19	40.54	1.21	54.22
Variance 0			-0.02	0.00	0.04			-0.06	8.25
Variance 1			0.02	0.00	-0.13			-0.04	-9.27
Variance 2			-0.03	0.00	-0.02			-0.02	-0.22

Notes

Sample time 1217. PZ-32

Grab Samples



Product Name: Low-Flow System

Date: 2017-10-19 10:54:29

Project Information:

Operator Name Daniel Howard  
Company Name Wood  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-33  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 516400  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micro  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 73.6 ft

Pump placement from TOC 68.6 ft

Well Information:

Well ID PZ-33  
Well diameter 2 in  
Well Total Depth 73.6 ft  
Screen Length 10 ft  
Depth to Water 51.19 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.190441 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	10:31:25	600.03	22.04	6.85	723.58	4.99	52.29	0.44	-69.47
Last 5	10:36:25	900.03	22.02	6.85	723.36	4.29	52.29	0.40	-62.77
Last 5	10:41:25	1200.03	22.03	6.85	723.05	2.68	52.29	0.37	-62.11
Last 5	10:46:24	1500.02	22.09	6.86	723.60	1.51	52.29	0.32	-59.00
Last 5	10:51:24	1800.03	22.18	6.86	722.81	1.22	52.29	0.30	-58.37
Variance 0			0.01	0.00	-0.31			-0.03	0.65
Variance 1			0.06	0.00	0.55			-0.05	3.12
Variance 2			0.10	0.00	-0.79			-0.03	0.62

Notes

PZ-33. Sample time 1152

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-20 10:53:58

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-1D  
Latitude 31° 26' 50.07"  
Longitude -84° -7' -55.66"  
Sonde SN 369807  
Turbidity Make/Model Hach 2100Q S/N: 1208C019573

Pump Information:

Pump Model/Type QED Micro pump  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 82 ft

Pump placement from TOC 76.7 ft

Well Information:

Well ID PZ-1D  
Well diameter 2 in  
Well Total Depth 81.71 ft  
Screen Length 10 ft  
Depth to Water 50.75 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.7810007 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 22.2 in  
Total Volume Pumped 7.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:29:46	1200.01	19.87	7.50	264.75	0.76	52.58	0.91	96.89
Last 5	10:34:46	1500.00	20.18	7.51	264.62	0.55	52.59	1.00	98.45
Last 5	10:39:46	1800.01	20.21	7.54	265.14	0.52	52.59	1.17	99.21
Last 5	10:44:46	2100.00	20.21	7.54	264.98	0.44	52.60	1.21	100.42
Last 5	10:49:46	2400.00	20.30	7.57	265.10	0.44	52.60	1.29	101.09
Variance 0			0.03	0.03	0.52			0.16	0.76
Variance 1			-0.00	-0.00	-0.15			0.04	1.20
Variance 2			0.09	0.03	0.11			0.08	0.68

Notes

Sample time = 10:50

Grab Samples

PZ-1D  
Groundwater

Product Name: Low-Flow System

Date: 2018-02-20 12:12:19

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-2S  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 408206  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 55 ft

Pump placement from TOC 53.6 ft

Well Information:

Well ID PZ-2S  
Well diameter 2 in  
Well Total Depth 58.6 ft  
Screen Length 10 ft  
Depth to Water 32.65 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.9626365 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.02 in  
Total Volume Pumped 13 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	11:48:30	2699.90	19.73	7.79	247.69	1.02	33.31	3.85	113.19
Last 5	11:53:30	2999.90	19.61	7.72	250.88	0.90	33.31	3.86	106.57
Last 5	11:58:30	3299.90	19.68	7.65	254.28	1.08	33.31	3.87	102.86
Last 5	12:03:30	3599.90	19.87	7.61	258.34	1.02	33.31	3.84	103.76
Last 5	12:08:30	3899.90	19.80	7.60	259.88	0.94	33.32	3.81	108.68
Variance 0			0.07	-0.07	3.40			0.01	-3.71
Variance 1			0.19	-0.04	4.05			-0.03	0.90
Variance 2			-0.07	-0.01	1.54			-0.03	4.92

Notes

PZ-2S sample time 1209

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-21 12:43:37

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-7D  
Latitude 31° 26' 1.17"  
Longitude -84° -8' -11.53"  
Sonde SN 369807  
Turbidity Make/Model Hach 2100Q S/N: 1208C019573

Pump Information:

Pump Model/Type QED Micro pump  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 60 ft

Pump placement from TOC 55.37 ft

Well Information:

Well ID PZ-7D  
Well diameter 2 in  
Well Total Depth 60.37 ft  
Screen Length 10 ft  
Depth to Water 31.76 ft

Pumping Information:

Final Pumping Rate 300 mL/min  
Total System Volume 0.6828054 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.6 in  
Total Volume Pumped 11.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:20:14	300.04	21.52	7.02	614.38	0.77	31.76	0.11	78.66
Last 5	12:25:14	600.01	21.65	7.00	614.83	0.47	31.75	0.11	88.17
Last 5	12:30:14	900.01	21.66	6.99	614.89	0.36	31.75	0.12	99.68
Last 5	12:35:14	1200.01	21.59	6.99	614.51	0.29	31.75	0.13	115.57
Last 5	12:40:14	1500.01	21.32	6.97	614.33	0.28	31.75	0.14	116.04
Variance 0			0.01	-0.01	0.06			0.01	11.51
Variance 1			-0.07	0.00	-0.39			0.01	15.89
Variance 2			-0.27	-0.02	-0.18			0.01	0.47

Notes

Sample time = 12:45

Grab Samples

PZ-7D  
Groundwater

Product Name: Low-Flow System

Date: 2018-02-20 13:50:39

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-14  
Latitude 31° 26' 1.8"  
Longitude -84° -8' -2.03"  
Sonde SN 369807  
Turbidity Make/Model Hach 2100Q S/N: 1208C019573

Pump Information:

Pump Model/Type QED Micro pump  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 53 ft

Pump placement from TOC 48.2 ft

Well Information:

Well ID PZ-14  
Well diameter 2 in  
Well Total Depth 53.20 ft  
Screen Length 10 ft  
Depth to Water 41.66 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.6515614 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 7.08 in  
Total Volume Pumped 10.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:23:02	600.02	21.14	7.41	497.74	0.61	42.18	1.14	117.15
Last 5	13:28:02	900.03	21.10	7.38	499.81	1.24	42.23	1.23	112.54
Last 5	13:33:02	1200.02	21.06	7.35	500.74	0.23	42.23	1.14	98.09
Last 5	13:38:02	1500.00	21.02	7.31	500.92	0.27	42.23	1.05	61.07
Last 5	13:43:02	1800.00	20.97	7.33	500.79	0.26	42.25	1.01	53.44
Variance 0			-0.04	-0.03	0.93			-0.10	-14.45
Variance 1			-0.04	-0.04	0.17			-0.09	-37.02
Variance 2			-0.04	0.01	-0.13			-0.04	-7.63

Notes

Program froze on countdown. Restarted.

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-20 14:19:19

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-14  
Latitude 31° 26' 1.8"  
Longitude -84° -8' -2.03"  
Sonde SN 369807  
Turbidity Make/Model Hach 2100Q S/N: 1208C019573

Pump Information:

Pump Model/Type QED Micro pump  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 48.20 ft

Pump placement from TOC 52 ft

Well Information:

Well ID PZ-14  
Well diameter 2 in  
Well Total Depth 53.20 ft  
Screen Length 10 ft  
Depth to Water 41.66 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.630137 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 7.2 in  
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:57:55	300.02	21.06	7.31	500.40	0.24	42.26	0.99	35.47
Last 5	14:02:55	600.00	21.10	7.31	499.94	0.22	42.26	1.00	34.06
Last 5	14:07:55	900.01	21.15	7.30	499.36	0.29	42.26	1.01	31.92
Last 5	14:12:55	1200.01	21.06	7.30	499.51	0.26	42.26	1.04	30.34
Last 5	14:17:55	1500.01	21.06	7.31	498.03	0.22	42.26	1.06	28.49
Variance 0			0.04	-0.00	-0.59			0.01	-2.14
Variance 1			-0.09	-0.00	0.16			0.03	-1.58
Variance 2			0.00	0.01	-1.48			0.03	-1.84

Notes

Sample time = 14:20

Grab Samples

PZ-14  
Groundwater

Product Name: Low-Flow System

Date: 2018-02-21 10:11:08

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-15  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 408206  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 80 ft

Pump placement from TOC 78 ft

Well Information:

Well ID PZ-15  
Well diameter 2 in  
Well Total Depth 83.22 ft  
Screen Length 10 ft  
Depth to Water 28.38 ft

Pumping Information:

Final Pumping Rate 300 mL/min  
Total System Volume 1.252218 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.06 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	09:46:23	300.08	21.88	7.06	505.61	7.39	29.34	0.16	-161.43
Last 5	09:51:23	600.03	21.87	7.09	507.45	4.49	29.34	0.15	-153.90
Last 5	09:56:23	900.02	21.91	7.11	510.38	2.60	29.40	0.14	-148.20
Last 5	10:01:23	1200.02	21.91	7.11	512.05	2.06	29.40	0.13	-142.49
Last 5	10:06:23	1500.03	21.94	7.11	512.44	1.90	29.40	0.14	-136.45
Variance 0			0.04	0.01	2.93			-0.02	5.70
Variance 1			0.00	0.00	1.67			-0.00	5.71
Variance 2			0.03	-0.00	0.39			0.01	6.04

Notes

PZ-15 sample time 1007

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-21 09:04:55

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-16  
Latitude 31° 26' 8.2"  
Longitude -84° -8' -18.77"  
Sonde SN 369807  
Turbidity Make/Model Hach 2100Q S/N: 1208C019573

Pump Information:

Pump Model/Type QED Micro pump  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 54 ft

Pump placement from TOC 48.19 ft

Well Information:

Well ID PZ-16  
Well diameter 2 in  
Well Total Depth 53.19 ft  
Screen Length 10 ft  
Depth to Water 30.78 ft

Pumping Information:

Final Pumping Rate 400 mL/min  
Total System Volume 0.6560248 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1.8 in  
Total Volume Pumped 15 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	08:39:36	600.01	20.66	7.11	463.36	0.28	32.15	0.81	125.57
Last 5	08:44:36	900.01	20.66	7.10	463.44	0.25	32.15	0.76	123.32
Last 5	08:49:36	1200.00	20.66	7.09	463.29	0.25	32.15	0.72	121.32
Last 5	08:54:36	1500.00	20.66	7.10	463.18	0.28	32.15	0.67	118.26
Last 5	08:59:36	1800.00	20.66	7.10	462.97	0.22	32.15	0.62	116.13
Variance 0			0.00	-0.01	-0.14			-0.04	-2.00
Variance 1			-0.00	0.01	-0.11			-0.05	-3.06
Variance 2			0.00	0.00	-0.21			-0.05	-2.13

Notes

Sample time: 09:00

Grab Samples

PZ-16  
Groundwater



Product Name: Low-Flow System

Date: 2018-02-21 12:25:54

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-17  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 408206  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 60 ft

Pump placement from TOC 57.7 ft

Well Information:

Well ID PZ-17  
Well diameter 2 in  
Well Total Depth 62.7 ft  
Screen Length 10 ft  
Depth to Water 29.62 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.059164 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:01:12	600.03	22.54	6.95	670.16	1.74	31.04	0.59	-98.45
Last 5	12:06:12	900.02	22.60	6.95	667.20	1.48	31.04	0.49	-96.54
Last 5	12:11:12	1200.02	22.54	6.95	670.04	1.10	31.04	0.42	-95.48
Last 5	12:16:12	1500.02	22.44	6.95	670.72	0.71	31.04	0.38	-94.50
Last 5	12:21:13	1800.83	22.70	6.95	670.18	0.65	31.04	0.34	-93.87
Variance 0			-0.06	0.00	2.84			-0.07	1.06
Variance 1			-0.09	-0.00	0.69			-0.04	0.98
Variance 2			0.26	-0.01	-0.55			-0.04	0.62

Notes

PZ-17 sample time 1222

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-21 14:06:22

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-18  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 408206  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 65 ft

Pump placement from TOC 58.18 ft

Well Information:

Well ID PZ-18  
Well diameter 2 in  
Well Total Depth 63.18 ft  
Screen Length 10 ft  
Depth to Water 27.17 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.107427 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.04 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:42:32	600.03	23.41	6.89	689.91	2.58	28.78	0.22	-58.75
Last 5	13:47:32	900.03	23.01	6.89	690.05	1.92	28.78	0.21	-56.78
Last 5	13:52:32	1200.03	22.89	6.89	690.98	1.77	28.80	0.18	-56.33
Last 5	13:57:32	1500.02	22.93	6.89	690.70	1.11	28.80	0.18	-55.77
Last 5	14:02:32	1800.02	22.91	6.89	690.14	0.84	28.81	0.18	-55.20
Variance 0			-0.11	-0.00	0.93			-0.03	0.44
Variance 1			0.04	-0.00	-0.29			-0.01	0.57
Variance 2			-0.02	-0.00	-0.56			0.00	0.57

Notes

PZ-18 sample time 1403

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-21 15:48:05

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-19  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 408206  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 60.0 ft

Pump placement from TOC 57.63 ft

Well Information:

Well ID PZ-19  
Well diameter 2 in  
Well Total Depth 62.63 ft  
Screen Length 10 ft  
Depth to Water 28.82 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.059164 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	15:24:01	600.03	22.96	6.67	854.29	1.14	30.40	0.40	-23.97
Last 5	15:29:01	900.03	23.09	6.66	855.28	0.80	30.40	0.33	-13.76
Last 5	15:34:01	1200.02	22.61	6.66	854.91	0.75	30.40	0.30	-2.82
Last 5	15:39:01	1500.02	22.22	6.66	855.54	0.64	30.40	0.29	-0.71
Last 5	15:44:01	1800.02	22.27	6.66	855.30	0.37	30.40	0.25	-2.89
Variance 0			-0.49	-0.00	-0.38			-0.03	10.94
Variance 1			-0.38	0.00	0.64			-0.01	2.11
Variance 2			0.05	-0.00	-0.24			-0.04	-2.18

Notes

PZ-19 sample time 1535. Collected DUP-01

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-20 15:30:05

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-23  
Latitude 31° 26' 24.91"  
Longitude -84° -7' -51.39"  
Sonde SN 369807  
Turbidity Make/Model Hach 2100Q S/N: 1208C019573

Pump Information:

Pump Model/Type QED Micro pump  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 61 ft

Pump placement from TOC 56.6 ft

Well Information:

Well ID PZ-23  
Well diameter 2 in  
Well Total Depth 61.60 ft  
Screen Length 10 ft  
Depth to Water 50.22 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 0.6872688 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 5.9 in  
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:05:11	600.02	21.30	7.20	715.76	0.83	50.68	2.36	129.29
Last 5	15:10:11	900.01	21.74	7.17	715.49	0.51	50.71	2.25	126.36
Last 5	15:15:11	1200.01	22.35	7.13	708.72	0.18	50.71	2.20	126.36
Last 5	15:20:11	1500.01	21.66	7.11	716.03	0.24	50.71	2.31	127.43
Last 5	15:25:11	1800.01	21.55	7.11	714.85	0.23	50.71	2.31	126.20
Variance 0			0.61	-0.04	-6.77			-0.05	0.00
Variance 1			-0.69	-0.03	7.31			0.11	1.06
Variance 2			-0.11	0.01	-1.18			-0.01	-1.23

Notes

Sample time = 15:27

Grab Samples

PZ-23  
Groundwater

Product Name: Low-Flow System

Date: 2018-02-21 11:29:47

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-25  
Latitude 31° 26' 31.57"  
Longitude -84° -8' -9.66"  
Sonde SN 369807  
Turbidity Make/Model Hach 2100Q S/N: 1208C019573

Pump Information:

Pump Model/Type QED Micro pump  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 62 ft

Pump placement from TOC 58.2 ft

Well Information:

Well ID PZ-25  
Well diameter 2 in  
Well Total Depth 63.19 ft  
Screen Length 10 ft  
Depth to Water 28.78 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.6917322 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1.92 in  
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:07:44	900.01	21.46	7.11	495.05	0.36	28.94	0.25	-54.69
Last 5	11:12:44	1200.01	21.51	7.12	496.67	0.38	28.94	0.22	-59.39
Last 5	11:17:44	1500.01	21.57	7.12	498.12	0.21	28.94	0.21	-62.50
Last 5	11:22:44	1800.00	21.51	7.11	499.63	0.21	28.94	0.20	-65.14
Last 5	11:27:44	2100.00	21.97	7.12	499.05	0.20	28.94	0.24	-67.08
Variance 0			0.06	0.00	1.44			-0.01	-3.11
Variance 1			-0.05	-0.01	1.52			-0.00	-2.64
Variance 2			0.46	0.01	-0.58			0.04	-1.94

Notes

Sample time = 11:25

Grab Samples

PZ-25  
Groundwater

Product Name: Low-Flow System

Date: 2018-02-20 12:21:26

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-31  
Latitude 31° 26' 56.44"  
Longitude -84° -8' -1.52"  
Sonde SN 369807  
Turbidity Make/Model Hach 2100Q S/N: 1208C019573

Pump Information:

Pump Model/Type QED Micro pump  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 61 ft

Pump placement from TOC 56.6 ft

Well Information:

Well ID PZ-31  
Well diameter 2 in  
Well Total Depth 61.60 ft  
Screen Length 10 ft  
Depth to Water 37.57 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.6872688 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 9.72 in  
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:58:29	600.03	21.01	7.42	465.49	0.37	38.37	2.57	99.07
Last 5	12:03:29	900.00	20.93	7.42	462.72	0.52	38.38	2.60	101.32
Last 5	12:08:29	1200.01	20.93	7.39	462.48	0.37	38.38	2.58	99.50
Last 5	12:13:29	1500.01	20.70	7.38	462.69	0.44	38.38	2.55	97.09
Last 5	12:18:29	1800.02	20.70	7.37	461.82	0.28	38.38	2.53	96.05
Variance 0			-0.00	-0.03	-0.24			-0.02	-1.82
Variance 1			-0.22	-0.01	0.21			-0.02	-2.41
Variance 2			0.00	-0.01	-0.87			-0.03	-1.04

Notes

Sample time = 12:20

Grab Samples

PZ-31  
Groundwater

Product Name: Low-Flow System

Date: 2018-02-20 14:39:33

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-32  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 408206  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 61 ft

Pump placement from TOC 53.5 ft

Well Information:

Well ID PZ-32  
Well diameter 2 in  
Well Total Depth 61.6 ft  
Screen Length 10 ft  
Depth to Water 34.66 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.068817 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.01 in  
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:14:54	1500.02	19.66	7.28	327.28	0.75	35.28	1.41	93.28
Last 5	14:19:54	1800.02	19.59	7.28	327.34	0.62	35.28	1.28	92.47
Last 5	14:24:54	2100.02	19.52	7.28	327.41	0.52	35.28	1.21	91.02
Last 5	14:29:54	2400.02	19.54	7.27	327.87	0.26	35.29	1.17	90.00
Last 5	14:34:54	2700.15	19.54	7.26	328.55	0.27	35.29	1.18	89.52
Variance 0			-0.06	0.00	0.07			-0.07	-1.46
Variance 1			0.02	-0.00	0.46			-0.04	-1.02
Variance 2			0.00	-0.01	0.68			0.01	-0.48

Notes

PZ-32 sample time 1435

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-21 15:03:13

Project Information:

Operator Name Terrell Parker  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-33  
Latitude 31° 26' 9.23"  
Longitude -84° -7' -57.14"  
Sonde SN 369807  
Turbidity Make/Model Hach 2100Q S/N: 1208C019573

Pump Information:

Pump Model/Type QED Micro pump  
Tubing Type PE  
Tubing Diameter .170 in  
Tubing Length 72 ft

Pump placement from TOC 68 ft

Well Information:

Well ID PZ-33  
Well diameter 2 in  
Well Total Depth 73.00 ft  
Screen Length 10 ft  
Depth to Water 47.69 ft

Pumping Information:

Final Pumping Rate 350 mL/min  
Total System Volume 0.7363665 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.84 in  
Total Volume Pumped 11.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:39:12	300.04	20.94	7.09	715.20	0.48	48.00	0.66	-10.62
Last 5	14:44:12	600.02	20.96	7.07	715.47	0.34	48.01	0.63	-13.62
Last 5	14:49:12	900.02	21.00	7.05	714.71	0.42	48.01	0.58	-17.60
Last 5	14:54:12	1200.02	21.06	7.04	715.88	0.60	48.01	0.54	-21.90
Last 5	14:59:12	1500.02	21.11	7.02	715.63	0.34	48.01	0.50	-23.32
Variance 0			0.04	-0.02	-0.77			-0.05	-3.99
Variance 1			0.06	-0.01	1.17			-0.04	-4.29
Variance 2			0.06	-0.02	-0.25			-0.03	-1.42

Notes

Sample time = 15:05 + Dup-02

Grab Samples

PZ-33  
Groundwater  
Dup-02  
Duo of PZ-33



Product Name: Low-Flow System

Date: 2018-07-11 11:21:58

Project Information:

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell CCR Phase 2  
Site Name PZ-1D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369370  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Microbladder  
Tubing Type LDPE  
Tubing Diameter .25 in  
Tubing Length 82 ft

Pump placement from TOC 77 ft

Well Information:

Well ID PZ-1D  
Well diameter 2 in  
Well Total Depth 81.71 ft  
Screen Length 10 ft  
Depth to Water 53.39 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.271524 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 15 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:57:52	3299.90	20.92	7.36	245.73	1.68	54.55	2.88	62.50
Last 5	11:02:52	3599.90	21.03	7.38	248.92	1.17	54.54	3.02	62.07
Last 5	11:07:52	3899.90	21.05	7.44	248.69	0.95	54.54	2.94	61.31
Last 5	11:12:52	4199.90	21.12	7.46	249.13	1.03	54.54	2.94	61.56
Last 5	11:17:52	4499.90	21.10	7.48	249.88	0.64	54.54	2.99	61.95
Variance 0			0.03	0.05	-0.23			-0.08	-0.76
Variance 1			0.07	0.02	0.44			0.00	0.25
Variance 2			-0.02	0.02	0.75			0.05	0.38

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 12:47:53

Project Information:

Operator Name Daniel Howard  
Company Name Wood E&I S  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-2S  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 445707  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micro Bladder  
Tubing Type LDPE  
Tubing Diameter .25 in  
Tubing Length 58 ft

Pump placement from TOC 53 ft

Well Information:

Well ID PZ-2S  
Well diameter 2 in  
Well Total Depth 57.83 ft  
Screen Length 10 ft  
Depth to Water 36.56 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.039858 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.02 in  
Total Volume Pumped 17 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:23:21	3901.91	20.98	7.99	242.22	1.92	36.94	4.73	76.46
Last 5	12:28:21	4201.91	21.11	7.91	245.36	1.74	36.94	4.76	76.96
Last 5	12:33:21	4501.91	21.24	7.87	246.99	1.40	36.97	4.74	77.62
Last 5	12:38:24	4804.91	20.88	7.83	249.11	1.13	36.96	4.80	77.96
Last 5	12:43:25	5105.91	20.83	7.79	250.52	1.10	36.96	4.80	77.63
Variance 0			0.14	-0.04	1.63			-0.02	0.66
Variance 1			-0.37	-0.04	2.11			0.07	0.34
Variance 2			-0.04	-0.04	1.41			-0.01	-0.33

Notes

PZ-2S sample time 1245

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 14:14:49

Project Information:

Operator Name Daniel Howard  
Company Name Wood E&I S  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-2D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 445707  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micro Bladder  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 81 ft

Pump placement from TOC 76 ft

Well Information:

Well ID PZ-2D  
Well diameter 2 in  
Well Total Depth 81.03 ft  
Screen Length 10 ft  
Depth to Water 36.48 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.5515373 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	13:50:55	600.02	20.75	9.51	119.62	3.15	36.89	1.78	35.83
Last 5	13:55:55	900.03	20.77	9.54	122.45	2.23	36.89	1.80	35.27
Last 5	14:00:55	1200.02	20.71	9.50	124.24	2.89	36.89	1.84	35.33
Last 5	14:05:55	1500.02	20.65	9.49	125.38	2.53	37.89	1.87	35.48
Last 5	14:10:55	1800.02	20.66	9.48	127.85	2.67	36.89	1.92	35.09
Variance 0			-0.06	-0.04	1.79			0.04	0.06
Variance 1			-0.06	-0.02	1.14			0.04	0.15
Variance 2			0.01	-0.01	2.47			0.05	-0.39

Notes

PZ-2D sample time 1414.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-12 15:08:18

Project Information:

Operator Name Daniel Howard  
Company Name Wood E&I S  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-7D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 445707  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micro Bladder  
Tubing Type LDPE  
Tubing Diameter .25 in  
Tubing Length 60.5 ft

Pump placement from TOC 55.5 ft

Well Information:

Well ID PZ-7D  
Well diameter 2 in  
Well Total Depth 60.37 ft  
Screen Length 10 ft  
Depth to Water 33.61 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.06399 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	14:44:12	300.14	22.62	6.94	640.43	6.87	34.61	0.39	54.00
Last 5	14:49:12	600.03	22.37	6.89	642.65	4.80	34.61	0.24	50.06
Last 5	14:54:12	900.03	22.29	6.87	643.36	2.88	34.61	0.21	48.04
Last 5	14:59:12	1200.03	22.17	6.86	642.52	2.76	34.61	0.19	46.82
Last 5	15:04:12	1500.03	22.15	6.85	642.89	1.28	34.61	0.19	46.23
Variance 0			-0.08	-0.02	0.71			-0.04	-2.02
Variance 1			-0.12	-0.01	-0.84			-0.01	-1.22
Variance 2			-0.02	-0.01	0.37			-0.00	-0.58

Notes

PZ-7D sample time 1506.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 14:51:30

Project Information:

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell CCR Phase 2  
Site Name PZ-14  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369370  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Microbladder  
Tubing Type LDPE  
Tubing Diameter .25 in  
Tubing Length 53.20 ft

Pump placement from TOC 48.20 ft

Well Information:

Well ID PZ-14  
Well diameter 2 in  
Well Total Depth 53.20 ft  
Screen Length 10 ft  
Depth to Water 44.38 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.9935253 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:30:18	2699.90	23.42	7.12	508.24	0.34	45.18	1.63	27.26
Last 5	14:35:18	2999.90	23.33	7.13	507.83	0.29	45.18	1.60	24.62
Last 5	14:40:18	3299.90	23.36	7.12	508.49	0.34	45.18	1.58	23.00
Last 5	14:45:18	3599.90	23.57	7.13	510.01	----	----	1.79	24.64
Last 5	14:50:18	3899.90	24.41	7.12	511.27	----	----	1.88	24.99
Variance 0			0.03	-0.01	0.66			-0.02	-1.62
Variance 1			0.21	0.01	1.51			0.21	1.64
Variance 2			0.84	-0.00	1.26			0.08	0.35

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-12 13:44:16

Project Information:

Operator Name Daniel Howard  
Company Name Wood E&I S  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-15  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 445707  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micro Bladder  
Tubing Type LDPE  
Tubing Diameter .25 in  
Tubing Length 83 ft

Pump placement from TOC 78 ft

Well Information:

Well ID PZ-15  
Well diameter 2 in  
Well Total Depth 83.22 ft  
Screen Length 10 ft  
Depth to Water 31.69 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.281177 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:20:38	3000.03	24.19	7.07	545.88	5.82	32.76	0.20	-107.78
Last 5	13:25:37	3299.91	24.19	7.07	546.52	5.54	32.78	0.21	-105.40
Last 5	13:30:37	3599.91	24.12	7.07	546.31	4.87	32.80	0.20	-105.01
Last 5	13:35:37	3899.91	24.24	7.07	546.41	4.84	32.82	0.21	-103.98
Last 5	13:40:37	4199.91	24.09	7.07	544.03	4.73	32.82	0.22	-102.54
Variance 0			-0.07	0.00	-0.21			-0.01	0.39
Variance 1			0.12	-0.00	0.10			0.02	1.03
Variance 2			-0.15	0.00	-2.37			0.00	1.43

Notes

PZ-15 sample time 1342.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-12 11:17:36

Project Information:

Operator Name Daniel Howard  
Company Name Wood E&I S  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-16  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 445707  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micro Bladder  
Tubing Type LDPE  
Tubing Diameter .25 in  
Tubing Length 53 ft

Pump placement from TOC 48 ft

Well Information:

Well ID PZ-16  
Well diameter 2 in  
Well Total Depth 53.19 ft  
Screen Length 10 ft  
Depth to Water 35.36 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.9915947 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:52:49	900.03	23.45	7.12	485.07	8.94	35.68	0.86	99.64
Last 5	10:57:49	1200.03	23.16	7.13	484.21	5.35	35.68	0.82	92.46
Last 5	11:02:49	1500.03	22.89	7.13	483.90	3.41	35.68	0.80	87.80
Last 5	11:07:49	1800.03	22.93	7.13	484.06	2.03	35.68	0.77	84.74
Last 5	11:12:49	2100.03	22.84	7.14	483.22	1.80	35.68	0.75	82.73
Variance 0			-0.27	0.01	-0.31			-0.02	-4.66
Variance 1			0.05	0.00	0.16			-0.03	-3.06
Variance 2			-0.09	0.00	-0.84			-0.02	-2.01

Notes

PZ-16 sample time 1115.

Grab Samples

PZ-16

G 😂 😊 😂 😊 😊 😊 😊 😊 😊

Product Name: Low-Flow System

Date: 2018-07-12 12:44:46

Project Information:

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell CCR Phase 2  
Site Name PZ-17  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369370  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Microbladder  
Tubing Type LDPE  
Tubing Diameter .25 in  
Tubing Length 62.70 ft

Pump placement from TOC 57.70 ft

Well Information:

Well ID PZ-17  
Well diameter 2 in  
Well Total Depth 62.70 ft  
Screen Length 10 ft  
Depth to Water 34.14 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.085226 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 13 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:22:48	2699.90	23.11	7.03	652.66	1.40	34.35	0.18	-65.08
Last 5	12:27:48	2999.90	23.05	7.04	653.83	0.90	34.35	0.18	-64.99
Last 5	12:32:48	3299.90	22.79	7.05	650.93	0.78	34.35	0.17	-64.22
Last 5	12:37:48	3599.90	23.04	7.05	653.73	0.66	34.35	0.17	-64.54
Last 5	12:42:48	3899.90	22.84	7.06	651.28	0.62	34.35	0.17	-63.64
Variance 0			-0.26	0.01	-2.90			-0.01	0.76
Variance 1			0.25	-0.00	2.80			-0.00	-0.32
Variance 2			-0.20	0.01	-2.45			-0.00	0.90

Notes

Grab Samples



Product Name: Low-Flow System

Date: 2018-07-12 14:21:25

Project Information:

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell CCR Phase 2  
Site Name PZ-18  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369370  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Microbladder  
Tubing Type LDPE  
Tubing Diameter .25 in  
Tubing Length 63.18 ft

Pump placement from TOC 58.18 ft

Well Information:

Well ID PZ-18  
Well diameter 2 in  
Well Total Depth 63.18 ft  
Screen Length 10 ft  
Depth to Water 31.17 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.08986 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	13:59:32	1499.90	25.27	6.95	673.98	6.59	31.93	0.22	-24.84
Last 5	14:04:32	1799.90	25.05	6.95	680.93	4.73	31.93	0.21	-23.89
Last 5	14:09:32	2099.90	24.63	7.00	669.27	3.70	31.93	0.20	-23.41
Last 5	14:14:32	2399.91	24.52	7.00	667.72	2.85	31.93	0.20	-22.50
Last 5	14:19:32	2699.90	24.77	7.01	665.87	2.16	31.93	0.22	-22.62
Variance 0			-0.42	0.05	-11.66			-0.01	0.48
Variance 1			-0.11	0.00	-1.55			0.00	0.91
Variance 2			0.25	0.01	-1.84			0.02	-0.12

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-12 16:27:27

Project Information:

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell CCR Phase 2  
Site Name PZ-19  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369370  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Microbladder  
Tubing Type LDPE  
Tubing Diameter .25 in  
Tubing Length 62.63 ft

Pump placement from TOC 57.63 ft

Well Information:

Well ID PZ-19  
Well diameter 2 in  
Well Total Depth 62.63 ft  
Screen Length 10 ft  
Depth to Water 33.24 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.08455 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 15 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	16:04:29	3299.90	23.59	6.85	803.30	0.67	31.72	0.21	9.05
Last 5	16:09:29	3599.90	23.34	6.84	804.00	0.62	31.72	0.20	7.77
Last 5	16:14:29	3899.90	23.61	6.82	807.47	0.50	31.72	0.20	5.17
Last 5	16:19:29	4199.90	23.93	6.81	812.05	0.52	31.72	0.20	4.25
Last 5	16:24:29	4499.90	23.33	6.84	803.74	0.41	31.72	0.18	4.38
Variance 0			0.27	-0.02	3.47			-0.01	-2.60
Variance 1			0.32	-0.01	4.58			0.01	-0.92
Variance 2			-0.60	0.03	-8.31			-0.02	0.13

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 15:56:47

Project Information:

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell CCR Phase 2  
Site Name PZ-23  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369370  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Microbladder  
Tubing Type LDPE  
Tubing Diameter .25 in  
Tubing Length 61.6 ft

Pump placement from TOC 56.6 ft

Well Information:

Well ID PZ-23  
Well diameter 2 in  
Well Total Depth 61.60 ft  
Screen Length 10 ft  
Depth to Water 50.23 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.074608 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:33:54	900.03	23.35	7.06	707.32	2.42	52.54	3.13	78.37
Last 5	15:38:54	1200.03	22.93	7.02	713.46	0.87	52.54	3.05	76.33
Last 5	15:43:54	1500.03	22.99	7.02	713.32	0.51	52.54	3.00	76.57
Last 5	15:48:54	1800.03	22.96	7.01	709.00	0.43	52.54	3.04	77.11
Last 5	15:53:54	2100.03	22.91	7.00	709.65	0.25	52.54	3.08	77.54
Variance 0			0.07	-0.01	-0.14			-0.05	0.25
Variance 1			-0.03	-0.01	-4.32			0.03	0.54
Variance 2			-0.05	-0.01	0.65			0.04	0.42

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-12 10:46:59

Project Information:

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell CCR Phase 2  
Site Name PZ-25  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369370  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Microbladder  
Tubing Type LDPE  
Tubing Diameter .25 in  
Tubing Length 63.19 ft

Pump placement from TOC 58.19 ft

Well Information:

Well ID PZ- 25  
Well diameter 2 in  
Well Total Depth 63.19 ft  
Screen Length 10 ft  
Depth to Water 31.81 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.089956 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:25:25	1200.02	22.52	6.93	494.08	1.55	32.11	0.19	-81.38
Last 5	10:30:25	1500.03	22.78	6.97	494.83	0.75	32.11	0.18	-82.80
Last 5	10:35:25	1800.02	22.72	7.00	495.07	0.59	32.11	0.18	-82.04
Last 5	10:40:25	2100.02	22.84	7.01	496.87	0.44	32.11	0.19	-81.78
Last 5	10:45:25	2400.02	22.75	7.01	498.67	0.28	32.11	0.19	-80.21
Variance 0			-0.06	0.02	0.24			-0.00	0.76
Variance 1			0.12	0.01	1.80			0.02	0.26
Variance 2			-0.09	0.00	1.80			-0.00	1.57

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-12 10:46:59

Project Information:

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell CCR Phase 2  
Site Name PZ-25  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369370  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Microbladder  
Tubing Type LDPE  
Tubing Diameter .25 in  
Tubing Length 63.19 ft

Pump placement from TOC 58.19 ft

Well Information:

Well ID PZ-31  
Well diameter 2 in  
Well Total Depth 63.19 ft  
Screen Length 10 ft  
Depth to Water 31.81 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.089956 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:25:25	1200.02	22.52	6.93	494.08	1.55	32.11	0.19	-81.38
Last 5	10:30:25	1500.03	22.78	6.97	494.83	0.75	32.11	0.18	-82.80
Last 5	10:35:25	1800.02	22.72	7.00	495.07	0.59	32.11	0.18	-82.04
Last 5	10:40:25	2100.02	22.84	7.01	496.87	0.44	32.11	0.19	-81.78
Last 5	10:45:25	2400.02	22.75	7.01	498.67	0.28	32.11	0.19	-80.21
Variance 0			-0.06	0.02	0.24			-0.00	0.76
Variance 1			0.12	0.01	1.80			0.02	0.26
Variance 2			-0.09	0.00	1.80			-0.00	1.57

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 16:08:14

Project Information:

Operator Name Daniel Howard  
Company Name Wood E&I S  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-32  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 445707  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micro Bladder  
Tubing Type LDPE  
Tubing Diameter .25 in  
Tubing Length 61.6 ft

Pump placement from TOC 56.5 ft

Well Information:

Well ID PZ-32  
Well diameter 2 in  
Well Total Depth 61.6 ft  
Screen Length 10 ft  
Depth to Water 38.83 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.074608 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:43:54	900.03	20.74	7.50	339.35	4.52	39.12	1.02	62.98
Last 5	15:48:54	1200.02	20.53	7.46	339.04	2.49	39.12	1.00	61.51
Last 5	15:53:54	1500.02	20.50	7.42	338.06	1.58	39.12	0.99	60.53
Last 5	15:58:56	1802.02	20.48	7.41	338.15	1.02	39.12	0.98	59.61
Last 5	16:03:56	2102.03	20.34	7.39	337.98	84.00	39.12	0.99	59.11
Variance 0			-0.02	-0.03	-0.98			-0.01	-0.98
Variance 1			-0.02	-0.01	0.09			-0.01	-0.92
Variance 2			-0.14	-0.01	-0.17			0.00	-0.49

Notes

PZ-32 sample time 1605.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-12 16:26:38

Project Information:

Operator Name Daniel Howard  
Company Name Wood E&I S  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-33  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 445707  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micro Bladder  
Tubing Type LDPE  
Tubing Diameter .25 in  
Tubing Length 73 ft

Pump placement from TOC 68 ft

Well Information:

Well ID PZ-33  
Well diameter 2 in  
Well Total Depth 73 ft  
Screen Length 10 ft  
Depth to Water 50.23 ft

Pumping Information:

Final Pumping Rate 300 mL/min  
Total System Volume 1.184649 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	16:01:36	300.14	23.07	6.90	730.29	10.50	50.86	0.59	-54.86
Last 5	16:06:36	600.03	22.97	6.86	733.38	7.23	50.86	0.37	-54.82
Last 5	16:11:36	900.03	22.75	6.84	730.93	2.99	50.86	0.25	-54.93
Last 5	16:16:36	1200.03	22.76	6.83	731.74	2.55	50.86	0.21	-54.47
Last 5	16:21:36	1500.04	22.94	6.82	731.88	2.28	50.86	0.20	-54.26
Variance 0			-0.22	-0.02	-2.44			-0.12	-0.11
Variance 1			0.00	-0.01	0.80			-0.04	0.46
Variance 2			0.18	-0.01	0.15			-0.01	0.21

Notes

PZ-33 sample time 1624. DUP-02 Collected.

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-12 12:04:13

Project Information:

Operator Name Ever Guillen  
Company Name Wood PLC  
Project Name Plant Mitchell Phase 2 CCR  
Site Name PZ-1D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED MICRO PURGE  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 81.71 ft

Pump placement from TOC 76.71 ft

Well Information:

Well ID PZ-1D  
Well diameter 2 in  
Well Total Depth 81.71 ft  
Screen Length 10 ft  
Depth to Water 52.48 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.268725 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.03 in  
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:39:52	2100.02	22.98	7.37	257.72	1.31	52.51	3.66	85.78
Last 5	11:44:52	2400.02	23.12	7.38	258.43	1.40	52.51	3.76	85.05
Last 5	11:49:52	2700.02	23.30	7.40	259.57	1.92	52.51	3.76	83.97
Last 5	11:54:52	3000.02	23.21	7.41	259.52	1.37	52.51	3.80	83.27
Last 5	11:59:52	3299.93	22.89	7.41	259.41	1.07	52.51	3.84	83.28
Variance 0			0.18	0.02	1.14			-0.00	-1.08
Variance 1			-0.09	0.01	-0.05			0.04	-0.70
Variance 2			-0.32	0.00	-0.11			0.04	0.01

Notes

Sample collected at 12:05

Grab Samples



Product Name: Low-Flow System

Date: 2018-09-12 14:28:12

Project Information:

Operator Name Daniel Howard  
Company Name Wood  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-2S  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 445707  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micropurge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 58 ft

Pump placement from TOC 53 ft

Well Information:

Well ID PZ-2S  
Well diameter 2 in  
Well Total Depth 57.83 ft  
Screen Length 10 ft  
Depth to Water 35.85 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.039858 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:05:17	3000.02	20.75	7.79	262.17	1.52	36.48	2.95	76.04
Last 5	14:10:17	3300.02	20.66	7.72	266.05	1.30	36.48	2.91	76.36
Last 5	14:15:16	3599.83	20.84	7.66	269.76	1.50	36.48	2.90	76.30
Last 5	14:20:16	3899.82	20.93	7.61	271.55	1.25	36.48	2.87	76.62
Last 5	14:25:16	4199.82	20.92	7.58	272.94	1.13	36.48	2.87	76.59
Variance 0			0.18	-0.05	3.71			-0.01	-0.06
Variance 1			0.10	-0.05	1.78			-0.03	0.31
Variance 2			-0.01	-0.03	1.39			0.00	-0.02

Notes

PZ-2S time 1427

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-12 15:48:32

Project Information:

Operator Name Daniel Howard  
Company Name Wood  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-2D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 445707  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type HDPE  
Tubing Diameter .17 in  
Tubing Length 81 ft

Pump placement from TOC 76 ft

Well Information:

Well ID PZ-2D  
Well diameter 2 in  
Well Total Depth 80.91 ft  
Screen Length 10 ft  
Depth to Water 35.81 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.5515373 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.01 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:25:08	1200.03	21.21	8.94	151.73	4.28	36.29	2.54	53.17
Last 5	15:30:08	1500.02	20.84	9.04	155.01	2.98	36.29	2.42	52.50
Last 5	15:35:08	1800.02	20.85	9.06	159.26	3.05	36.29	2.39	52.13
Last 5	15:40:08	2100.03	20.87	9.06	161.89	1.98	36.30	2.35	51.87
Last 5	15:45:08	2400.03	20.58	9.07	163.95	1.57	36.30	2.31	51.79
Variance 0			0.01	0.02	4.25			-0.04	-0.37
Variance 1			0.02	0.00	2.63			-0.04	-0.26
Variance 2			-0.30	0.01	2.06			-0.04	-0.08

Notes

PZ-2D time 1547

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-13 15:17:57

Project Information:

Operator Name Daniel Howard  
Company Name Wood  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-7D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 445707  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micropurge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 63 ft

Pump placement from TOC 58 ft

Well Information:

Well ID PZ-7D  
Well diameter 2 in  
Well Total Depth 60.37 ft  
Screen Length 10 ft  
Depth to Water 35.33 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.088122 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	14:55:03	300.15	22.62	6.99	617.18	8.50	35.64	0.67	27.94
Last 5	15:00:03	600.03	22.46	6.94	617.52	4.27	35.64	0.28	42.07
Last 5	15:05:03	900.03	22.31	6.91	618.42	2.99	35.64	0.19	46.09
Last 5	15:10:03	1200.03	22.49	6.89	619.72	2.42	35.64	0.18	47.94
Last 5	15:15:03	1500.03	22.47	6.88	620.28	1.02	35.64	0.17	49.13
Variance 0			-0.15	-0.03	0.90			-0.09	4.02
Variance 1			0.18	-0.02	1.30			-0.02	1.85
Variance 2			-0.02	-0.01	0.56			-0.00	1.19

Notes

PZ-7D sample time 1517

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-12 16:25:54

Project Information:

Operator Name Ever Guillen  
Company Name Wood PLC  
Project Name Plant Mitchell Phase 2 CCR  
Site Name PZ-14  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED MICRO PURGE  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 53.2 ft

Pump placement from TOC 48.2 ft

Well Information:

Well ID PZ-14  
Well diameter 2 in  
Well Total Depth 53.2 ft  
Screen Length 10 ft  
Depth to Water 44.84 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.9935253 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.7 in  
Total Volume Pumped 17 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	15:59:09	3902.93	23.57	6.87	505.98	0.42	45.54	1.90	25.98
Last 5	16:04:09	4202.83	24.00	6.87	505.24	0.45	45.54	1.88	24.26
Last 5	16:09:09	4502.83	24.00	6.87	504.54	0.41	45.54	1.87	24.73
Last 5	16:14:09	4802.83	23.65	6.87	502.88	0.36	45.54	1.85	29.17
Last 5	16:19:09	5102.83	23.32	6.87	504.49	0.45	45.54	1.90	29.56
Variance 0			-0.00	0.00	-0.70			-0.01	0.47
Variance 1			-0.34	-0.00	-1.66			-0.02	4.44
Variance 2			-0.34	0.00	1.61			0.05	0.38

Notes

Collected sample at 1625

Product Name: Low-Flow System

Date: 2018-09-13 16:11:50

Project Information:

Operator Name Ever Guillen  
Company Name Wood PLC  
Project Name Plant Mitchell phase 2 CCR  
Site Name PZ-15  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED micro purge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 83.22 ft

Pump placement from TOC 78.22 ft

Well Information:

Well ID PZ-15  
Well diameter 2 in  
Well Total Depth 83.22 ft  
Screen Length 10 ft  
Depth to Water 33.44 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.2833 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 28 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2%	+/- 10
Last 5	15:46:24	7204.81	23.93	7.01	519.72	6.14	33.44	0.16	-78.79
Last 5	15:51:24	7504.81	24.44	7.01	517.91	5.84	33.44	0.16	-78.66
Last 5	15:56:24	7804.81	24.69	7.01	516.95	5.39	33.44	0.16	-78.80
Last 5	16:01:24	8104.81	23.88	7.01	518.94	5.18	33.44	0.17	-77.33
Last 5	16:06:24	8404.81	24.56	7.01	516.02	4.96	33.44	0.16	-77.62
Variance 0			0.26	-0.00	-0.97			-0.00	-0.14
Variance 1			-0.81	0.01	1.99			0.00	1.47
Variance 2			0.68	-0.00	-2.92			-0.00	-0.28

Notes

Sample collected at 1610

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-13 12:22:52

Project Information:

Operator Name Ever Guillen  
Company Name Wood PLC  
Project Name Plant Mitchell phase 2 CCR  
Site Name PZ-16  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED micro purge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 53.19 ft

Pump placement from TOC 48.19 ft

Well Information:

Well ID PZ-16  
Well diameter 2 in  
Well Total Depth 53.19 ft  
Screen Length 10 ft  
Depth to Water 36.28 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.9934288 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.17 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:00:13	600.03	22.04	7.08	480.18	3.84	36.45	0.70	82.51
Last 5	12:05:13	900.03	21.95	7.08	480.49	3.20	36.45	0.69	78.69
Last 5	12:10:13	1200.03	22.01	7.08	481.47	2.38	36.45	0.68	76.50
Last 5	12:15:13	1500.03	22.00	7.07	480.78	1.03	36.45	0.67	75.46
Last 5	12:20:13	1800.03	21.92	7.08	479.73	0.81	36.45	0.67	75.39
Variance 0			0.05	0.00	0.98			-0.02	-2.19
Variance 1			-0.01	-0.00	-0.69			-0.00	-1.04
Variance 2			-0.08	0.00	-1.05			-0.00	-0.07

Notes

Sample collected at 1225

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-14 10:08:02

Project Information:

Operator Name Ever Guillen  
Company Name Wood PLC  
Project Name Plant Mitchell phase 2 CCR  
Site Name PZ-17  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED micro purge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 62.70 ft

Pump placement from TOC 57.70 ft

Well Information:

Well ID PZ-17  
Well diameter 2 in  
Well Total Depth 62.7 ft  
Screen Length 10 ft  
Depth to Water 34.82 ft

Pumping Information:

Final Pumping Rate 240 mL/min  
Total System Volume 1.085226 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.29 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 4		+/- 0.2	+/- 10
Last 5	09:44:10	900.03	21.85	6.80	655.97	5.21	35.11	0.13	-102.24
Last 5	09:49:10	1200.03	21.79	6.82	655.05	4.60	35.11	0.13	-97.60
Last 5	09:54:10	1500.03	21.73	6.83	654.26	3.02	35.11	0.13	-94.29
Last 5	09:59:10	1800.03	21.82	6.82	654.34	2.80	35.11	0.13	-91.61
Last 5	10:04:10	2100.03	21.64	6.83	655.05	2.47	35.11	0.13	-88.73
Variance 0			-0.05	0.01	-0.79			-0.00	3.31
Variance 1			0.09	-0.00	0.08			0.00	2.68
Variance 2			-0.18	0.01	0.71			-0.00	2.88

Notes

Sample collected at 1010

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-13 14:00:46

Project Information:

Operator Name Daniel Howard  
Company Name Wood  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-18  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 445707  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micropurge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 63 ft

Pump placement from TOC 58 ft

Well Information:

Well ID PZ-18  
Well diameter 2 in  
Well Total Depth 63.18 ft  
Screen Length 10 ft  
Depth to Water 32.11 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.088122 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.01 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:37:58	600.03	25.78	6.90	669.71	4.03	32.29	0.37	-68.79
Last 5	13:42:58	900.03	25.74	6.88	672.53	3.60	32.29	0.33	-57.88
Last 5	13:47:58	1200.03	25.59	6.87	671.85	2.83	32.29	0.32	-50.26
Last 5	13:52:58	1500.03	25.60	6.87	671.85	1.92	32.29	0.30	-46.12
Last 5	13:57:58	1799.83	25.51	6.86	670.31	1.42	32.30	0.26	-43.13
Variance 0			-0.15	-0.01	-0.68			-0.01	7.62
Variance 1			0.01	-0.01	0.01			-0.02	4.15
Variance 2			-0.09	-0.01	-1.55			-0.04	2.98

Notes

PZ-18 sample time 1400

Grab Samples



Product Name: Low-Flow System

Date: 2018-09-14 10:15:06

Project Information:

Operator Name Daniel Howard  
Company Name Wood  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-19  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 445707  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micropurge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 63 ft

Pump placement from TOC 57.63 ft

Well Information:

Well ID PZ-19  
Well diameter 2 in  
Well Total Depth 62.63 ft  
Screen Length 10 ft  
Depth to Water 34.22 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.088122 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	09:50:47	900.03	23.57	6.80	737.34	5.53	34.47	0.31	8.01
Last 5	09:55:47	1200.03	23.61	6.78	736.78	4.31	34.47	0.22	8.18
Last 5	10:00:47	1500.03	23.65	6.78	737.93	2.84	34.47	0.19	8.11
Last 5	10:05:47	1800.03	23.66	6.77	740.29	1.47	34.47	0.18	8.85
Last 5	10:10:47	2100.03	23.63	6.76	742.32	1.32	34.47	0.18	9.42
Variance 0			0.04	-0.01	1.15			-0.03	-0.07
Variance 1			0.01	-0.01	2.36			-0.01	0.74
Variance 2			-0.03	-0.01	2.03			0.00	0.57

Notes

PZ-19 sample time 1012. DUP-01 collected

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-13 10:21:46

Project Information:

Operator Name Ever Guillen  
Company Name Wood PLC  
Project Name Plant Mitchell phase 2 CCR  
Site Name PZ-23  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED micro purge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 63.6 ft

Pump placement from TOC 58.6 ft

Well Information:

Well ID PZ-23  
Well diameter 2 in  
Well Total Depth 63.60 ft  
Screen Length 10 ft  
Depth to Water 51.50 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.093914 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.61 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	09:58:06	1200.03	23.14	6.55	731.69	2.93	52.11	3.71	99.44
Last 5	10:03:06	1499.92	23.03	6.56	734.25	1.81	52.11	3.70	98.53
Last 5	10:08:06	1799.93	22.86	6.56	735.16	1.07	52.11	3.72	98.08
Last 5	10:13:06	2099.93	23.21	6.56	734.10	0.63	52.11	3.70	97.75
Last 5	10:18:08	2401.92	23.03	6.56	733.30	0.42	52.11	3.73	97.60
Variance 0			-0.17	-0.00	0.91			0.02	-0.45
Variance 1			0.34	0.00	-1.06			-0.02	-0.32
Variance 2			-0.18	0.00	-0.80			0.02	-0.15

Notes

Sample collected at 1020

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-13 12:08:41

Project Information:

Operator Name Daniel Howard  
Company Name Wood  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-25  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 445707  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micropurge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 63 ft

Pump placement from TOC 58 ft

Well Information:

Well ID PZ-25  
Well diameter 2 in  
Well Total Depth 63.19 ft  
Screen Length 10 ft  
Depth to Water 32.8 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.088122 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:45:01	600.03	24.19	7.08	474.52	2.30	32.97	0.33	-102.92
Last 5	11:50:01	900.03	24.17	7.06	477.91	2.15	32.97	0.25	-103.28
Last 5	11:55:01	1200.03	24.37	7.04	477.28	1.47	32.97	0.22	-103.36
Last 5	12:00:01	1500.03	24.45	7.03	476.84	1.11	32.97	0.20	-102.66
Last 5	12:05:01	1800.03	24.33	7.03	477.83	0.82	32.97	0.20	-101.61
Variance 0			0.20	-0.01	-0.63			-0.04	-0.08
Variance 1			0.08	-0.01	-0.45			-0.02	0.70
Variance 2			-0.12	-0.00	1.00			-0.00	1.05

Notes

PZ-25 sample time 1207

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-12 13:56:00

Project Information:

Operator Name Ever Guillen  
Company Name Wood PLC  
Project Name Plant Mitchell phase 2 CCR  
Site Name PZ-31  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED MICRO PURGE  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 61.6 ft

Pump placement from TOC 56.6 ft

Well Information:

Well ID PZ-31  
Well diameter 2 in  
Well Total Depth 61.6 ft  
Screen Length 10 ft  
Depth to Water 38.79 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.074608 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.21 in  
Total Volume Pumped 1.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.3	+/- 10
Last 5	13:34:21	900.03	21.97	7.03	445.01	1.52	39.00	4.03	85.89
Last 5	13:39:21	1200.02	21.66	7.03	443.67	0.61	39.00	3.96	86.25
Last 5	13:44:21	1500.02	21.77	7.03	444.20	0.57	39.00	3.96	86.77
Last 5	13:49:21	1800.03	21.79	7.02	444.64	0.54	39.00	3.96	87.09
Last 5	13:54:21	2100.03	21.37	7.02	443.43	0.61	39.00	3.97	87.71
Variance 0			0.11	-0.00	0.53			-0.01	0.52
Variance 1			0.02	-0.01	0.44			0.01	0.32
Variance 2			-0.42	-0.00	-1.21			0.01	0.62

Notes

Sample time 1400

Product Name: Low-Flow System

Date: 2018-09-13 10:27:13

Project Information:

Operator Name Daniel Howard  
Company Name Wood  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-32  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 445707  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 66 ft

Pump placement from TOC 60 ft

Well Information:

Well ID PZ-32  
Well diameter 2 in  
Well Total Depth 65.3 ft  
Screen Length 10 ft  
Depth to Water 37.61 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.11708 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:04:56	600.03	20.07	7.30	332.98	7.10	38.40	0.40	116.76
Last 5	10:09:56	900.03	20.03	7.27	332.97	3.68	38.40	0.39	105.70
Last 5	10:14:56	1200.02	19.99	7.26	332.89	2.64	38.40	0.39	100.11
Last 5	10:19:56	1500.03	19.96	7.25	332.63	1.45	38.40	0.39	96.99
Last 5	10:24:56	1800.02	19.90	7.25	332.21	1.24	38.40	0.40	94.81
Variance 0			-0.04	-0.01	-0.08			-0.00	-5.60
Variance 1			-0.03	-0.01	-0.26			0.00	-3.12
Variance 2			-0.06	0.00	-0.42			0.01	-2.18

Notes

PZ-32 time 1026

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-14 11:27:01

Project Information:

Operator Name Ever Guillen  
Company Name Wood PLC  
Project Name Plant Mitchell phase 2 CCR  
Site Name PZ-33  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED micro purge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 73.60 ft

Pump placement from TOC 68.60 ft

Well Information:

Well ID PZ-33  
Well diameter 2 in  
Well Total Depth 73.60 ft  
Screen Length 10 ft  
Depth to Water 50.87 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.190441 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.11 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:01:59	900.03	21.93	6.77	702.23	6.28	50.98	0.17	-35.98
Last 5	11:06:59	1200.03	21.91	6.76	700.99	6.65	50.98	0.14	-33.64
Last 5	11:11:59	1500.03	21.89	6.75	700.33	2.13	50.98	0.14	-32.85
Last 5	11:16:59	1799.92	21.91	6.75	700.81	0.55	50.98	0.14	-32.36
Last 5	11:21:59	2099.93	21.87	6.75	701.86	0.83	50.98	0.14	-31.89
Variance 0			-0.03	-0.01	-0.66			-0.00	0.79
Variance 1			0.02	-0.00	0.49			0.00	0.48
Variance 2			-0.04	-0.00	1.04			-0.00	0.48

Notes

Sample collected at 1125. Also collected Dup-02

Grab Samples

Product Name: Low-Flow System

Date: 2018-04-12 16:37:53

Project Information:

Operator Name Daniel Howard  
Company Name Amec Foster Wheeler  
Project Name Plant Mitchell Phase II CCR  
Site Name PZ-2D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 402579  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micro Bladder Pump  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 81 ft

Pump placement from TOC 76 ft

Well Information:

Well ID PZ-2D  
Well diameter 2 in  
Well Total Depth 81.03 ft  
Screen Length 10 ft  
Depth to Water 36.39 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.5515373 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.24 in  
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10	+/- 10
Last 5	16:09:17	1501.02	19.14	9.67	105.60	2.87	36.55	2.27	102.72
Last 5	16:14:17	1801.03	19.06	9.62	107.26	2.61	36.55	2.33	107.42
Last 5	16:19:17	2101.02	19.02	9.59	110.24	1.72	36.55	2.41	112.05
Last 5	16:24:17	2401.02	19.06	9.56	112.88	1.67	36.55	2.48	115.89
Last 5	16:29:17	2701.02	18.97	9.54	112.01	1.51	36.55	2.49	118.19
Variance 0			-0.04	-0.03	2.98			0.08	4.63
Variance 1			0.03	-0.03	2.64			0.06	3.84
Variance 2			-0.09	-0.02	-0.87			0.02	2.31

Notes

PZ-2D sample time 1630

Grab Samples

Product Name: Low-Flow System

Date: 2018-05-23 10:01:46

Project Information:

Operator Name Paul Gazzo  
Company Name Wood  
Project Name Plant Mitchell  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 402579  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED  
Tubing Type HDP  
Tubing Diameter .25 in  
Tubing Length 75 ft

Pump placement from TOC 71 ft

Well Information:

Well ID PZ 02D  
Well diameter 2 in  
Well Total Depth 78 ft  
Screen Length 10 ft  
Depth to Water 35.46 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.9139549 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3 in  
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 0.5%	pH +/- 0.1%	SpCond $\mu$ S/cm +/- 3%	Turb NTU +/- 10	DTW ft	RDO mg/L +/- 0.3%	ORP mV +/- 10%
Stabilization									
Last 5	09:39:17	2400.02	19.26	9.61	115.51	1.50	35.68	2.24	50.28
Last 5	09:44:17	2700.02	19.32	9.60	117.78	0.73	35.68	2.31	48.56
Last 5	09:49:17	3000.02	19.33	9.60	119.88	0.63	35.68	2.37	46.09
Last 5	09:54:17	3300.02	19.33	9.59	120.77	0.90	35.68	2.42	45.15
Last 5	09:59:16	3599.90	19.36	9.57	122.48	1.03	35.68	2.47	45.83
Variance 0			0.01	0.00	2.10			0.07	-2.46
Variance 1			0.01	-0.01	0.89			0.05	-0.94
Variance 2			0.02	-0.01	1.71			0.05	0.67

Notes

Grab Samples



Product Name: Low-Flow System

Date: 2018-05-23 10:37:44

Project Information:

Operator Name Paul Gazzo  
Company Name Wood  
Project Name Plant Mitchell  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 402579  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED  
Tubing Type HDP  
Tubing Diameter .25 in  
Tubing Length 75 ft

Pump placement from TOC 71 ft

Well Information:

Well ID PZ 02D  
Well diameter 2 in  
Well Total Depth 78 ft  
Screen Length 10 ft  
Depth to Water 35.46 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.9139549 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3 in  
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5%	+/- 0.1%	+/- 3%	+/- 10		+/- 0.3%	+/- 10%
Last 5	10:15:35	600.02	19.24	9.59	125.54	1.60	35.68	2.50	48.59
Last 5	10:20:35	900.02	19.22	9.55	127.30	1.59	35.68	2.53	50.36
Last 5	10:25:35	1200.02	19.24	9.58	128.06	2.41	35.68	2.54	50.87
Last 5	10:30:35	1500.02	19.28	9.57	128.41	1.74	35.68	2.56	50.78
Last 5	10:35:35	1800.02	19.32	9.57	129.28	1.72	35.68	2.58	49.59
Variance 0			0.01	0.03	0.76			0.01	0.51
Variance 1			0.05	-0.01	0.35			0.02	-0.09
Variance 2			0.04	-0.00	0.87			0.02	-1.19

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-13 15:59:15

Project Information:

Operator Name Paul Gazzo  
Company Name Wood  
Project Name Plant Mitchell  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 369370  
Turbidity Make/Model Hacq 21

Pump Information:

Pump Model/Type QED  
Tubing Type poly  
Tubing Diameter .25 in  
Tubing Length 78 ft

Pump placement from TOC 73 ft

Well Information:

Well ID PZ 2D  
Well diameter 2 in  
Well Total Depth 78 ft  
Screen Length 10 ft  
Depth to Water 38.48 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.843913 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3 in  
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5%	+/- 0.1%	+/- 3%	+/- 5		+/- 0.3%	+/- 10%
Last 5	15:34:26	1800.02	20.43	9.73	118.82	1.04	34.61	1.70	36.53
Last 5	15:39:27	2101.02	20.28	9.73	120.46	1.21	34.64	1.79	35.68
Last 5	15:44:27	2400.89	20.38	9.75	122.36	0.90	34.63	1.81	35.37
Last 5	15:49:27	2700.89	20.38	9.74	122.86	0.65	34.64	1.89	34.33
Last 5	15:54:27	3000.89	20.26	9.71	123.71	0.48	34.63	1.92	36.16
Variance 0			0.09	0.02	1.90			0.03	-0.31
Variance 1			0.00	-0.01	0.51			0.08	-1.04
Variance 2			-0.12	-0.04	0.85			0.03	1.83

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-08-17 11:16:23

Project Information:

Operator Name Gazzo  
Company Name Wood  
Project Name Plant Mitchell  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED  
Tubing Type poly  
Tubing Diameter .25 in  
Tubing Length 78 ft

Pump placement from TOC 73 ft

Well Information:

Well ID PZ 2d  
Well diameter 2 in  
Well Total Depth 78 ft  
Screen Length 10 ft  
Depth to Water 29.12 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.942913 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3 in  
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 0.5%	pH +/- 0.1%	SpCond $\mu$ S/cm +/- 3%	Turb NTU +/- 10	DTW ft	RDO mg/L +/- 0.3%	ORP mV +/- 10%
Stabilization									
Last 5	10:54:32	1200.02	19.50	9.51	109.78	4.17	29.20	1.74	37.49
Last 5	10:59:32	1500.02	19.50	9.47	140.01	3.01	29.20	1.87	38.75
Last 5	11:04:32	1800.02	19.55	9.40	150.58	2.24	29.20	1.91	39.37
Last 5	11:09:32	2100.02	19.46	9.33	154.48	1.18	29.20	1.93	39.07
Last 5	11:14:32	2400.02	19.42	9.31	158.97	1.01	29.20	1.93	38.35
Variance 0			0.04	-0.07	10.57			0.05	0.62
Variance 1			-0.09	-0.07	3.90			0.02	-0.30
Variance 2			-0.04	-0.02	4.49			0.00	-0.72

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-08-16 09:40:40

Project Information:

Operator Name Gazzo  
Company Name Wood  
Project Name Plant Mitchell  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED  
Tubing Type poly  
Tubing Diameter .25 in  
Tubing Length 50 ft

Pump placement from TOC 45 ft

Well Information:

Well ID PZ 17  
Well diameter 2 in  
Well Total Depth 55 ft  
Screen Length 10 ft  
Depth to Water ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.6726365 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3 in  
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5%	+/- 0.1%	+/- 3%	+/- 10		+/- 0.3%	+/- 10%
Last 5	09:19:49	300.14	21.13	6.95	620.27	4.56	31.45	0.11	-105.76
Last 5	09:24:49	600.02	21.09	6.98	620.62	2.48	31.45	0.10	-103.91
Last 5	09:29:49	900.02	21.07	6.99	620.82	1.48	31.45	0.10	-104.14
Last 5	09:34:49	1200.02	21.07	7.01	621.01	1.78	31.45	0.10	-103.32
Last 5	09:39:49	1499.92	21.13	7.01	620.64	1.52	31.45	0.10	-102.04
Variance 0			-0.02	0.01	0.21			-0.00	-0.22
Variance 1			0.00	0.01	0.19			0.00	0.82
Variance 2			0.06	0.01	-0.37			-0.00	1.28

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-08-15 16:15:00

Project Information:

Operator Name Gazzo  
Company Name Wood  
Project Name Plant Mitchell  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED  
Tubing Type poly  
Tubing Diameter .25 in  
Tubing Length ft

Pump placement from TOC ft

Well Information:

Well ID PZ 18  
Well diameter 2 in  
Well Total Depth 60 ft  
Screen Length 10 ft  
Depth to Water ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.19 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3 in  
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5%	+/- 0.1%	+/- 3%	+/- 10		+/- 0.3%	+/- 10%
Last 5	15:54:00	3603.91	22.28	6.87	626.11	1.00	29.75	0.08	-8.81
Last 5	15:59:04	3907.91	22.27	6.88	626.94	1.02	29.81	0.08	-19.88
Last 5	16:04:04	4207.91	22.20	6.87	627.63	1.04	29.80	0.08	-30.22
Last 5	16:09:04	4507.91	22.14	6.87	626.74	1.00	29.80	0.08	-38.02
Last 5	16:14:04	4807.91	22.04	6.87	627.10	--	--	0.08	-42.26
Variance 0			-0.06	-0.01	0.69			0.01	-10.34
Variance 1			-0.06	-0.01	-0.89			-0.00	-7.80
Variance 2			-0.10	-0.00	0.37			-0.00	-4.24

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-04 05:20:58

Project Information:

Operator Name Gazzo  
Company Name Wood  
Project Name Plant mitchell  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 459710  
Turbidity Make/Model Hach 2100"

Pump Information:

Pump Model/Type QED  
Tubing Type ploy  
Tubing Diameter .25 in  
Tubing Length 68 ft

Pump placement from TOC 65 ft

Well Information:

Well ID Pz 33  
Well diameter 2 in  
Well Total Depth 70 ft  
Screen Length 10 ft  
Depth to Water 52.64 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.9963858 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.24 in  
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5%	+/- 1%	+/- 3%	+/- 10		+/- 0.3%	+/- 10%
Last 5	04:59:52	1500.02	21.08	6.86	705.48	1.02	52.66	0.18	-100.40
Last 5	05:04:52	1800.02	21.10	6.88	704.08	1.01	52.66	0.15	-102.50
Last 5	05:09:52	2100.02	21.11	6.88	702.62	1.03	52.66	0.12	-102.99
Last 5	05:14:52	2400.02	21.11	6.88	701.53	1.00	52.66	0.11	-102.53
Last 5	05:19:52	2700.02	21.14	6.90	701.96	1.02	52.66	0.10	-99.14
Variance 0			0.01	-0.00	-1.46			-0.02	-0.49
Variance 1			-0.00	0.01	-1.08			-0.02	0.46
Variance 2			0.03	0.01	0.43			-0.01	3.39

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-04 06:47:33

Project Information:

Operator Name Gazzo  
Company Name Wood  
Project Name Plant mitchell  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 459710  
Turbidity Make/Model Hach 2100"

Pump Information:

Pump Model/Type QED  
Tubing Type ploy  
Tubing Diameter .25 in  
Tubing Length 70 ft

Pump placement from TOC 73 ft

Well Information:

Well ID PZ2D  
Well diameter 2 in  
Well Total Depth 78 ft  
Screen Length 10 ft  
Depth to Water 38.60 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 1.015691 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.6 in  
Total Volume Pumped 8.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5%	+/- 1%	+/- 3%	+/- 10		+/- 0.3%	+/- 10%
Last 5	06:26:22	1200.02	19.97	9.18	141.32	2.76	38.65	2.10	45.42
Last 5	06:31:22	1500.02	19.97	9.19	148.60	2.25	38.65	2.15	47.38
Last 5	06:36:22	1800.02	19.91	9.13	152.04	2.01	38.65	2.15	49.19
Last 5	06:41:22	2100.02	19.95	9.18	153.40	1.64	38.65	2.15	47.44
Last 5	06:46:22	2400.02	19.79	9.16	156.75	1.31	38.65	2.15	47.08
Variance 0			-0.06	-0.07	3.45			0.00	1.81
Variance 1			0.05	0.06	1.35			0.00	-1.75
Variance 2			-0.16	-0.02	3.35			0.00	-0.36

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-24 16:44:07

Project Information:

Operator Name Gazzo  
Company Name Wood  
Project Name Plant Mitchell |  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 407447  
Turbidity Make/Model Hach 2100

Pump Information:

Pump Model/Type QED  
Tubing Type hdep  
Tubing Diameter .25 in  
Tubing Length 73 ft

Pump placement from TOC 20'

Well Information:

Well ID PZ 2D  
Well diameter 2 in  
Well Total Depth 78 ft  
Screen Length 10 ft  
Depth to Water 36.11 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.7946494 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.12 in  
Total Volume Pumped 15 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5%	+/- 0.1%	+/- 3%	+/- 10%		+/- 0.3%	+/- 10%
Last 5	16:22:38	2399.92	19.58	9.38	146.90	0.71	36.23	1.84	92.20
Last 5	16:27:38	2699.92	19.59	9.39	148.74	0.62	36.23	1.86	84.95
Last 5	16:32:38	2999.91	19.52	9.32	151.46	0.77	36.23	1.88	82.60
Last 5	16:37:38	3299.92	19.46	9.32	153.64	0.54	36.23	1.92	78.60
Last 5	16:42:38	3599.92	19.43	9.29	155.61	0.64	36.23	1.91	75.03
Variance 0			-0.06	-0.07	2.72			0.02	-2.35
Variance 1			-0.07	0.01	2.18			0.04	-4.00
Variance 2			-0.03	-0.03	1.97			-0.00	-3.57

Notes

Grab Samples



Product Name: Low-Flow System

Date: 2019-03-26 12:39:33

**Project Information:**

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell CCR PHASE 2  
Site Name PZ-1D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 647079  
Turbidity Make/Model Hach 2100Q

**Pump Information:**

Pump Model/Type QED  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 81.71 ft

Pump placement from TOC 76.71 ft

**Well Information:**

Well ID PZ-1D  
Well diameter 2 in  
Well Total Depth 81.71 ft  
Screen Length 10 ft  
Depth to Water 48.29 ft

**Pumping Information:**

Final Pumping Rate 200 mL/min  
Total System Volume 0.8447063 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 13 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1%	+/- 5%	+/- 5		+/- 0.2%	+/- 10
Last 5	12:15:41	3000.89	21.54	7.51	250.49	2.11	48.73	3.65	49.72
Last 5	12:20:41	3300.89	21.89	7.51	250.49	1.74	48.73	3.66	50.27
Last 5	12:25:41	3600.88	20.37	7.50	251.60	1.34	48.73	3.77	49.75
Last 5	12:30:43	3902.88	20.06	7.50	254.83	1.56	48.73	3.86	49.80
Last 5	12:35:43	4202.89	20.17	7.49	255.38	1.35	48.73	3.91	50.04
Variance 0			-1.52	-0.00	1.11			0.11	-0.52
Variance 1			-0.31	-0.01	3.23			0.09	0.05
Variance 2			0.11	-0.00	0.55			0.05	0.24

Notes PZ-1D sample time 1440

**Grab Samples**

Product Name: Low-Flow System

Date: 2019-03-27 09:39:14

**Project Information:**

Operator Name Daniel Howard  
Company Name Wood E&IS  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-2D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 647101  
Turbidity Make/Model Hach 2100Q

**Pump Information:**

Pump Model/Type QED micro purge  
Tubing Type HDPE  
Tubing Diameter .17 in  
Tubing Length 81 ft

Pump placement from TOC 75.94 ft

**Well Information:**

Well ID PZ-2D  
Well diameter 2 in  
Well Total Depth 80.94 ft  
Screen Length 10 ft  
Depth to Water 31.68 ft

**Pumping Information:**

Final Pumping Rate 200 mL/min  
Total System Volume 0.8415373 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 10 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 5%	+/- 10
Last 5	09:15:38	1800.02	17.61	8.83	143.35	2.53	32.02	3.57	150.51
Last 5	09:20:38	2100.02	17.67	8.77	146.45	2.18	32.02	3.44	151.36
Last 5	09:25:39	2400.88	17.72	8.76	149.32	1.94	32.02	3.37	150.95
Last 5	09:30:40	2701.88	18.06	8.75	150.70	1.95	32.02	3.30	150.46
Last 5	09:35:40	3001.88	17.90	8.76	153.01	1.62	32.02	3.29	148.61
Variance 0			0.06	-0.01	2.88			-0.07	-0.41
Variance 1			0.34	-0.01	1.38			-0.07	-0.49
Variance 2			-0.16	0.01	2.30			-0.01	-1.85

**Notes**

PZ-2D sample time 1136

**Grab Samples**

Product Name: Low-Flow System

Date: 2019-03-26 14:09:14

**Project Information:**

Operator Name Daniel Howard  
Company Name Wood E&IS  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-2S  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 647101  
Turbidity Make/Model Hach 2100Q

**Pump Information:**

Pump Model/Type QED micro purge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 57 ft

Pump placement from TOC 52 ft

**Well Information:**

Well ID PZ-2S  
Well diameter 2 in  
Well Total Depth 57.83 ft  
Screen Length 10 ft  
Depth to Water 31.72 ft

**Pumping Information:**

Final Pumping Rate 200 mL/min  
Total System Volume 1.030206 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 15 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 5%	+/- 10
Last 5	13:44:46	3299.94	18.99	7.94	221.90	1.12	32.22	5.19	81.09
Last 5	13:49:46	3599.93	18.97	7.86	226.13	1.06	32.22	5.23	82.43
Last 5	13:54:46	3899.93	18.91	7.81	227.86	0.93	32.22	5.22	83.23
Last 5	13:59:46	4199.93	18.87	7.77	229.71	0.87	32.22	5.27	83.39
Last 5	14:04:46	4499.93	18.92	7.73	232.77	0.87	32.22	5.23	84.02
Variance 0			-0.06	-0.05	1.73			-0.01	0.80
Variance 1			-0.04	-0.04	1.85			0.05	0.16
Variance 2			0.05	-0.04	3.05			-0.04	0.63

**Notes**

PZ-2S sample time 1605

**Grab Samples**

Product Name: Low-Flow System

Date: 2019-03-28 09:44:43

**Project Information:**

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell CCR PHASE 2  
Site Name PZ-7D  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 647079  
Turbidity Make/Model Hach 2100Q

**Pump Information:**

Pump Model/Type QED  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 60.37 ft

Pump placement from TOC 55.37 ft

**Well Information:**

Well ID PZ-7D  
Well diameter 2 in  
Well Total Depth 60.37 ft  
Screen Length 10 ft  
Depth to Water 31.53 ft

**Pumping Information:**

Final Pumping Rate 200 mL/min  
Total System Volume 0.7494568 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 7 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5%	+/- 0.1%	+/- 5%	+/- 5%		+/- 0.2%	+/- 10%
Last 5	09:20:25	900.02	19.86	6.95	599.37	2.70	31.66	0.12	30.01
Last 5	09:25:25	1200.03	19.83	6.95	599.85	1.02	31.66	0.13	29.45
Last 5	09:30:25	1500.06	19.88	6.96	601.32	1.05	31.66	0.13	28.64
Last 5	09:35:25	1799.89	19.90	6.96	602.20	0.80	31.66	0.13	25.79
Last 5	09:40:25	2099.89	19.98	6.96	603.18	0.67	31.66	0.13	23.51
Variance 0			0.05	0.01	1.47			0.00	-0.82
Variance 1			0.02	-0.00	0.88			0.00	-2.84
Variance 2			0.08	-0.00	0.97			0.00	-2.28

Notes PZ-7D sample time 1045

**Grab Samples**

Product Name: Low-Flow System

Date: 2019-03-27 10:02:05

**Project Information:**

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell CCR PHASE 2  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 647079  
Turbidity Make/Model Hach 2100Q

**Pump Information:**

Pump Model/Type QED  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 53.20 ft

Pump placement from TOC 48.20 ft

**Well Information:**

Well ID PZ-14  
Well diameter 2 in  
Well Total Depth 53.2 ft  
Screen Length 10 ft  
Depth to Water 40.93 ft

**Pumping Information:**

Final Pumping Rate 200 mL/min  
Total System Volume 0.7174541 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 7 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 0.5%	+/- 0.1%	+/- 5%	+/- 5%		+/- 0.2%	+/- 10%
Stabilization									
Last 5	09:39:09	900.03	19.86	6.98	492.77	0.29	41.71	2.35	61.49
Last 5	09:44:09	1200.03	19.88	6.98	493.12	0.34	41.71	2.27	58.65
Last 5	09:49:09	1500.03	19.86	6.98	492.71	0.37	41.71	2.23	56.95
Last 5	09:54:09	1800.03	19.97	6.98	493.33	0.30	41.71	2.20	55.31
Last 5	09:59:09	2100.03	19.93	6.98	492.77	0.29	41.71	2.16	54.04
Variance 0			-0.03	-0.00	-0.41			-0.04	-1.70
Variance 1			0.11	0.00	0.63			-0.03	-1.64
Variance 2			-0.03	0.00	-0.57			-0.04	-1.27

Notes PZ-14 sample time 1100

**Grab Samples**

Product Name: Low-Flow System

Date: 2019-03-28 11:48:50

**Project Information:**

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell CCR PHASE 2  
Site Name PZ-15  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 647079  
Turbidity Make/Model Hach 2100Q

**Pump Information:**

Pump Model/Type QED  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 83.22 ft

Pump placement from TOC 78.22 ft

**Well Information:**

Well ID PZ-15  
Well diameter 2 in  
Well Total Depth 83.22 ft  
Screen Length 10 ft  
Depth to Water 29.54 ft

**Pumping Information:**

Final Pumping Rate 200 mL/min  
Total System Volume 0.851446 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 14 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5%	+/- 0.1%	+/- 5%	+/- 5%		+/- 0.2%	+/- 10%
Last 5	11:28:02	3599.89	22.89	7.15	501.75	1.39	29.61	0.87	-41.51
Last 5	11:33:02	3899.89	22.64	7.15	502.10	1.35	29.61	0.82	-40.80
Last 5	11:38:02	4199.75	22.98	7.15	502.41	1.31	29.61	0.75	-41.33
Last 5	11:43:02	4499.75	23.43	7.61	0.00	--	--	6.09	28.51
Last 5	11:48:02	4799.75	24.69	7.84	0.00	--	--	8.09	-422.38
Variance 0			0.34	0.00	0.31			-0.07	-0.52
Variance 1			0.45	0.46	-502.41			5.34	69.84
Variance 2			1.26	0.23	0.00			2.00	-450.90

Notes PZ-15 sample time 1340

**Grab Samples**

Product Name: Low-Flow System

Date: 2019-03-27 13:15:48

**Project Information:**

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell CCR PHASE 2  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 647079  
Turbidity Make/Model Hach 2100Q

**Pump Information:**

Pump Model/Type QED  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 53.19 ft

Pump placement from TOC 48.20 ft

**Well Information:**

Well ID PZ-16  
Well diameter 2 in  
Well Total Depth 53.19 ft  
Screen Length 10 ft  
Depth to Water 32.32 ft

**Pumping Information:**

Final Pumping Rate 200 mL/min  
Total System Volume 0.7174094 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 7 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 0.5%	+/- 0.1%	+/- 5%	+/- 5%		+/- 0.2%	+/- 10%
Stabilization									
Last 5	12:42:39	900.03	20.21	7.22	467.57	2.61	32.61	0.91	35.65
Last 5	12:47:39	1200.03	20.12	7.23	467.63	1.16	32.61	0.91	35.79
Last 5	12:52:39	1500.03	20.12	7.23	469.11	0.53	32.61	0.92	35.76
Last 5	12:57:39	1800.03	20.14	7.23	470.11	0.31	32.61	0.92	35.57
Last 5	13:02:39	2099.89	20.21	7.23	469.28	0.28	32.61	0.92	35.35
Variance 0			0.00	0.00	1.48			0.02	-0.03
Variance 1			0.02	-0.00	1.00			-0.00	-0.19
Variance 2			0.07	0.00	-0.83			-0.01	-0.22

Notes PZ-16 sample time 1505

**Grab Samples**

Product Name: Low-Flow System

Date: 2019-03-28 08:48:13

**Project Information:**

Operator Name Daniel Howard  
Company Name Wood E&IS  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-17  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 647101  
Turbidity Make/Model Hach 2100Q

**Pump Information:**

Pump Model/Type QED micro purge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 62.7 ft

Pump placement from TOC 57.7 ft

**Well Information:**

Well ID PZ-17  
Well diameter 2 in  
Well Total Depth 62.70 ft  
Screen Length 10 ft  
Depth to Water 30.50 ft

**Pumping Information:**

Final Pumping Rate 200 mL/min  
Total System Volume 1.085226 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 6 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	08:24:50	600.03	20.13	6.98	660.01	5.11	30.49	0.23	-152.01
Last 5	08:29:50	900.02	20.16	6.98	660.24	2.69	30.49	0.21	-146.59
Last 5	08:34:50	1200.03	20.17	6.97	661.75	1.62	30.49	0.20	-138.88
Last 5	08:39:50	1500.03	20.12	6.97	662.06	1.04	30.49	0.19	-133.52
Last 5	08:44:50	1800.02	20.17	6.97	661.98	0.78	30.49	0.18	-130.28
Variance 0			0.01	-0.00	1.51			-0.00	7.72
Variance 1			-0.04	-0.00	0.31			-0.02	5.36
Variance 2			0.05	-0.00	-0.08			-0.01	3.24

**Notes**

PZ-17 sample time 1045

**Grab Samples**



Product Name: Low-Flow System

Date: 2019-03-27 14:32:21

**Project Information:**

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell CCR PHASE 2  
Site Name PZ-18  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 647079  
Turbidity Make/Model Hach 2100Q

**Pump Information:**

Pump Model/Type QED  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 63.18 ft

Pump placement from TOC 58.18 ft

**Well Information:**

Well ID PZ-18  
Well diameter 2 in  
Well Total Depth 63.18 ft  
Screen Length 10 ft  
Depth to Water 27.88 ft

**Pumping Information:**

Final Pumping Rate 200 mL/min  
Total System Volume 0.761999 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 7 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 0.5%	+/- 0.1%	+/- 5%	+/- 5%		+/- 0.2%	+/- 10%
Stabilization									
Last 5	14:00:06	899.89	21.19	6.92	678.39	1.57	28.12	0.11	-12.10
Last 5	14:05:06	1199.89	21.15	6.92	679.54	0.82	28.12	0.12	-11.40
Last 5	14:10:06	1499.89	21.07	6.92	679.08	0.77	28.12	0.13	-10.91
Last 5	14:15:06	1799.89	21.11	6.92	679.70	0.78	28.12	0.13	-11.82
Last 5	14:20:06	2099.89	21.11	6.92	680.12	1.13	28.12	0.13	-14.16
Variance 0			-0.08	0.00	-0.46			0.01	0.49
Variance 1			0.04	0.00	0.61			0.00	-0.91
Variance 2			-0.00	0.00	0.43			0.00	-2.34

Notes PZ-18 sample time 1625

**Grab Samples**

Product Name: Low-Flow System

Date: 2019-03-28 10:53:37

**Project Information:**

Operator Name Daniel Howard  
Company Name Wood E&IS  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-19  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 647101  
Turbidity Make/Model Hach 2100Q

**Pump Information:**

Pump Model/Type QED micro purge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 62.6 ft

Pump placement from TOC 57.6 ft

**Well Information:**

Well ID PZ-19  
Well diameter 2 in  
Well Total Depth 62.63 ft  
Screen Length 10 ft  
Depth to Water 30.11 ft

**Pumping Information:**

Final Pumping Rate 200 mL/min  
Total System Volume 1.084261 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 6 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:28:37	600.03	22.06	6.67	861.79	1.32	30.71	0.19	11.21
Last 5	10:33:37	900.03	22.09	6.67	863.51	1.10	30.71	0.17	6.70
Last 5	10:38:37	1200.02	22.12	6.67	861.29	0.80	30.71	0.17	3.90
Last 5	10:43:37	1500.03	22.08	6.67	858.50	0.50	30.71	0.16	2.86
Last 5	10:48:37	1800.02	21.61	6.67	860.17	0.31	30.71	0.17	3.00
Variance 0			0.03	0.00	-2.22			-0.01	-2.80
Variance 1			-0.04	0.00	-2.79			-0.00	-1.05
Variance 2			-0.47	-0.00	1.67			0.01	0.14

**Notes**

PZ-19 sample time 1249. Collected DUP-01

**Grab Samples**

Product Name: Low-Flow System

Date: 2019-03-27 11:49:34

**Project Information:**

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell CCR PHASE 2  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 647079  
Turbidity Make/Model Hach 2100Q

**Pump Information:**

Pump Model/Type QED  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 63.60 ft

Pump placement from TOC 58.60 ft

**Well Information:**

Well ID PZ-23  
Well diameter 2 in  
Well Total Depth 63.60 ft  
Screen Length 10 ft  
Depth to Water 46.32 ft

**Pumping Information:**

Final Pumping Rate 200 mL/min  
Total System Volume 0.7638736 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 8 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 0.5%	+/- 0.1%	+/- 5%	+/- 5%		+/- 0.2%	+/- 10%
Stabilization									
Last 5	11:28:07	1200.02	20.08	6.76	733.33	1.85	47.03	4.47	64.51
Last 5	11:33:07	1500.03	20.19	6.75	733.86	1.70	47.03	4.44	64.63
Last 5	11:38:07	1800.02	20.34	6.76	734.04	1.14	47.03	4.44	64.62
Last 5	11:43:07	2100.03	20.35	6.75	732.94	1.23	47.03	4.39	65.00
Last 5	11:48:07	2400.02	20.39	6.75	731.23	1.00	47.03	4.33	65.14
Variance 0			0.15	0.00	0.18			-0.00	-0.01
Variance 1			0.01	-0.00	-1.09			-0.05	0.38
Variance 2			0.04	-0.00	-1.71			-0.07	0.14

Notes PZ-23 sample time 1250

**Grab Samples**

Product Name: Low-Flow System

Date: 2019-03-27 12:53:33

**Project Information:**

Operator Name Daniel Howard  
Company Name Wood E&IS  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-25  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 647101  
Turbidity Make/Model Hach 2100Q

**Pump Information:**

Pump Model/Type QED micro purge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 63.19 ft

Pump placement from TOC 58.19 ft

**Well Information:**

Well ID PZ-25  
Well diameter 2 in  
Well Total Depth 63.19 ft  
Screen Length 10 ft  
Depth to Water 29.19 ft

**Pumping Information:**

Final Pumping Rate 200 mL/min  
Total System Volume 1.089956 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 6 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:28:14	600.03	21.55	7.09	487.91	1.23	29.40	0.66	-138.87
Last 5	12:33:14	900.03	21.66	7.08	486.39	1.02	29.40	0.63	-134.28
Last 5	12:38:14	1200.02	21.58	7.09	488.13	0.41	29.40	0.58	-130.48
Last 5	12:43:14	1500.03	21.75	7.08	488.45	0.34	29.40	0.54	-128.17
Last 5	12:48:14	1800.03	21.84	7.08	489.26	0.26	29.40	0.50	-125.62
Variance 0			-0.08	0.00	1.73			-0.05	3.80
Variance 1			0.17	-0.00	0.32			-0.04	2.31
Variance 2			0.08	0.00	0.81			-0.04	2.55

**Notes**

PZ-25 sample time 1449

**Grab Samples**

Product Name: Low-Flow System

Date: 2019-03-26 14:15:42

**Project Information:**

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell CCR PHASE 2  
Site Name PZ-31  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 647079  
Turbidity Make/Model Hach 2100Q

**Pump Information:**

Pump Model/Type QED  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 61.6 ft

Pump placement from TOC 56.6 ft

**Well Information:**

Well ID PZ-31  
Well diameter 2 in  
Well Total Depth 61.60 ft  
Screen Length 10 ft  
Depth to Water 34.67 ft

**Pumping Information:**

Final Pumping Rate 200 mL/min  
Total System Volume 0.7549468 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 6 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 0.5%	+/- 0.1%	+/- 5%	+/- 5%		+/- 0.2%	+/- 10%
Stabilization									
Last 5	13:50:16	600.03	21.91	7.00	435.79	1.10	35.11	4.05	44.46
Last 5	13:55:16	900.02	21.86	7.00	437.60	0.98	35.11	4.27	52.30
Last 5	14:00:16	1200.02	21.82	7.00	440.02	0.83	35.11	4.34	54.11
Last 5	14:05:16	1500.02	21.41	7.00	445.71	0.78	35.11	4.34	54.55
Last 5	14:10:16	1800.02	21.20	7.00	448.46	0.89	35.11	4.38	55.08
Variance 0			-0.04	-0.01	2.42			0.07	1.81
Variance 1			-0.41	-0.00	5.70			0.00	0.44
Variance 2			-0.21	-0.00	2.75			0.03	0.53

Notes PZ-31 sample time 1615

**Grab Samples**

Product Name: Low-Flow System

Date: 2019-03-27 11:11:42

**Project Information:**

Operator Name Daniel Howard  
Company Name Wood E&IS  
Project Name Plant Mitchell CCR Phase II  
Site Name PZ-32  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 647101  
Turbidity Make/Model Hach 2100Q

**Pump Information:**

Pump Model/Type QED micro purge  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 65.3 ft

Pump placement from TOC 60.3 ft

**Well Information:**

Well ID PZ-32  
Well diameter 2 in  
Well Total Depth 65.3 ft  
Screen Length 10 ft  
Depth to Water 33.72 ft

**Pumping Information:**

Final Pumping Rate 200 mL/min  
Total System Volume 1.110323 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 6 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 5%	+/- 10
Last 5	10:48:27	600.03	18.05	7.42	304.29	2.05	34.05	0.51	73.13
Last 5	10:53:27	900.02	17.92	7.42	303.07	0.61	34.05	0.43	71.60
Last 5	10:58:27	1200.02	17.99	7.42	301.45	0.38	34.05	0.38	70.80
Last 5	11:03:27	1500.02	17.99	7.42	300.41	0.24	34.05	0.38	70.09
Last 5	11:08:27	1800.02	18.10	7.42	299.56	0.14	34.05	0.35	69.16
Variance 0			0.06	0.00	-1.62			-0.05	-0.80
Variance 1			0.00	0.00	-1.04			0.00	-0.71
Variance 2			0.12	-0.00	-0.85			-0.03	-0.93

**Notes**

PZ-32 sample time 1309

**Grab Samples**

Product Name: Low-Flow System

Date: 2019-03-28 13:14:25

**Project Information:**

Operator Name Ever Guillen  
Company Name Wood  
Project Name Plant Mitchell CCR PHASE 2  
Site Name PZ-33  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 647079  
Turbidity Make/Model Hach 2100Q

**Pump Information:**

Pump Model/Type QED  
Tubing Type HDPE  
Tubing Diameter .25 in  
Tubing Length 73.60 ft

Pump placement from TOC 68.60 ft

**Well Information:**

Well ID PZ-33  
Well diameter 2 in  
Well Total Depth 73.60 ft  
Screen Length 10 ft  
Depth to Water 46.68 ft

**Pumping Information:**

Final Pumping Rate 200 mL/min  
Total System Volume 0.8085079 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 10 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 0.5%	+/- 0.1%	+/- 5%	+/- 5%		+/- 0.2%	+/- 10%
Stabilization									
Last 5	12:52:54	1799.89	20.70	6.97	652.62	0.97	47.11	0.14	-4.04
Last 5	12:57:54	2099.89	20.86	6.96	654.18	0.51	47.11	0.14	-5.83
Last 5	13:02:54	2399.89	21.01	6.96	653.83	0.31	47.11	0.14	-7.32
Last 5	13:07:54	2699.89	21.10	6.96	654.72	0.28	47.11	0.14	-8.53
Last 5	13:12:54	2999.89	21.10	6.96	654.29	0.29	47.11	0.14	-9.02
Variance 0			0.15	-0.00	-0.35			0.00	-1.49
Variance 1			0.09	-0.00	0.89			0.00	-1.22
Variance 2			-0.00	-0.00	-0.43			-0.00	-0.48

Notes PZ-33 sample time 1515 , Collected DUP-02

**Grab Samples**

**Stage 2A Data Verification Report  
Georgia Power  
Mitchell Fossil Plant  
Coal Combustion Residuals Project  
Groundwater Samples**

This quality assurance (QA) review is based upon an examination of the data generated from the analyses of the 152 groundwater samples collected as part of the eight rounds of 2016-2018 baseline monitoring, at the Georgia Power Mitchell Fossil Plant facility. These samples were collectively analyzed by Pace Analytical Services, Inc. (Pace), of Peachtree Corners, Georgia (Pace Atlanta), for total metals and dissolved boron by SW-846 Method 6020A; for total mercury by SW-846 Method 7470A; for total dissolved solids (TDS) by Standard Methods (SM) 2540C; and for anions (specifically, chloride, fluoride, and sulfate) by US EPA Method 300.0. In addition, these samples were collectively analyzed by Pace of Greensburg, Pennsylvania (Pace Pittsburgh), for total radium-226 by SW-846 Method 9315, for total radium-228 by SW-846 Method 9320, and for combined radium-226+228 by calculation.

This review was performed with guidance from the US EPA Region IV Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (November 2001); the US EPA Region IV Data Validation Standard Operating Procedures (SOPs; US EPA Region IV, September 2011); and the applied analytical methods. These validation guidance documents, with the exception of the analytical methods, specifically address analyses performed in accordance with the Contract Laboratory Program (CLP) analytical methods and are not completely applicable to the type of analyses and analytical protocols performed for the SW-846, US EPA, and SM methods utilized by the laboratory for these samples. Environmental Standards, Inc. (Environmental Standards) used professional judgment to determine the usability of the analytical results and compliance relative to the SW-846, US EPA, and SM methods utilized by the laboratory.



## Summary

The analytical results and associated laboratory quality control (QC) samples were reviewed to determine the integrity of the reported analytical results and to verify that the data met the established data quality objectives.

The following sampling events were evaluated as part of this QA review: Event 1, collected 8/30/2016 through 10/18/2016; Event 2, collected 12/6/2016 through 12/15/2016; Event 3, collected 3/21/2017 through 3/23/2017; Event 4, collected 7/11/2017 through 7/12/2017; Event 5, collected 10/17/17 through 10/19/17; Event 6, collected 02/20/18 through 02/21/18; Event 7, collected 07/11/18 through 08/16/18; Event 8, collected 09/12/18 through 09/14/18; a catchup event for sample PZ-33, collected on 10/04/18; sample PZ-2D catchup Events 1-8 collected 04/12/18, 05/23/18, 06/13/18, 07/11/18, 08/17/18, 09/12/18, 10/04/18, and 10/24/18; and the rush samples collected 09/21/16 through 09/23/16, 09/29/16, 10/04/16 through 10/07/16, 10/10/16 through 10/12/16, 10/16/16, 10/18/16, 10/20/16, 10/29/16 through 10/30/16, and 11/04/16.

The following samples were evaluated as part of this QA review: PZ-1D, PZ-2S, PZ-7D, PZ-14, PZ-15, PZ-16, PZ-17, PZ-18, PZ-19, PZ-23, PZ-24, PZ-25, PZ-31, PZ-32, PZ-33, and PZ-2D. In addition, the following rush samples were evaluated as part of this QA review: PZ-9D, PZ-8D, PZ-10S, PZ-12S, PZ-6S, PZ-13S, PZ-11S, PZ-26, PZ-33, PZ-29, PZ-27, PZ-30, PZ-34, PZ-36, PZ-37, PZ-38, PZ-39, PZ-35, PZ-40, PZ-41, PZ-42, PZ-43, PZ-43 Filtered, and PZ-44.

The following Pace inorganic Sample Delivery Groups (SDGs) were evaluated as part of this QA review: AZH0946, AZI0021, AZI0057, AZI0211, AZI0282, AZJ0503, AZL0241, AZL0316, AZL0418, AZL0715, AAC0770, AAC0780, AAC0830, AAC0831, AAC0832, AAC0880, AAC0881, AAG0332, AAJ0677, AAJ0714, 262069, 262141, 263915, 267050, 267101, 267105, 267107, 268373, 269231, 269234, 269285, 269287, 269327, 269329, 2610164, 2610850, 265387, 266099, AZI0780, AZI0817, AZI0990, AZJ0135, AZJ0144, AZJ0211, AZJ0253, AZJ0317, AZJ0370, AZJ0450, AZJ0502, AZJ0607, AZJ0844, and AZK0199.

The following Pace radiological SDGs were evaluated as part of this QA review: 30194836, 30195005, 30195125, 30195540, 30195541, 30195629, 30199880, 30204838, 30205266, 30205160, 30206176, 30213980, 30213981, 30214101, 30214102, 30214103, 30214377, 30214379, 30224178, 30233661, 30233778, 262069, 262141, 263917, 30244272, 30245802, 267052, 267102, 267106, 267109, 268374, 269232, 269235, 269286, 269288, 269328, 269330, 2610165, 2610851, 265388, and 266100.

All data are considered usable as reported, or usable after integration of data validation qualifications.

### **Inorganic and Radiological Data Review**

Data validation was performed for these samples based on the sample results, summary QC data, and raw data provided by the laboratory. The findings offered in this report for the inorganic analyses are based upon a review of the following QC measures:

- Sample condition upon laboratory receipt
- Chain-of-Custody (COC) Records
- Blank analysis results
- Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries and precision
- Laboratory duplicate precision
- Total vs. dissolved results
- Sample holding times
- Case Narratives
- Chemical yield
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries and precision
- Field duplicate precision

The above QC measures were evaluated against the analytical method requirements and QC acceptance criteria. The data were validated based on guidance from the US EPA Region IV Data Validation SOPs, the referenced procedures, and were qualified as appropriate as described in the sections below.

### **Comments and Exceptions**

1. In the metals fraction, the laboratory did not report a set number of significant figures for results < 0.1 mg/L. All results that were < 0.1 mg/L were reported to four decimal places. As a result, reported sample results ranged from one to three significant figures. In addition, the anions results < 1 mg/L were reported to two decimal places, which led to in sample results with one to two significant figures.
2. The data validator applied qualification to combined radium-226+228 based upon the QC samples associated with the analyses of the individual isotopes, radium-226 and radium-228. The electronic data deliverable (EDD) and the database only include the laboratory results for the combined radium-226+228; therefore, qualification of the individual isotopes is not addressed in this QA review.
3. SW-846 Method 9315 includes all alpha-emitting isotopes of radium. In order to analyze for only radium-226, a 21-day ingrowth period must be used. The radium-226 reported by the laboratory did not undergo a 21-day ingrowth; therefore, the results reported as radium-226 potentially contain additional alpha-emitting radium isotopes and could be high biased.
4. Combined radium-226+228 was reported as the summation of the calculated activities for radium-226 and radium-228. As consistent with routine radiological reporting conventions, negative activities were reported for the radium-226 and radium-228 analyses; however, all negative activities were entered as zero in the calculation of combined radium-226+228 activity.



5. The combined radium-226+228 sample-specific minimum detectable concentration (MDC) was reported as the summation of the MDCs for radium-226 and radium-228. Consequently, there may be instances where a detection was observed in one of the individual isotopes but the combined radium-226+228 result was reported as “not-detected” due to the laboratory’s reporting convention for combined radium-226+228.
6. The combined radium-226+228 result uncertainty was reported as the summation of the calculated uncertainties for radium-226 and radium-228. If routine statistical uncertainty reporting conventions were followed, the result uncertainty would have been reported as the root sum square (RSS; the square root of the sum of the squared individual uncertainties).
7. The laboratory did not flag the combined radium-226+228 results < the MDC as “not-detected” in the data package provided. The data validator qualified these samples with a “U” flag on the data tables.
8. In the TDS fraction of SDG AAJ0677, 268373, and 2610164, the laboratory performed matrix QC (laboratory duplicate) analyses on an associated field blank. Matrix QC analyses are performed to evaluate the impact of matrix interferences on target analyte results in investigative samples, which would not be present in a field blank sample. The data reviewer evaluated the duplicate analyses performed on the field blanks, applying the evaluation technique and acceptance criteria established for laboratory duplicate analyses.
9. In the anion fractions of SDGs 263915, 267050, and 265387 and the metals fraction of SDG 265387, the laboratory performed matrix QC (MS/MSD) analyses on an associated equipment blank. Matrix QC analyses are performed to evaluate the impact of matrix interferences on target analyte results in investigative samples, which would not be present in an equipment blank sample. The data reviewer evaluated the MS/MSD analysis performed on the equipment blank, applying the evaluation technique and acceptance criteria established for LCS/LCSD analyses.
10. The laboratory did not provide a Case Narrative associated with metals and wet chemistry or radium analyses in any of the SDGs, with the exception of SDGs AAJ0677 and AAJ0714. As this item was not needed to complete the data validation, the laboratory had not been requested to provide this information. Qualification of data due to this issue was not warranted.
11. In SDGs 263917, 267051, 267102, 267106, 267108, 268374, 269232, 269235, 269286, 269288, 269328, 269330, 2610165, 265388, and 266100, the laboratory did not provide the subcontracted COC record for transfer of the samples from Pace Atlanta to Pace Pittsburgh. As these items were not needed to complete the data validation, the laboratory had not been requested to provide this information. Qualification of data due to this issue was not warranted.
12. In SDGs 30233661, 30233778, 30244272, and 30245802, the laboratory did not provide the field consultant COC record provided with the initial sample shipment to Pace Atlanta. As these items were provided in the associated inorganic data package, they were not needed to complete the data validation. The laboratory had not been requested to provide this information. Qualification of data due to this issue was not warranted.

13. In SDGs 263917, 267052, 267102, 267106, 267109, 268374, 262232, 269235, 269286, 269288, 269328, 269330, 2610165, 2610851, 269388, and 266100, the laboratory did not provide the sample login receipt checklist from Pace Pittsburgh. As these items were not needed to complete the data validation, the laboratory had not been requested to provide this information. Qualification of data due to this issue was not warranted.
14. In SDG 30244272, Pace Pittsburgh did not document the result of the pH check for the radiological samples on the Pace Pittsburgh Lab Sample Condition Upon Receipt form. A Case Narrative indicating there was an issue with the pH was not provided, therefore, the laboratory had not been requested to provide this information. Qualification of data due to this issue was not warranted.
15. The laboratory data packages, EDDs, and associated COCs reported the well identifier PZ-2D as "PZ 2D" in SDGs 268373, 268374, 2610850, and 2610851 and as "PZ2D" in SDGs 2610164 and 2610165. These well identifiers have been used as they were reported in the COCs in this QA review.
16. The laboratory data packages, EDDs, and associated COCs reported the well identifiers PZ-17 and PZ-18, as "PZ 17" and "PZ 18" in SDGs 268373 and 268374, and PZ-33 as "PZ33" in SDGs 2610164 and 2610165. These well identifiers have been used as they were reported in the COCs in this QA review.
17. In SDG 30214379, the collection time for sample PZ-33 was reported as "15:30." According to the COC record, the sample collection time for sample PZ-33 was 15:20. Qualification of data due to this issue was not warranted.
18. In SDG 30214103, the collection time for sample PZ-6S was reported as "10:25." The subcontract COC record to Pace Pittsburgh for sample PZ-6S also reported a collection time of "10:25." According to the field consultant COC record, the sample collection time for sample PZ-6S was "10:56." Qualification of data due to this issue was not warranted.
19. In SDGs 30194836, 30195005, 30195125, 30195541, 30195540, and 30195629, the laboratory did not provide the field consultant COC record provided with the initial sample shipment to Pace Atlanta. In addition, in SDG 30224178 the laboratory did not provide the field consultant COC record provided with the initial sample shipment of samples PZ-33, PZ-19, and PZ-7D to Pace Atlanta. As these items were provided in the associated inorganic data package, they were not needed to complete the data validation. The laboratory had not been requested to provide this information. Qualification of this issue was not warranted.
20. In SDG 30205160, the laboratory performed matrix QC (laboratory duplicate) analysis on an associated equipment blank. Matrix QC analyses are performed to evaluate the impact of matrix interferences on target analyte results in investigative samples, which would not be present in an equipment blank sample. The data reviewer evaluated the duplicate analysis performed on the equipment blank, applying the evaluation technique and acceptance criteria established for laboratory duplicate analyses.
21. The following field duplicate pairs (see table) were submitted and analyzed for inorganic and radiological parameters with this data set. Acceptable precision and sample representativeness (the relative percent difference [RPD] between results was  $\leq 20\%$



when both results were  $\geq 5 \times$  the reporting limit [RL], the difference between results was  $\leq$  the RL when at least one result was  $< 5 \times$  the RL, or replicate error ratio [RER]  $< 3$ ) were demonstrated by the reported results in the field duplicate pair evaluation with the exception of the parameters indicated in the Overall Assessment of Data Section below.

<u>Laboratory SDG(s)</u>	<u>Sample</u>	<u>Field Duplicate</u>
AZI0057 30195125	PZ-15	Dup-01
AZI0211 30195541	PZ-16	Dup-02
ALZ0316 30205266	PZ-7D	Dup-01
ALZ0418 30205160	PZ-17	Dup-02
AAC0830 30214103	PZ-15	Dup-01
AAC0832 30214101	PZ-7D	Dup-02
AAG0332 30224178	PZ-33	Dup-01
AAG0332 30224178	PZ-16	Dup-02
AAJ0677 30233661	PZ-14	Dup-01
AAJ0714 30233778	PZ-19	Dup-02
262141 30245802	PZ-19	Dup-01
262141 30245802	PZ-33	Dup-02
267107 267109	PZ-19	Dup-01
267101 267102	PZ-33	Dup-02
268373 268374	PZ-2D	Dup
269327 269328	PZ-19	Dup-01
269329 269330	PZ-33	Dup-02
2610164 2610165	PZ-2D	Dup

<u>Laboratory SDG(s)</u>	<u>Sample</u>	<u>Field Duplicate</u>
2610850 2610851	PZ-2D	Dup
AZI0780	PZ-8D	Dup-01
AZI0990	PZ-11S	Dup-02
AZJ0135	PZ-26	Dup-01
AZJ0317	PZ-29	Dup-01
AZJ0844	PZ-40 PZ-43	Dup-01 Dup-02



### Overall Assessment of Data

Based on a review of the data, qualification of data was warranted as noted below.

<u>Laboratory SDG(s)</u>	<u>Event</u>	<u>Sample(s)</u>	<u>Analyte(s)</u>	<u>Qualifier(s)</u>	<u>Reason(s) for Qualification</u>
AZH0946	1	PZ-2S and PZ-1D	fluoride	U*	BE – Equipment blank contamination
AZI0021	1	PZ-23 and PZ-14	fluoride	U*	BE – Equipment blank contamination
AZI0057	1	PZ-15	fluoride	U*	BE – Equipment blank contamination
30195541	1	PZ-16	combined radium- 226+228	U*	BE – Equipment blank contamination
30195540	1	PZ-18 and PZ-19	combined radium- 226+228	U*	BE – Equipment blank contamination
AZH0946	1	PZ-2S and PZ-1D	boron	U*	BE – Equipment blank contamination BF – Field blank contamination
AZI0021	1	PZ-14	boron	U*	BE – Equipment blank contamination BF – Field blank contamination
AZI0282	1	PZ-24	boron	U*	BF – Field blank contamination
AZH0946	1	PZ-1D	antimony	U*	BL – Laboratory blank contamination
30205160	2	PZ-15, PZ-16, PZ-17, PZ-19, PZ-25, and PZ-18	combined radium- 226+228	U*	BE – Equipment blank contamination
AZL0241	2	PZ-31 and PZ-1D	fluoride	U*	BE – Equipment blank contamination BF – Field blank contamination
AZL0316	2	PZ-7D, PZ-14, PZ-23, PZ-32, and PZ-6S	fluoride	U*	BE – Equipment blank contamination BF – Field blank contamination
AZL0418	2	PZ-15, PZ-16, PZ-17, PZ-19, and PZ-18	fluoride	U*	BE – Equipment blank contamination BF – Field blank contamination

<u>Laboratory SDG(s)</u>	<u>Event</u>	<u>Sample(s)</u>	<u>Analyte(s)</u>	<u>Qualifier(s)</u>	<u>Reason(s) for Qualification</u>
AZL0241	2	PZ-1D	chromium	U*	BF – Field blank contamination
AZL0316	2	PZ-7D	chromium	U*	BF – Field blank contamination
AAC0780	3	PZ-1D and PZ-31	fluoride	U*	BE – Equipment blank contamination
AAC0831	3	PZ-16	fluoride	U*	BE – Equipment blank contamination
AAC0830	3	PZ-6S	fluoride	U*	BE – Equipment blank contamination
AAC0770	3	PZ-14	thallium	U*	BL – Laboratory blank contamination
AAC0780	3	PZ-31	thallium	U*	BL – Laboratory blank contamination
266099	3	PZ-2D	mercury	U*	BL – Method blank contamination BE – Equipment blank contamination
267052	4	PZ-2D	combined radium-226+228	U*	BL – Method blank contamination
268373	5	PZ 2D	boron	U*	BF – Field blank contamination BE – Equipment blank contamination
268373	5	PZ 2D	chloride	U*	BF – Field blank contamination
262069	6	PZ-32, PZ-1D, PZ-31, and PZ-14	boron	U*	BF – Field blank contamination BE – Equipment blank contamination
262141	6	PZ-16, PZ-25, PZ-7D, PZ-18, PZ-15, PZ-17, PZ-33, and PZ-19	mercury	U*	BF – Field blank contamination BE – Equipment blank contamination
268373	7	PZ 17	fluoride	U*	BF – Field blank contamination
269231	8	PZ-1D and PZ-31	sulfate	U*	BE – Equipment blank contamination
269234	8	PZ-2S	sulfate	U*	BE – Equipment blank contamination



<u>Laboratory SDG(s)</u>	<u>Event</u>	<u>Sample(s)</u>	<u>Analyte(s)</u>	<u>Qualifier(s)</u>	<u>Reason(s) for Qualification</u>
269287	8	PZ-32	sulfate	U*	BE – Equipment blank contamination
2610850	8	PZ 2D	mercury	U*	BF – Field blank contamination BE – Equipment blank contamination
AZI0780	Rush	PZ-8D	boron	U*	BF – Field blank contamination BE – Equipment blank contamination
AZJ0502	Rush	PZ-39	boron	U*	BL – Method blank contamination
30195629	1	PZ-25	combined radium- 226+228	J	BE – Equipment blank contamination
30195005	1	PZ-23 and PZ-14	combined radium- 226+228	J	BL – Laboratory blank contamination
30195125	1	PZ-15	combined radium- 226+228	J	BL – Laboratory blank contamination
30205266	2	PZ-6S	combined radium- 226+228	J	BE – Equipment blank contamination
30224178	4	PZ-32	combined radium- 226+228	J	BL – Laboratory blank contamination
263917	1	PZ-2D	combined radium-226+228	UJ	L- – Low LCS recovery
30204838	2	PZ-31 and PZ-1D	combined radium- 226+228	UJ	L- – Low LCS recovery
30205160	2	PZ-15, PZ-16, PZ-33, PZ-17, PZ-19, PZ-25, and PZ-18	combined radium- 226+228	J/UJ (unless previously flagged U*)	L- – Low LCS recovery
30213980	3	PZ-14, PZ-2S and PZ-23	combined radium- 226+228	UJ	L- – Low LCS recovery
30213981	3	PZ-1D and PZ-31	combined radium- 226+228	UJ	L- – Low LCS recovery
30214101	3	PZ-17, PZ-18, and PZ-7D	combined radium- 226+228	UJ	L- – Low LCS recovery
30214102	3	PZ-16	combined radium- 226+228	UJ	L- – Low LCS recovery
266100	3	PZ-2D	combined radium-226+228	UJ	L- – Low LCS recovery

<u>Laboratory SDG(s)</u>	<u>Event</u>	<u>Sample(s)</u>	<u>Analyte(s)</u>	<u>Qualifier(s)</u>	<u>Reason(s) for Qualification</u>
30224178	4	PZ-1D	combined radium- 226+228	UJ	L- – Low LCS recovery
30224178	4	PZ-32	combined radium- 226+228	J	L- – Low LCS recovery LP – LCS/LCSD imprecision
30233661	5	PZ-32, PZ-1D, PZ-31, PZ-2S, PZ-23, PZ-17, PZ-15, PZ-14, PZ-16, PZ-18, and PZ-25	combined radium-226+228	J/UJ	L- – Low LCS recovery
268374	5	PZ 2D	combined radium-226+228	UJ	L- – Low LCS recovery
269235	6	PZ-2D	combined radium-226+228	UJ	L- – Low LCS recovery
267102	7	PZ-15, PZ-7D, and PZ-33	combined radium-226+228	UJ	L- – Low LCS recovery
268374	7	PZ 18 and PZ 17	combined radium-226+228	UJ	L- – Low LCS recovery
2610165	7	PZ2D	combined radium-226+228	J	L- – Low LCS recovery
269232	8	PZ-1D, PZ-31, and PZ-14	combined radium-226+228	UJ	L- – Low LCS recovery
269235	8	PZ-2S	combined radium-226+228	UJ	L- – Low LCS recovery
269286	8	PZ-23, PZ-16, and PZ-15	combined radium-226+228	UJ	L- – Low LCS recovery
269288	8	PZ-32, PZ-25, PZ-18, and PZ-7D	combined radium-226+228	UJ	L- – Low LCS recovery
269328	8	PZ-19	combined radium-226+228	UJ	L- – Low LCS recovery
269330	8	PZ-17 and PZ-33	combined radium-226+228	J/UJ	L- – Low LCS recovery
2610165	8	PZ33	combined radium-226+228	UJ	L- – Low LCS recovery
30245802	6	PZ-17	combined radium-226+228	J	L+ – High LCS recovery
AZL0418	2	PZ-15, PZ-16, PZ-33, PZ-17, PZ-19, PZ-25, and PZ-18	chloride	J	M- – Low MS recovery

<u>Laboratory SDG(s)</u>	<u>Event</u>	<u>Sample(s)</u>	<u>Analyte(s)</u>	<u>Qualifier(s)</u>	<u>Reason(s) for Qualification</u>
266099	3	PZ-2D	chloride	J	M- – Low MS recovery
266099	3	PZ-2D	mercury	J (unless previously flagged U*)	M- – Low MS recovery
AZI0057	1	PZ-15 and PZ-7D	barium	J	M+ – High MS recovery
266099	3	PZ-2D	mercury	J (unless previously flagged U*)	MP – MS/MSD imprecision
268373	5	PZ 2D	TDS	J	FD – Field duplicate imprecision

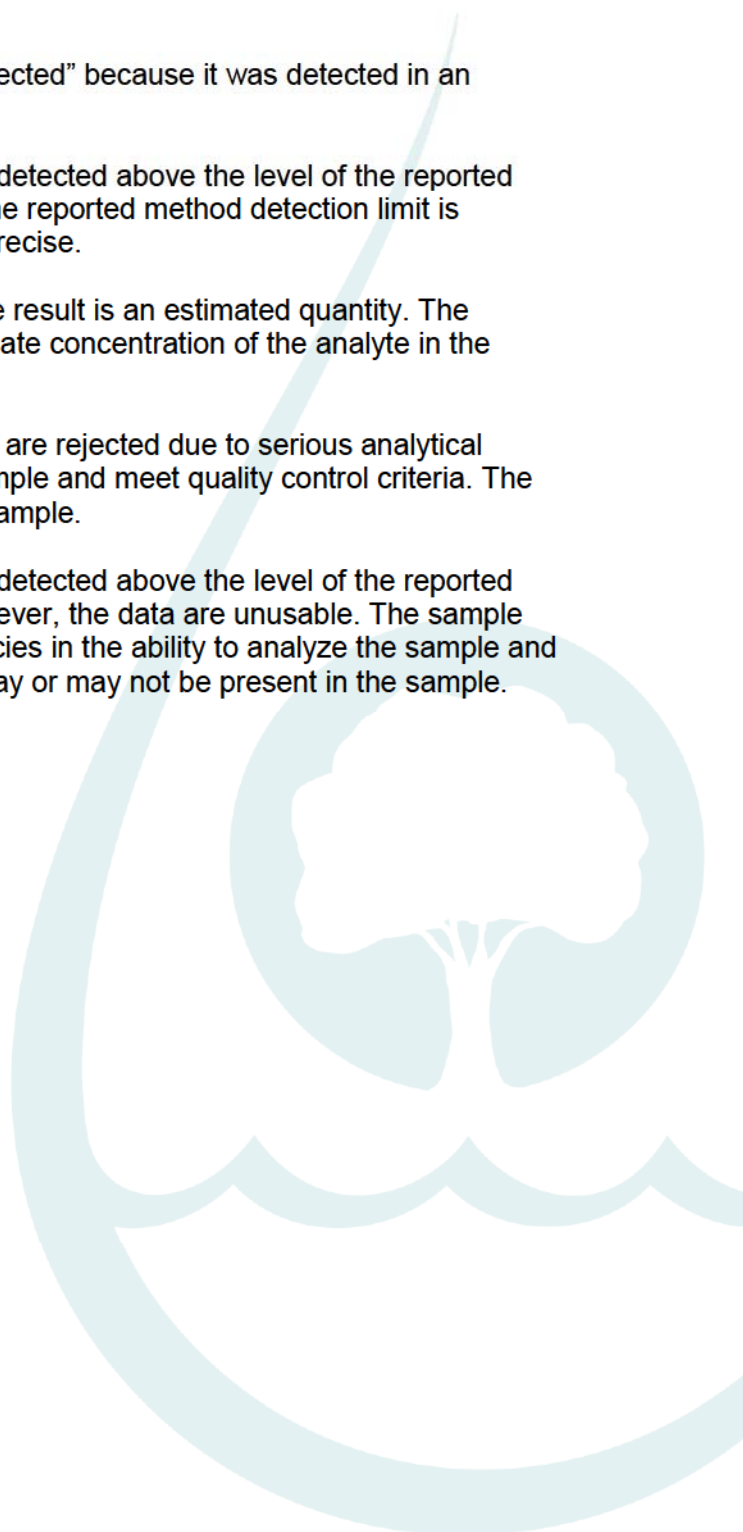
- All inorganic positive results reported between the method detection limit (MDL) and RL have been flagged "J."
- All radiological results reported below the MDC have been flagged "U."

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Report prepared by: Mark D. Haslett, Quality Analyst  
 Report prepared by: Steven J. Lennon, Senior Quality Assurance Chemist  
 Report reviewed by: Konstadina Vlahogiani, Senior Technical Chemist  
 Report reviewed by: Alyssa M. Reed, Senior Quality Assurance Chemist/Project Manager  
 Report approved by: David I. Thal, CEAC, CQA, Principal Chemist  
 Date: 2/26/2019

## **INORGANIC AND RADIOLOGICAL DATA QUALIFIERS**

- U - The analyte was analyzed for, but was not detected above the level of the reported sample reporting/method detection limit.
- U\* - This analyte should be considered “not-detected” because it was detected in an associated blank at a similar level.
- UJ - The analyte was analyzed for, but was not detected above the level of the reported sample reporting/method detection limit. The reported method detection limit is approximate and may be inaccurate or imprecise.
- J - The analyte was positively identified but the result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
- R - The data are unusable. The sample results are rejected due to serious analytical deficiencies in the ability to analyze the sample and meet quality control criteria. The analyte may or may not be present in the sample.
- UR - The analyte was analyzed for, but was not detected above the level of the reported sample reporting or method detection; however, the data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The analyte may or may not be present in the sample.





### Reason Codes and Explanations

Reason Code	Explanation
BE	Equipment blank contamination. The result should be considered "not-detected."
BF	Field blank contamination. The result should be considered "not-detected."
BL	Laboratory blank contamination. The result should be considered "not-detected."
BN	Negative laboratory blank contamination.
C	Initial and/or continuing calibration issue, indeterminate bias.
C+	Initial and/or continuing calibration issue. The result may be biased high.
C-	Initial and/or continuing calibration issue. The result may be biased low.
FD	Field duplicate imprecision.
FG	Total versus dissolved imprecision.
H	Holding time exceeded.
I	Internal standard recovery outside of acceptance limits.
L	LCS and LCSD recoveries outside of acceptance limits, indeterminate bias.
L+	LCS and/or LCSD recoveries outside of acceptance limits. The result may be biased high.
L-	LCS and/or LCSD recoveries outside of acceptance limits. The result may be biased low.
LD	Laboratory duplicate imprecision.
LP	LCS/LCSD imprecision.
M	MS and MSD recoveries outside of acceptance limits, indeterminate bias.
M+	MS and/or MSD recoveries outside of acceptance limits. The result may be biased high.
M-	MS and/or MSD recoveries outside of acceptance limits. The result may be biased low.
MP	MS/MSD imprecision.
P	Post-digestion spike recoveries outside of acceptance limits, indeterminate bias.
P+	Post-digestion spike recovery outside of acceptance limits. The result may be biased high.
P-	Post-digestion spike recovery outside of acceptance limits. The result may be biased low.
Q	Chemical preservation issue.
R	RL standards outside of acceptance limits, indeterminate bias.
R+	RL standard(s) outside of acceptance limits. The result may be biased high.
R-	RL standard(s) outside of acceptance limits. The result may be biased low.
T	Temperature preservation issue.
SD	Serial dilution imprecision.
Y	Chemical yields outside of acceptance limits, indeterminate bias.
Y+	Chemical yield(s) outside of acceptance limits. The result may be biased high.
Y-	Chemical yield(s) outside of acceptance limits. The result may be biased low.
ZZ	Other

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# ***APPENDIX C***

## ***STATISTICAL ANALYSES***

# Interwell Prediction Limit Summary Table – Significant Results

Plant Mitchell   Client: Southern Company   Data: Mitchel V3   Printed 8/6/2019, 10:18 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/l)	PZ-15	0.02908	n/a	3/28/2019	0.22	Yes	36	5.556	ln(x)	0.000...	Param Inter 1 of 2
Boron (mg/l)	PZ-16	0.02908	n/a	3/27/2019	0.21	Yes	36	5.556	ln(x)	0.000...	Param Inter 1 of 2
Boron (mg/l)	PZ-17	0.02908	n/a	3/28/2019	0.34	Yes	36	5.556	ln(x)	0.000...	Param Inter 1 of 2
Boron (mg/l)	PZ-18	0.02908	n/a	3/27/2019	0.41	Yes	36	5.556	ln(x)	0.000...	Param Inter 1 of 2
Boron (mg/l)	PZ-19	0.02908	n/a	3/28/2019	0.7	Yes	36	5.556	ln(x)	0.000...	Param Inter 1 of 2
Boron (mg/l)	PZ-23	0.02908	n/a	3/27/2019	0.18	Yes	36	5.556	ln(x)	0.000...	Param Inter 1 of 2
Boron (mg/l)	PZ-25	0.02908	n/a	3/27/2019	0.22	Yes	36	5.556	ln(x)	0.000...	Param Inter 1 of 2
Boron (mg/l)	PZ-33	0.02908	n/a	3/28/2019	0.39	Yes	36	5.556	ln(x)	0.000...	Param Inter 1 of 2
Boron (mg/l)	PZ-7D	0.02908	n/a	3/28/2019	0.33	Yes	36	5.556	ln(x)	0.000...	Param Inter 1 of 2
Calcium (mg/l)	PZ-17	107	n/a	3/28/2019	123	Yes	35	2.857	No	0.000...	Param Inter 1 of 2
Calcium (mg/l)	PZ-18	107	n/a	3/27/2019	134	Yes	35	2.857	No	0.000...	Param Inter 1 of 2
Calcium (mg/l)	PZ-19	107	n/a	3/28/2019	164	Yes	35	2.857	No	0.000...	Param Inter 1 of 2
Calcium (mg/l)	PZ-23	107	n/a	3/27/2019	152	Yes	35	2.857	No	0.000...	Param Inter 1 of 2
Calcium (mg/l)	PZ-33	107	n/a	3/28/2019	117	Yes	35	2.857	No	0.000...	Param Inter 1 of 2
Calcium (mg/l)	PZ-7D	107	n/a	3/28/2019	124	Yes	35	2.857	No	0.000...	Param Inter 1 of 2
Chloride (mg/l)	PZ-14	4.779	n/a	3/27/2019	5.2	Yes	36	0	No	0.000...	Param Inter 1 of 2
Chloride (mg/l)	PZ-15	4.779	n/a	3/28/2019	7.4	Yes	36	0	No	0.000...	Param Inter 1 of 2
Chloride (mg/l)	PZ-16	4.779	n/a	3/27/2019	7.3	Yes	36	0	No	0.000...	Param Inter 1 of 2
Chloride (mg/l)	PZ-17	4.779	n/a	3/28/2019	7.3	Yes	36	0	No	0.000...	Param Inter 1 of 2
Chloride (mg/l)	PZ-18	4.779	n/a	3/27/2019	6.5	Yes	36	0	No	0.000...	Param Inter 1 of 2
Chloride (mg/l)	PZ-19	4.779	n/a	3/28/2019	6.4	Yes	36	0	No	0.000...	Param Inter 1 of 2
Chloride (mg/l)	PZ-33	4.779	n/a	3/28/2019	4.8	Yes	36	0	No	0.000...	Param Inter 1 of 2
Chloride (mg/l)	PZ-7D	4.779	n/a	3/28/2019	6.4	Yes	36	0	No	0.000...	Param Inter 1 of 2
Fluoride (mg/l)	PZ-25	0.2509	n/a	3/27/2019	0.37	Yes	36	36.11	sqrt(x)	0.000...	Param Inter 1 of 2
pH (pH units)	PZ-18	9.71	6.96	3/27/2019	6.92	Yes	36	0	n/a	0.002709	NP Inter (normality) ...
pH (pH units)	PZ-19	9.71	6.96	3/28/2019	6.67	Yes	36	0	n/a	0.002709	NP Inter (normality) ...
pH (pH units)	PZ-23	9.71	6.96	3/27/2019	6.75	Yes	36	0	n/a	0.002709	NP Inter (normality) ...
Sulfate (mg/l)	PZ-14	6.4	n/a	3/27/2019	8.2	Yes	36	0	n/a	0.001354	NP Inter (normality) ...
Sulfate (mg/l)	PZ-15	6.4	n/a	3/28/2019	90.3	Yes	36	0	n/a	0.001354	NP Inter (normality) ...
Sulfate (mg/l)	PZ-16	6.4	n/a	3/27/2019	46.5	Yes	36	0	n/a	0.001354	NP Inter (normality) ...
Sulfate (mg/l)	PZ-17	6.4	n/a	3/28/2019	94.7	Yes	36	0	n/a	0.001354	NP Inter (normality) ...
Sulfate (mg/l)	PZ-18	6.4	n/a	3/27/2019	111	Yes	36	0	n/a	0.001354	NP Inter (normality) ...
Sulfate (mg/l)	PZ-19	6.4	n/a	3/28/2019	83.5	Yes	36	0	n/a	0.001354	NP Inter (normality) ...
Sulfate (mg/l)	PZ-23	6.4	n/a	3/27/2019	41.9	Yes	36	0	n/a	0.001354	NP Inter (normality) ...
Sulfate (mg/l)	PZ-25	6.4	n/a	3/27/2019	43.7	Yes	36	0	n/a	0.001354	NP Inter (normality) ...
Sulfate (mg/l)	PZ-33	6.4	n/a	3/28/2019	76.7	Yes	36	0	n/a	0.001354	NP Inter (normality) ...
Sulfate (mg/l)	PZ-7D	6.4	n/a	3/28/2019	59.6	Yes	36	0	n/a	0.001354	NP Inter (normality) ...
Total Dissolved Solids (mg/l)	PZ-15	319.5	n/a	3/28/2019	337	Yes	36	0	No	0.000...	Param Inter 1 of 2
Total Dissolved Solids (mg/l)	PZ-17	319.5	n/a	3/28/2019	420	Yes	36	0	No	0.000...	Param Inter 1 of 2
Total Dissolved Solids (mg/l)	PZ-18	319.5	n/a	3/27/2019	408	Yes	36	0	No	0.000...	Param Inter 1 of 2
Total Dissolved Solids (mg/l)	PZ-19	319.5	n/a	3/28/2019	378	Yes	36	0	No	0.000...	Param Inter 1 of 2
Total Dissolved Solids (mg/l)	PZ-23	319.5	n/a	3/27/2019	410	Yes	36	0	No	0.000...	Param Inter 1 of 2
Total Dissolved Solids (mg/l)	PZ-33	319.5	n/a	3/28/2019	405	Yes	36	0	No	0.000...	Param Inter 1 of 2
Total Dissolved Solids (mg/l)	PZ-7D	319.5	n/a	3/28/2019	365	Yes	36	0	No	0.000...	Param Inter 1 of 2

# Interwell Prediction Limit Summary Table – All Results

Plant Mitchell   Client: Southern Company   Data: Mitchel V3   Printed 8/6/2019, 10:18 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/l)	PZ-14	0.02908	n/a	3/27/2019	0.023	No	36	5.556	ln(x)	0.000...	Param Inter 1 of 2
<b>Boron (mg/l)</b>	<b>PZ-15</b>	<b>0.02908</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>0.22</b>	<b>Yes</b>	<b>36</b>	<b>5.556</b>	<b>ln(x)</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
Boron (mg/l)	PZ-16	0.02908	n/a	3/27/2019	0.21	Yes	36	5.556	ln(x)	0.000...	Param Inter 1 of 2
Boron (mg/l)	PZ-17	0.02908	n/a	3/28/2019	0.34	Yes	36	5.556	ln(x)	0.000...	Param Inter 1 of 2
Boron (mg/l)	PZ-18	0.02908	n/a	3/27/2019	0.41	Yes	36	5.556	ln(x)	0.000...	Param Inter 1 of 2
Boron (mg/l)	PZ-19	0.02908	n/a	3/28/2019	0.7	Yes	36	5.556	ln(x)	0.000...	Param Inter 1 of 2
Boron (mg/l)	PZ-23	0.02908	n/a	3/27/2019	0.18	Yes	36	5.556	ln(x)	0.000...	Param Inter 1 of 2
Boron (mg/l)	PZ-25	0.02908	n/a	3/27/2019	0.22	Yes	36	5.556	ln(x)	0.000...	Param Inter 1 of 2
Boron (mg/l)	PZ-33	0.02908	n/a	3/28/2019	0.39	Yes	36	5.556	ln(x)	0.000...	Param Inter 1 of 2
<b>Boron (mg/l)</b>	<b>PZ-7D</b>	<b>0.02908</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>0.33</b>	<b>Yes</b>	<b>36</b>	<b>5.556</b>	<b>ln(x)</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
Calcium (mg/l)	PZ-14	107	n/a	3/27/2019	105	No	35	2.857	No	0.000...	Param Inter 1 of 2
Calcium (mg/l)	PZ-15	107	n/a	3/28/2019	100	No	35	2.857	No	0.000...	Param Inter 1 of 2
Calcium (mg/l)	PZ-16	107	n/a	3/27/2019	90.5	No	35	2.857	No	0.000...	Param Inter 1 of 2
<b>Calcium (mg/l)</b>	<b>PZ-17</b>	<b>107</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>123</b>	<b>Yes</b>	<b>35</b>	<b>2.857</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
<b>Calcium (mg/l)</b>	<b>PZ-18</b>	<b>107</b>	<b>n/a</b>	<b>3/27/2019</b>	<b>134</b>	<b>Yes</b>	<b>35</b>	<b>2.857</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
<b>Calcium (mg/l)</b>	<b>PZ-19</b>	<b>107</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>164</b>	<b>Yes</b>	<b>35</b>	<b>2.857</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
<b>Calcium (mg/l)</b>	<b>PZ-23</b>	<b>107</b>	<b>n/a</b>	<b>3/27/2019</b>	<b>152</b>	<b>Yes</b>	<b>35</b>	<b>2.857</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
Calcium (mg/l)	PZ-25	107	n/a	3/27/2019	95.2	No	35	2.857	No	0.000...	Param Inter 1 of 2
<b>Calcium (mg/l)</b>	<b>PZ-33</b>	<b>107</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>117</b>	<b>Yes</b>	<b>35</b>	<b>2.857</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
<b>Calcium (mg/l)</b>	<b>PZ-7D</b>	<b>107</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>124</b>	<b>Yes</b>	<b>35</b>	<b>2.857</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
<b>Chloride (mg/l)</b>	<b>PZ-14</b>	<b>4.779</b>	<b>n/a</b>	<b>3/27/2019</b>	<b>5.2</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
<b>Chloride (mg/l)</b>	<b>PZ-15</b>	<b>4.779</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>7.4</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
<b>Chloride (mg/l)</b>	<b>PZ-16</b>	<b>4.779</b>	<b>n/a</b>	<b>3/27/2019</b>	<b>7.3</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
<b>Chloride (mg/l)</b>	<b>PZ-17</b>	<b>4.779</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>7.3</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
<b>Chloride (mg/l)</b>	<b>PZ-18</b>	<b>4.779</b>	<b>n/a</b>	<b>3/27/2019</b>	<b>6.5</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
<b>Chloride (mg/l)</b>	<b>PZ-19</b>	<b>4.779</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>6.4</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
Chloride (mg/l)	PZ-23	4.779	n/a	3/27/2019	4.7	No	36	0	No	0.000...	Param Inter 1 of 2
Chloride (mg/l)	PZ-25	4.779	n/a	3/27/2019	2.4	No	36	0	No	0.000...	Param Inter 1 of 2
<b>Chloride (mg/l)</b>	<b>PZ-33</b>	<b>4.779</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>4.8</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
<b>Chloride (mg/l)</b>	<b>PZ-7D</b>	<b>4.779</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>6.4</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
Fluoride (mg/l)	PZ-14	0.2509	n/a	3/27/2019	0.15ND	No	36	36.11	sqrt(x)	0.000...	Param Inter 1 of 2
Fluoride (mg/l)	PZ-15	0.2509	n/a	3/28/2019	0.1	No	36	36.11	sqrt(x)	0.000...	Param Inter 1 of 2
Fluoride (mg/l)	PZ-16	0.2509	n/a	3/27/2019	0.15ND	No	36	36.11	sqrt(x)	0.000...	Param Inter 1 of 2
Fluoride (mg/l)	PZ-17	0.2509	n/a	3/28/2019	0.15	No	36	36.11	sqrt(x)	0.000...	Param Inter 1 of 2
Fluoride (mg/l)	PZ-18	0.2509	n/a	3/27/2019	0.15ND	No	36	36.11	sqrt(x)	0.000...	Param Inter 1 of 2
Fluoride (mg/l)	PZ-19	0.2509	n/a	3/28/2019	0.074	No	36	36.11	sqrt(x)	0.000...	Param Inter 1 of 2
Fluoride (mg/l)	PZ-23	0.2509	n/a	3/27/2019	0.15ND	No	36	36.11	sqrt(x)	0.000...	Param Inter 1 of 2
<b>Fluoride (mg/l)</b>	<b>PZ-25</b>	<b>0.2509</b>	<b>n/a</b>	<b>3/27/2019</b>	<b>0.37</b>	<b>Yes</b>	<b>36</b>	<b>36.11</b>	<b>sqrt(x)</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
Fluoride (mg/l)	PZ-33	0.2509	n/a	3/28/2019	0.15ND	No	36	36.11	sqrt(x)	0.000...	Param Inter 1 of 2
Fluoride (mg/l)	PZ-7D	0.2509	n/a	3/28/2019	0.15ND	No	36	36.11	sqrt(x)	0.000...	Param Inter 1 of 2
pH (pH units)	PZ-14	9.71	6.96	3/27/2019	6.98	No	36	0	n/a	0.002709	NP Inter (normality) ...
pH (pH units)	PZ-15	9.71	6.96	3/28/2019	7.84	No	36	0	n/a	0.002709	NP Inter (normality) ...
pH (pH units)	PZ-16	9.71	6.96	3/27/2019	7.23	No	36	0	n/a	0.002709	NP Inter (normality) ...
pH (pH units)	PZ-17	9.71	6.96	3/28/2019	6.97	No	36	0	n/a	0.002709	NP Inter (normality) ...
<b>pH (pH units)</b>	<b>PZ-18</b>	<b>9.71</b>	<b>6.96</b>	<b>3/27/2019</b>	<b>6.92</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>n/a</b>	<b>0.002709</b>	<b>NP Inter (normality) ...</b>
<b>pH (pH units)</b>	<b>PZ-19</b>	<b>9.71</b>	<b>6.96</b>	<b>3/28/2019</b>	<b>6.67</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>n/a</b>	<b>0.002709</b>	<b>NP Inter (normality) ...</b>
<b>pH (pH units)</b>	<b>PZ-23</b>	<b>9.71</b>	<b>6.96</b>	<b>3/27/2019</b>	<b>6.75</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>n/a</b>	<b>0.002709</b>	<b>NP Inter (normality) ...</b>
pH (pH units)	PZ-25	9.71	6.96	3/27/2019	7.08	No	36	0	n/a	0.002709	NP Inter (normality) ...
pH (pH units)	PZ-33	9.71	6.96	3/28/2019	6.96	No	36	0	n/a	0.002709	NP Inter (normality) ...
pH (pH units)	PZ-7D	9.71	6.96	3/28/2019	6.96	No	36	0	n/a	0.002709	NP Inter (normality) ...



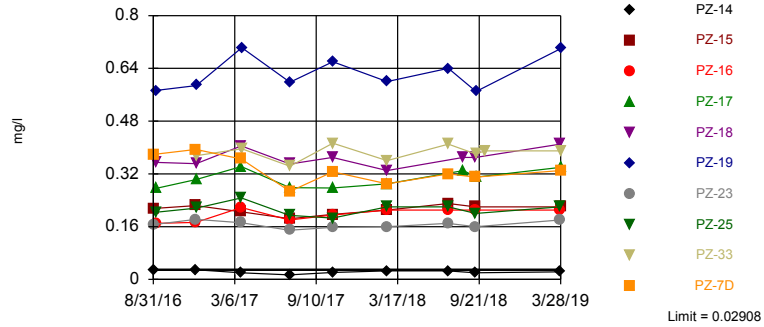
# Interwell Prediction Limit Summary Table – All Results

Plant Mitchell Client: Southern Company Data: Mitchel V3 Printed 8/6/2019, 10:18 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
<b>Sulfate (mg/l)</b>	<b>PZ-14</b>	<b>6.4</b>	<b>n/a</b>	<b>3/27/2019</b>	<b>8.2</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>n/a</b>	<b>0.001354</b>	<b>NP Inter (normality) ...</b>
<b>Sulfate (mg/l)</b>	<b>PZ-15</b>	<b>6.4</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>90.3</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>n/a</b>	<b>0.001354</b>	<b>NP Inter (normality) ...</b>
<b>Sulfate (mg/l)</b>	<b>PZ-16</b>	<b>6.4</b>	<b>n/a</b>	<b>3/27/2019</b>	<b>46.5</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>n/a</b>	<b>0.001354</b>	<b>NP Inter (normality) ...</b>
<b>Sulfate (mg/l)</b>	<b>PZ-17</b>	<b>6.4</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>94.7</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>n/a</b>	<b>0.001354</b>	<b>NP Inter (normality) ...</b>
<b>Sulfate (mg/l)</b>	<b>PZ-18</b>	<b>6.4</b>	<b>n/a</b>	<b>3/27/2019</b>	<b>111</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>n/a</b>	<b>0.001354</b>	<b>NP Inter (normality) ...</b>
<b>Sulfate (mg/l)</b>	<b>PZ-19</b>	<b>6.4</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>83.5</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>n/a</b>	<b>0.001354</b>	<b>NP Inter (normality) ...</b>
<b>Sulfate (mg/l)</b>	<b>PZ-23</b>	<b>6.4</b>	<b>n/a</b>	<b>3/27/2019</b>	<b>41.9</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>n/a</b>	<b>0.001354</b>	<b>NP Inter (normality) ...</b>
<b>Sulfate (mg/l)</b>	<b>PZ-25</b>	<b>6.4</b>	<b>n/a</b>	<b>3/27/2019</b>	<b>43.7</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>n/a</b>	<b>0.001354</b>	<b>NP Inter (normality) ...</b>
<b>Sulfate (mg/l)</b>	<b>PZ-33</b>	<b>6.4</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>76.7</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>n/a</b>	<b>0.001354</b>	<b>NP Inter (normality) ...</b>
<b>Sulfate (mg/l)</b>	<b>PZ-7D</b>	<b>6.4</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>59.6</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>n/a</b>	<b>0.001354</b>	<b>NP Inter (normality) ...</b>
Total Dissolved Solids (mg/l)	PZ-14	319.5	n/a	3/27/2019	281	No	36	0	No	0.000...	Param Inter 1 of 2
<b>Total Dissolved Solids (mg/l)</b>	<b>PZ-15</b>	<b>319.5</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>337</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
Total Dissolved Solids (mg/l)	PZ-16	319.5	n/a	3/27/2019	277	No	36	0	No	0.000...	Param Inter 1 of 2
<b>Total Dissolved Solids (mg/l)</b>	<b>PZ-17</b>	<b>319.5</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>420</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
<b>Total Dissolved Solids (mg/l)</b>	<b>PZ-18</b>	<b>319.5</b>	<b>n/a</b>	<b>3/27/2019</b>	<b>408</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
<b>Total Dissolved Solids (mg/l)</b>	<b>PZ-19</b>	<b>319.5</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>378</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
<b>Total Dissolved Solids (mg/l)</b>	<b>PZ-23</b>	<b>319.5</b>	<b>n/a</b>	<b>3/27/2019</b>	<b>410</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
Total Dissolved Solids (mg/l)	PZ-25	319.5	n/a	3/27/2019	287	No	36	0	No	0.000...	Param Inter 1 of 2
<b>Total Dissolved Solids (mg/l)</b>	<b>PZ-33</b>	<b>319.5</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>405</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>
<b>Total Dissolved Solids (mg/l)</b>	<b>PZ-7D</b>	<b>319.5</b>	<b>n/a</b>	<b>3/28/2019</b>	<b>365</b>	<b>Yes</b>	<b>36</b>	<b>0</b>	<b>No</b>	<b>0.000...</b>	<b>Param Inter 1 of 2</b>

Exceeds Limit: PZ-15, PZ-16, PZ-17, PZ-18, PZ-19, PZ-23, PZ-25, PZ-33...

Prediction Limit  
Interwell Parametric

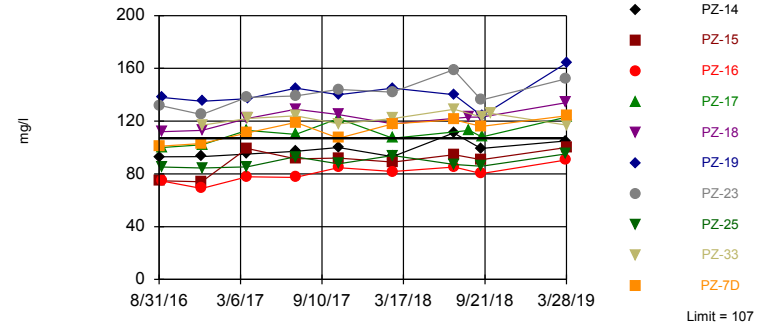


Background Data Summary (based on natural log transformation): Mean=-4.297, Std. Dev.=0.3641, n=36, 5.556% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9503, critical = 0.912. Kappa = 2.086 (c=7, w=10, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0007523. Comparing 10 points to limit.

Constituent: Boron Analysis Run 8/6/2019 10:16 AM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Exceeds Limit: PZ-17, PZ-18, PZ-19, PZ-23, PZ-33, PZ-7D

Prediction Limit  
Interwell Parametric

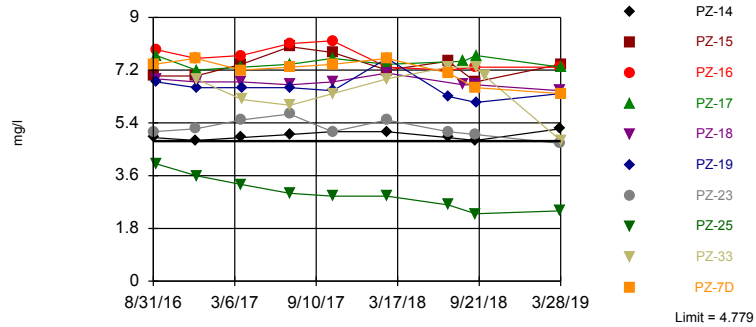


Background Data Summary: Mean=53.7, Std. Dev.=25.5, n=35, 2.857% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9293, critical = 0.91. Kappa = 2.091 (c=7, w=10, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0007523. Comparing 10 points to limit.

Constituent: Calcium Analysis Run 8/6/2019 10:16 AM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Exceeds Limit: PZ-14, PZ-15, PZ-16, PZ-17, PZ-18, PZ-19, PZ-33, PZ-7D

Prediction Limit  
Interwell Parametric

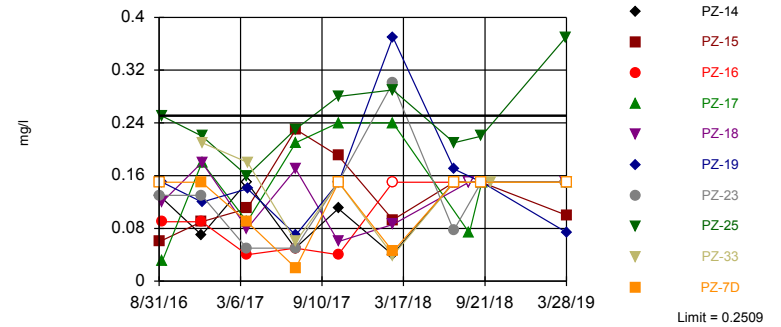


Background Data Summary: Mean=3.258, Std. Dev.=0.7287, n=36. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9126, critical = 0.912. Kappa = 2.086 (c=7, w=10, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0007523. Comparing 10 points to limit.

Constituent: Chloride Analysis Run 8/6/2019 10:16 AM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Exceeds Limit: PZ-25

Prediction Limit  
Interwell Parametric



Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.2501, Std. Dev.=0.1202, n=36, 36.11% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9136, critical = 0.912. Kappa = 2.086 (c=7, w=10, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0007523. Comparing 10 points to limit.

Constituent: Fluoride Analysis Run 8/6/2019 10:16 AM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

# Prediction Limit

Constituent: Boron (mg/l)    Analysis Run 8/6/2019 10:18 AM    View: App III Interwell  
 Plant Mitchell    Client: Southern Company    Data: Mitchel V3

	PZ-14	PZ-15	PZ-16	PZ-17	PZ-18	PZ-19	PZ-1D (bg)	PZ-23	PZ-25
8/30/2016							0.0132 (X)		
8/31/2016	0.0285 (X)							0.166	
9/1/2016		0.215							
9/6/2016			0.17						
9/7/2016				0.276	0.355	0.573			
9/8/2016									0.204
10/18/2016									
12/6/2016							0.0096 (X)		
12/7/2016	0.0292 (X)	0.224	0.173					0.182	
12/8/2016				0.303	0.351	0.588			0.216
3/21/2017	0.0198 (X)						0.0082 (X)	0.172	
3/22/2017		0.205	0.218	0.342	0.405				0.247
3/23/2017						0.703			
7/11/2017	0.0137 (X)		0.18				0.0067 (X)	0.149	0.194
7/12/2017		0.184		0.278	0.35	0.598			
10/17/2017							0.0083 (X)		
10/18/2017	0.0212 (X)	0.197	0.195	0.277	0.37			0.158	0.186
10/19/2017						0.66			
2/20/2018	0.026 (X)						0.024 (X)	0.16	
2/21/2018		0.21	0.21	0.29	0.33	0.6			0.22
4/12/2018									
5/23/2018									
6/13/2018									
7/11/2018	0.026 (X)						0.017 (X)	0.17	
7/12/2018		0.23	0.21			0.64			0.22
8/15/2018					0.37				
8/16/2018				0.33					
8/17/2018									
9/12/2018	0.02 (X)						0.012 (X)		
9/13/2018		0.22	0.21		0.37			0.16	0.2
9/14/2018				0.31		0.57			
10/4/2018									
10/24/2018									
3/26/2019							0.0082 (X)		
3/27/2019	0.023 (X)		0.21		0.41			0.18	0.22
3/28/2019		0.22		0.34		0.7			

# Prediction Limit

Constituent: Boron (mg/l) Analysis Run 8/6/2019 10:18 AM View: App III Interwell  
 Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)	PZ-33	PZ-7D
8/30/2016					
8/31/2016					
9/1/2016					0.379
9/6/2016					
9/7/2016					
9/8/2016					
10/18/2016		0.0174 (X)	0.0156 (X)		
12/6/2016		0.0133 (X)			
12/7/2016			0.0157 (X)		0.394
12/8/2016				0.375	
3/21/2017		0.0103 (X)			
3/22/2017					0.365
3/23/2017			0.0103 (X)	0.396	
7/11/2017		<0.04	<0.04		
7/12/2017				0.343	0.267
10/17/2017		0.0116 (X)	0.0142 (X)		
10/18/2017					
10/19/2017				0.413	0.326
2/20/2018		0.046 (X)	0.011 (X)		
2/21/2018				0.36	0.29
4/12/2018	0.016 (X)				
5/23/2018	0.018 (X)				
6/13/2018	0.014 (X)				
7/11/2018	0.017 (X)	0.014 (X)	0.014 (X)		
7/12/2018				0.41	0.32
8/15/2018					
8/16/2018					
8/17/2018	0.015 (X)				
9/12/2018	0.013 (X)	0.0098 (X)			
9/13/2018			0.013 (X)		0.31
9/14/2018				0.38	
10/4/2018	0.016 (X)			0.39	
10/24/2018	0.018 (X)				
3/26/2019		0.0076 (X)			
3/27/2019	0.016 (X)		0.012 (X)		
3/28/2019				0.39	0.33

# Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 8/6/2019 10:18 AM View: App III Interwell

Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-14	PZ-15	PZ-16	PZ-17	PZ-18	PZ-19	PZ-1D (bg)	PZ-23	PZ-25
8/30/2016							40.4		
8/31/2016	92.9							132	
9/1/2016		74.8							
9/6/2016			74.6						
9/7/2016				100	112	138			
9/8/2016									85.2
10/18/2016									
12/6/2016							43.3		
12/7/2016	93.1	74	68.9					125	
12/8/2016				102	113	135			84.5
3/21/2017	95						44.1	138	
3/22/2017		99.3	77.8	113	122				85.3
3/23/2017						137			
7/11/2017	97.1		77.3				47.4	139	93
7/12/2017		91.4		110	129	145			
10/17/2017							48.7		
10/18/2017	100	92	84.7	122	125			144	87.6
10/19/2017						140			
2/20/2018	93.1						46.8	142	
2/21/2018		89	81.8	107	118	145			93.9
4/12/2018									
5/23/2018									
6/13/2018									
7/11/2018	111							159	
7/12/2018		94.5	85.2			140			87.1
8/15/2018					123				
8/16/2018				113					
8/17/2018									
9/12/2018	99.3						46.6		
9/13/2018		90.8	80.2		123			136	85.8
9/14/2018				108		124			
10/4/2018									
10/24/2018									
3/26/2019							43.3		
3/27/2019	105		90.5		134			152	95.2
3/28/2019		100		123		164			

# Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 8/6/2019 10:18 AM View: App III Interwell  
 Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)	PZ-33	PZ-7D
8/30/2016					
8/31/2016					
9/1/2016					101
9/6/2016					
9/7/2016					
9/8/2016					
10/18/2016		88.3	57.2		
12/6/2016		83.4			
12/7/2016			52.8		103
12/8/2016				117	
3/21/2017		94			
3/22/2017					111
3/23/2017			59.1	122	
7/11/2017		86	59.7		
7/12/2017				124	119
10/17/2017		91.6	64.9		
10/18/2017					
10/19/2017				118	107
2/20/2018		86.5	64.1		
2/21/2018				122	118
4/12/2018	<25				
5/23/2018	17.6 (X)				
6/13/2018	14.3				
7/11/2018	15.6	95.4	60.4		
7/12/2018				129	121
8/15/2018					
8/16/2018					
8/17/2018	27				
9/12/2018	26.9	86			
9/13/2018			58.7		116
9/14/2018				123	
10/4/2018	25			126	
10/24/2018	23.8				
3/26/2019		87.3			
3/27/2019	26.1		54.6		
3/28/2019				117	124

# Prediction Limit

Constituent: Chloride (mg/l) Analysis Run 8/6/2019 10:18 AM View: App III Interwell

Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-14	PZ-15	PZ-16	PZ-17	PZ-18	PZ-19	PZ-1D (bg)	PZ-23	PZ-25
8/30/2016							3.1		
8/31/2016	4.9							5.1	
9/1/2016		7							
9/6/2016			7.9						
9/7/2016				7.7	6.9	6.8			
9/8/2016									4
10/18/2016									
12/6/2016							3.4		
12/7/2016	4.8	7	7.6					5.2	
12/8/2016				7.2	6.8	6.6			3.6
3/21/2017	4.9						2.9	5.5	
3/22/2017		7.4	7.7	7.3	6.8				3.3
3/23/2017						6.6			
7/11/2017	5		8.1				3.4	5.7	3
7/12/2017		8		7.4	6.7	6.6			
10/17/2017							3.3		
10/18/2017	5.1	7.8	8.2	7.6	6.8			5.1	2.9
10/19/2017						6.5			
2/20/2018	5.1						3.3	5.5	
2/21/2018		7.2	7.3	7.4	7.1	7.6			2.9
4/12/2018									
5/23/2018									
6/13/2018									
7/11/2018	4.9						2.9	5.1	
7/12/2018		7.5	7.2			6.3			2.6
8/15/2018					6.7				
8/16/2018				7.5					
8/17/2018									
9/12/2018	4.8						2.8		
9/13/2018		6.8	7.3		6.7			5	2.3
9/14/2018				7.7		6.1			
10/4/2018									
10/24/2018									
3/26/2019							3.3		
3/27/2019	5.2		7.3		6.5			4.7	2.4
3/28/2019		7.4		7.3		6.4			

# Prediction Limit

Constituent: Chloride (mg/l) Analysis Run 8/6/2019 10:18 AM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)	PZ-33	PZ-7D
8/30/2016					
8/31/2016					
9/1/2016					7.4
9/6/2016					
9/7/2016					
9/8/2016					
10/18/2016		4.5	3.5		
12/6/2016		5			
12/7/2016			3.2		7.6
12/8/2016				6.9	
3/21/2017		4.3			
3/22/2017					7.2
3/23/2017			2.9	6.2	
7/11/2017		4.7	3.1		
7/12/2017				6	7.3
10/17/2017		4.6	3		
10/18/2017					
10/19/2017				6.4	7.4
2/20/2018		4.4	3		
2/21/2018				6.9	7.6
4/12/2018	2.6				
5/23/2018	2.5				
6/13/2018	2.5				
7/11/2018	2.6	4	2.8		
7/12/2018				7.3	7.1
8/15/2018					
8/16/2018					
8/17/2018	2.6				
9/12/2018	2.3	3.7			
9/13/2018			2.2		6.6
9/14/2018				7.3	
10/4/2018	2.7			7	
10/24/2018	2.8				
3/26/2019		3.8			
3/27/2019	2.5		3.1		
3/28/2019				4.8	6.4



# Prediction Limit

Constituent: Fluoride (mg/l) Analysis Run 8/6/2019 10:18 AM View: App III Interwell

Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-14	PZ-15	PZ-16	PZ-17	PZ-18	PZ-19	PZ-1D (bg)	PZ-23	PZ-25
8/30/2016							0.06 (X)		
8/31/2016	0.13 (X)							0.13 (X)	
9/1/2016		0.06 (X)							
9/6/2016			0.09 (X)						
9/7/2016				0.03 (X)	0.12 (X)	0.15 (X)			
9/8/2016									0.25 (X)
10/18/2016									
12/6/2016							0.06 (X)		
12/7/2016	0.07 (X)	0.09 (X)	0.09 (X)					0.13 (X)	
12/8/2016				0.18 (X)	0.18 (X)	0.12 (X)			0.22 (X)
3/21/2017	<0.3						0.004 (X)	0.05 (X)	
3/22/2017		0.11 (X)	0.04 (X)	0.09 (X)	0.08 (X)				0.16 (X)
3/23/2017						0.14 (X)			
7/11/2017	0.05 (X)		0.05 (X)				0.05 (X)	0.05 (X)	0.23 (X)
7/12/2017		0.23 (X)		0.21 (X)	0.17 (X)	0.07 (X)			
10/17/2017							<0.3		
10/18/2017	0.11 (X)	0.19 (X)	0.04 (X)	0.24 (X)	0.06 (X)			<0.3	0.28 (X)
10/19/2017						<0.3			
2/20/2018	0.04 (X)						0.098 (X)	0.3 (X)	
2/21/2018		0.093 (X)	<0.3	0.24 (X)	0.086 (X)	0.37			0.29 (X)
4/12/2018									
5/23/2018									
6/13/2018									
7/11/2018	<0.3						<0.3	0.077 (X)	
7/12/2018		<0.3	<0.3			0.17 (X)			0.21 (X)
8/15/2018					<0.3				
8/16/2018				0.073 (X)					
8/17/2018									
9/12/2018	<0.3						0.034 (X)		
9/13/2018		0.15 (X)	<0.3		<0.3			<0.3	0.22 (X)
9/14/2018				<0.3		<0.3			
10/4/2018									
10/24/2018									
3/26/2019							<0.3		
3/27/2019	<0.3		<0.3		<0.3			<0.3	0.37
3/28/2019		0.1 (X)		0.15 (X)		0.074 (X)			

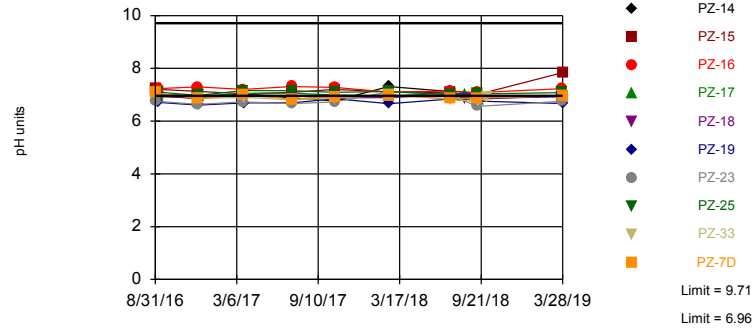
# Prediction Limit

Constituent: Fluoride (mg/l) Analysis Run 8/6/2019 10:18 AM View: App III Interwell  
 Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)	PZ-33	PZ-7D
8/30/2016					
8/31/2016					
9/1/2016					<0.3
9/6/2016					
9/7/2016					
9/8/2016					
10/18/2016		0.16 (X)	0.11 (X)		
12/6/2016		0.15 (X)			
12/7/2016			0.07 (X)		0.15 (X)
12/8/2016				0.21 (X)	
3/21/2017		0.02 (X)			
3/22/2017					0.09 (X)
3/23/2017			<0.3	0.18 (X)	
7/11/2017		0.06 (X)	0.02 (X)		
7/12/2017				0.06 (X)	0.02 (X)
10/17/2017		0.05 (X)	<0.3		
10/18/2017					
10/19/2017				<0.3	<0.3
2/20/2018		0.21 (X)	<0.3		
2/21/2018				0.039 (X)	0.045 (X)
4/12/2018	<0.3				
5/23/2018	0.063 (X)				
6/13/2018	0.11 (X)				
7/11/2018	<0.3	0.087 (X)	<0.3		
7/12/2018				<0.3	<0.3
8/15/2018					
8/16/2018					
8/17/2018	<0.3				
9/12/2018	0.093 (X)	0.049 (X)			
9/13/2018			<0.3		<0.3
9/14/2018				<0.3	
10/4/2018	0.15 (X)			0.15 (X)	
10/24/2018	0.29 (X)				
3/26/2019		<0.3			
3/27/2019	0.04 (X)		<0.3		
3/28/2019				<0.3	<0.3

Exceeds Limits: PZ-18, PZ-19, PZ-23

Prediction Limit  
Interwell Non-parametric

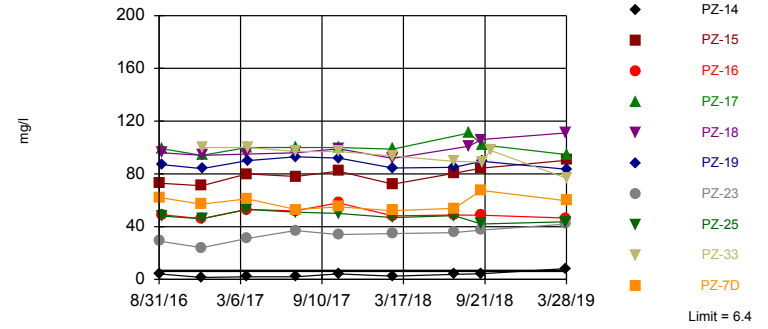


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 36 background values. Annual per-constituent alpha = 0.05348. Individual comparison alpha = 0.002709 (1 of 2). Comparing 10 points to limit. Seasonality was not detected with 95% confidence.

Constituent: pH Analysis Run 8/6/2019 10:16 AM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Exceeds Limit: PZ-14, PZ-15, PZ-16, PZ-17, PZ-18, PZ-19, PZ-23, PZ-25...

Prediction Limit  
Interwell Non-parametric

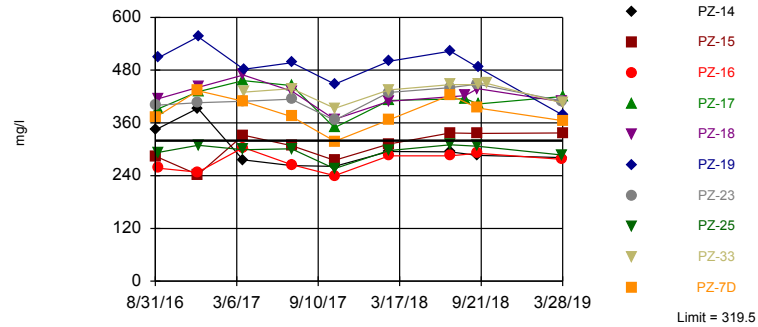


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 36 background values. Annual per-constituent alpha = 0.02674. Individual comparison alpha = 0.001354 (1 of 2). Comparing 10 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Sulfate Analysis Run 8/6/2019 10:16 AM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Exceeds Limit: PZ-15, PZ-17, PZ-18, PZ-19, PZ-23, PZ-33, PZ-7D

Prediction Limit  
Interwell Parametric



Background Data Summary: Mean=171.5, Std. Dev.=70.91, n=36. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9483, critical = 0.912. Kappa = 2.086 (c=7, w=10, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0007523. Comparing 10 points to limit.

Constituent: Total Dissolved Solids Analysis Run 8/6/2019 10:16 AM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

# Prediction Limit

Constituent: pH (pH units) Analysis Run 8/6/2019 10:18 AM View: App III Interwell  
 Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-1D (bg)	PZ-14	PZ-23	PZ-7D	PZ-15	PZ-16	PZ-18	PZ-19	PZ-17
8/30/2016	7.62								
8/31/2016		6.97	6.75						
9/1/2016				7.07	7.21				
9/6/2016						7.23			
9/7/2016							6.92	6.71	7.02
9/8/2016									
10/18/2016									
12/6/2016	7.57								
12/7/2016		6.85	6.64	6.85	7.13	7.3			
12/8/2016							6.9	6.61	6.95
3/21/2017	7.54	7.04	6.73						
3/22/2017				6.99	7.04	7.2	7		7.05
3/23/2017								6.69	
7/11/2017	7.43	6.88	6.66			7.31			
7/12/2017				6.83	7.09		6.95	6.69	7.06
10/17/2017	7.7								
10/18/2017		6.77	6.73		7.2	7.28	6.88		6.99
10/19/2017				6.91				6.85	
2/20/2018	7.57	7.31	7.11						
2/21/2018				6.97	7.11	7.1	6.89	6.66	6.95
4/12/2018									
5/23/2018									
6/13/2018									
7/11/2018	7.48	7.12	7						
7/12/2018				6.85	7.07	7.14	7.01	6.84	7.06
8/15/2018							6.87		
8/16/2018									7.01
8/17/2018									
9/12/2018	7.41	6.87							
9/13/2018			6.56	6.88	7.01	7.08	6.86		
9/14/2018								6.76	6.83
10/4/2018									
10/24/2018									
3/26/2019	7.49								
3/27/2019		6.98	6.75			7.23	6.92		
3/28/2019				6.96	7.84			6.67	6.97

# Prediction Limit

Constituent: pH (pH units) Analysis Run 8/6/2019 10:18 AM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-25	PZ-31 (bg)	PZ-32 (bg)	PZ-33	PZ-2D (bg)
8/30/2016					
8/31/2016					
9/1/2016					
9/6/2016					
9/7/2016					
9/8/2016	7.1				
10/18/2016		7.15	7.45		
12/6/2016		7.04			
12/7/2016			7.29		
12/8/2016	6.98			6.86	
3/21/2017		7.01			
3/22/2017	7.16				
3/23/2017			7.26	6.9	
7/11/2017	7.15	6.96	7.31		
7/12/2017				6.81	
10/17/2017		7.31	7.29		
10/18/2017	7.09				
10/19/2017				6.86	
2/20/2018		7.37	7.26		
2/21/2018	7.12			7.02	
4/12/2018					9.54
5/23/2018					9.57
6/13/2018					9.71
7/11/2018		7.26	7.39		9.48
7/12/2018	7.01			6.82	
8/15/2018					
8/16/2018					
8/17/2018					9.31
9/12/2018		7.02			9.07
9/13/2018	7.03		7.25		
9/14/2018				6.75	
10/4/2018				6.9	9.16
10/24/2018					9.29
3/26/2019		7			
3/27/2019	7.08		7.42		8.76
3/28/2019				6.96	

# Prediction Limit

Constituent: Sulfate (mg/l) Analysis Run 8/6/2019 10:18 AM View: App III Interwell  
 Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-1D (bg)	PZ-14	PZ-23	PZ-7D	PZ-15	PZ-16	PZ-19	PZ-18	PZ-17
8/30/2016	2.1								
8/31/2016		4.1	29						
9/1/2016				62	73				
9/6/2016						49			
9/7/2016							87	96	99
9/8/2016									
10/18/2016									
12/6/2016	2.4								
12/7/2016		1.5	24	57	71	46			
12/8/2016							84	94	94
3/21/2017	2.5	2	31						
3/22/2017				61	80	53		95	100
3/23/2017							90		
7/11/2017	2.6	2	37			52			
7/12/2017				53	78		93	96	100
10/17/2017	2.5								
10/18/2017		4.2	34		82	58		99	100
10/19/2017				55			92		
2/20/2018	2.3	2.4	34.7						
2/21/2018				52.1	72.2	48.2	84.5	91.8	98.8
4/12/2018									
5/23/2018									
6/13/2018									
7/11/2018	2.5	3.8	35.4						
7/12/2018				53.9	80.5	48.8	84.9		
8/15/2018								101	
8/16/2018									111
8/17/2018									
9/12/2018	2	4.3							
9/13/2018			37.4	67.5	84.4	48.7		106	
9/14/2018							89.5		102
10/4/2018									
10/24/2018									
3/26/2019	2.7								
3/27/2019		8.2	41.9			46.5		111	
3/28/2019				59.6	90.3		83.5		94.7

# Prediction Limit

Constituent: Sulfate (mg/l) Analysis Run 8/6/2019 10:18 AM View: App III Interwell  
 Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-25	PZ-32 (bg)	PZ-31 (bg)	PZ-33	PZ-2D (bg)
8/30/2016					
8/31/2016					
9/1/2016					
9/6/2016					
9/7/2016					
9/8/2016	48				
10/18/2016		2.3	2.2		
12/6/2016			6.1		
12/7/2016		1.9			
12/8/2016	46			100	
3/21/2017			5.7		
3/22/2017	53				
3/23/2017		1.7		100	
7/11/2017	51	1.8	4.8		
7/12/2017				97	
10/17/2017		1.9	6.4		
10/18/2017	50				
10/19/2017				97	
2/20/2018		2.1	5.2		
2/21/2018	46.8			93.6	
4/12/2018					4.8
5/23/2018					4.5
6/13/2018					5.3
7/11/2018		2	3.6		5.4
7/12/2018	48.3			89.4	
8/15/2018					
8/16/2018					
8/17/2018					4.5
9/12/2018			2.7		4.4
9/13/2018	42	2.1 (*)			
9/14/2018				88.9	
10/4/2018				97.8	5.8
10/24/2018					6.2
3/26/2019			1.6		
3/27/2019	43.7	2.4			3.7
3/28/2019				76.7	

# Prediction Limit

Constituent: Total Dissolved Solids (mg/l) Analysis Run 8/6/2019 10:18 AM View: App III Interwell

Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-14	PZ-15	PZ-16	PZ-17	PZ-18	PZ-19	PZ-1D (bg)	PZ-23	PZ-25
8/30/2016							136		
8/31/2016	344							400	
9/1/2016		284							
9/6/2016			257						
9/7/2016				392	415	508			
9/8/2016									293
10/18/2016									
12/6/2016							207		
12/7/2016	393	242	248					406	
12/8/2016				431	441	556			309
3/21/2017	276						128	409	
3/22/2017		332	304	456	469				299
3/23/2017						482			
7/11/2017	263		265				138	414	301
7/12/2017		308		445	432	497			
10/17/2017							101		
10/18/2017	261	275	240	349	368			366	256
10/19/2017						448			
2/20/2018	295						138	429	
2/21/2018		312	285	411	409	500			297
4/12/2018									
5/23/2018									
6/13/2018									
7/11/2018	294						153	440	
7/12/2018		337	285			523			310
8/15/2018					422				
8/16/2018				415					
8/17/2018									
9/12/2018	286						146		
9/13/2018		336	291		438			448	307
9/14/2018				403		486			
10/4/2018									
10/24/2018									
3/26/2019							334		
3/27/2019	281		277		408			410	287
3/28/2019		337		420		378 (X)			



# Prediction Limit

Constituent: Total Dissolved Solids (mg/l) Analysis Run 8/6/2019 10:18 AM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)	PZ-33	PZ-7D
8/30/2016					
8/31/2016					
9/1/2016					373
9/6/2016					
9/7/2016					
9/8/2016					
10/18/2016		264	152		
12/6/2016		299			
12/7/2016			214		433
12/8/2016					
3/21/2017		260			
3/22/2017					409
3/23/2017			165	430	
7/11/2017		244	162		
7/12/2017				438	374
10/17/2017		218	140		
10/18/2017					
10/19/2017				393	318
2/20/2018		264	163		
2/21/2018				435	367
4/12/2018	69				
5/23/2018	62				
6/13/2018	93				
7/11/2018	84	273	192		
7/12/2018				447	423
8/15/2018					
8/16/2018					
8/17/2018	115				
9/12/2018	97	252			
9/13/2018			192		394
9/14/2018				447	
10/4/2018	103			450	
10/24/2018	110				
3/26/2019		253			
3/27/2019	87		167		
3/28/2019				405	365

# Trend Test Upgradient Wells - Significant Only

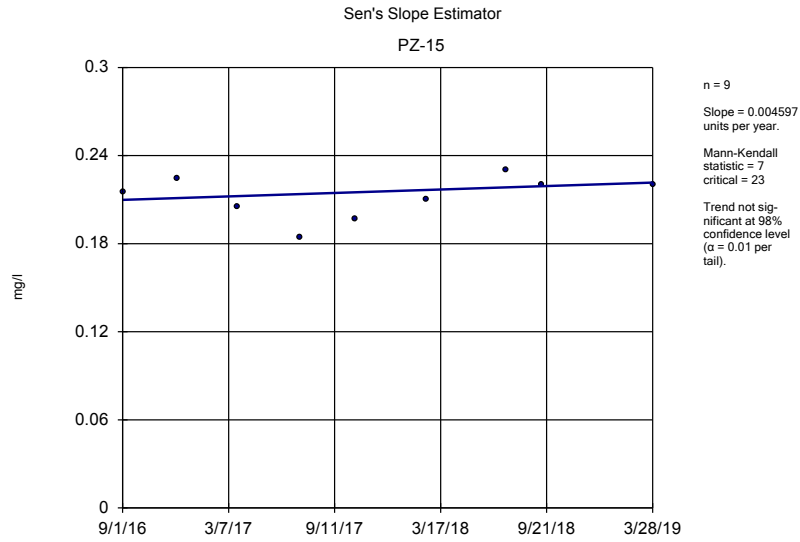
Plant Mitchell Client: Southern Company Data: Mitchel V3 Printed 8/6/2019, 12:22 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
<b>Calcium (mg/l)</b>	<b>PZ-7D</b>	<b>7.628</b>	<b>24</b>	<b>23</b>	<b>Yes</b>	<b>9</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.02</b>	<b>NP</b>
<b>Sulfate (mg/l)</b>	<b>PZ-23</b>	<b>4.613</b>	<b>28</b>	<b>23</b>	<b>Yes</b>	<b>9</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.02</b>	<b>NP</b>
<b>Sulfate (mg/l)</b>	<b>PZ-33</b>	<b>-6.932</b>	<b>-24</b>	<b>-23</b>	<b>Yes</b>	<b>9</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.02</b>	<b>NP</b>

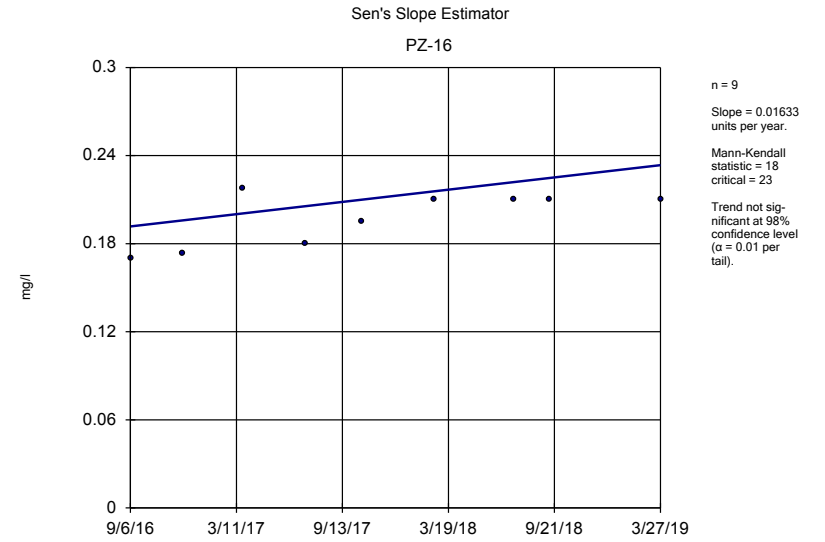
# Trend Test Upgradient Wells

Plant Mitchell   Client: Southern Company   Data: Mitchel V3   Printed 8/6/2019, 12:22 PM

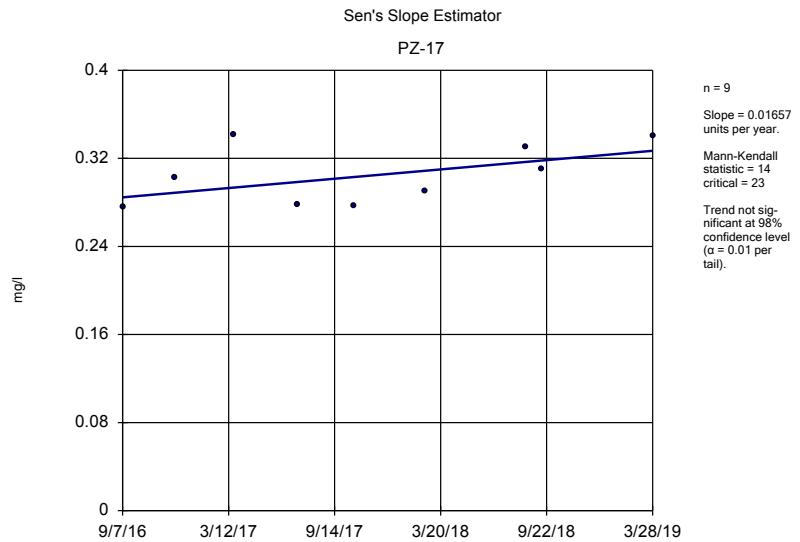
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/l)	PZ-15	0.004597	7	23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/l)	PZ-16	0.01633	18	23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/l)	PZ-17	0.01657	14	23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/l)	PZ-18	0.009256	9	23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/l)	PZ-19	0.02317	8	23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/l)	PZ-23	0.001075	1	23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/l)	PZ-25	0.000...	3	23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/l)	PZ-33	0.007375	5	23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/l)	PZ-7D	-0.02975	-12	-23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/l)	PZ-17	5.739	17	23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/l)	PZ-18	5.673	19	23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/l)	PZ-19	3.972	10	23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/l)	PZ-23	7.96	20	23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/l)	PZ-33	1.703	8	23	No	9	0	n/a	n/a	0.02	NP
<b>Calcium (mg/l)</b>	<b>PZ-7D</b>	<b>7.628</b>	<b>24</b>	<b>23</b>	<b>Yes</b>	<b>9</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.02</b>	<b>NP</b>
Chloride (mg/l)	PZ-14	0.1037	11	23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/l)	PZ-15	0.03826	2	23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/l)	PZ-16	-0.2496	-13	-23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/l)	PZ-17	0.06735	5	23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/l)	PZ-18	-0.1012	-18	-23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/l)	PZ-19	-0.2093	-19	-23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/l)	PZ-7D	-0.3808	-18	-23	No	9	0	n/a	n/a	0.02	NP
Fluoride (mg/l)	PZ-25	0.03361	9	23	No	9	0	n/a	n/a	0.02	NP
pH (pH units)	PZ-18	-0.02212	-12	-27	No	10	0	n/a	n/a	0.02	NP
pH (pH units)	PZ-19	0.01694	3	23	No	9	0	n/a	n/a	0.02	NP
pH (pH units)	PZ-23	0.01191	4	23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/l)	PZ-14	1.571	21	23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/l)	PZ-15	5.786	22	23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/l)	PZ-16	-0.7792	-8	-23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/l)	PZ-17	1.042	7	23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/l)	PZ-18	5.386	21	23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/l)	PZ-19	-1.026	-6	-23	No	9	0	n/a	n/a	0.02	NP
<b>Sulfate (mg/l)</b>	<b>PZ-23</b>	<b>4.613</b>	<b>28</b>	<b>23</b>	<b>Yes</b>	<b>9</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.02</b>	<b>NP</b>
Sulfate (mg/l)	PZ-25	-2.908	-14	-23	No	9	0	n/a	n/a	0.02	NP
<b>Sulfate (mg/l)</b>	<b>PZ-33</b>	<b>-6.932</b>	<b>-24</b>	<b>-23</b>	<b>Yes</b>	<b>9</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.02</b>	<b>NP</b>
Sulfate (mg/l)	PZ-7D	-1.2	-4	-23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/l)	PZ-15	24.73	21	23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/l)	PZ-17	-7.13	-2	-23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/l)	PZ-18	-6.632	-8	-23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/l)	PZ-19	-32.27	-12	-23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/l)	PZ-23	20.52	20	23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/l)	PZ-33	9.378	9	20	No	8	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/l)	PZ-7D	-5.768	-8	-23	No	9	0	n/a	n/a	0.02	NP



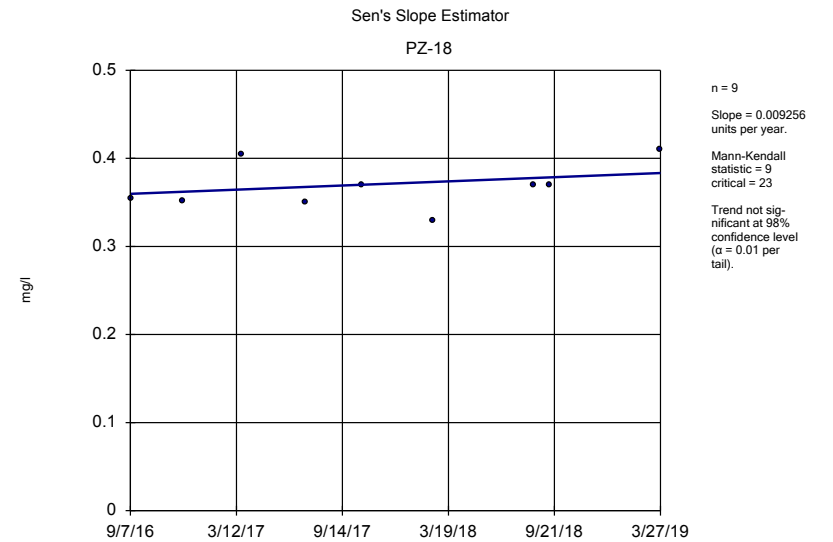
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Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Boron Analysis Run 8/6/2019 12:19 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Boron Analysis Run 8/6/2019 12:19 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Boron Analysis Run 8/6/2019 12:19 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

# Sen's Slope Estimator

Constituent: Boron (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-15
9/1/2016	0.215
12/7/2016	0.224
3/22/2017	0.205
7/12/2017	0.184
10/18/2017	0.197
2/21/2018	0.21
7/12/2018	0.23
9/13/2018	0.22
3/28/2019	0.22

# Sen's Slope Estimator

Constituent: Boron (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-16
9/6/2016	0.17
12/7/2016	0.173
3/22/2017	0.218
7/11/2017	0.18
10/18/2017	0.195
2/21/2018	0.21
7/12/2018	0.21
9/13/2018	0.21
3/27/2019	0.21

# Sen's Slope Estimator

Constituent: Boron (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-17
9/7/2016	0.276
12/8/2016	0.303
3/22/2017	0.342
7/12/2017	0.278
10/18/2017	0.277
2/21/2018	0.29
8/16/2018	0.33
9/14/2018	0.31
3/28/2019	0.34

# Sen's Slope Estimator

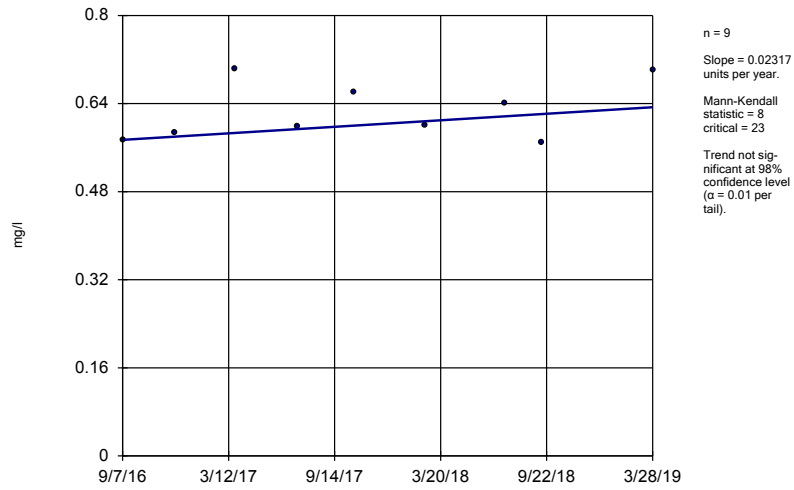
Constituent: Boron (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-18
9/7/2016	0.355
12/8/2016	0.351
3/22/2017	0.405
7/12/2017	0.35
10/18/2017	0.37
2/21/2018	0.33
8/15/2018	0.37
9/13/2018	0.37
3/27/2019	0.41

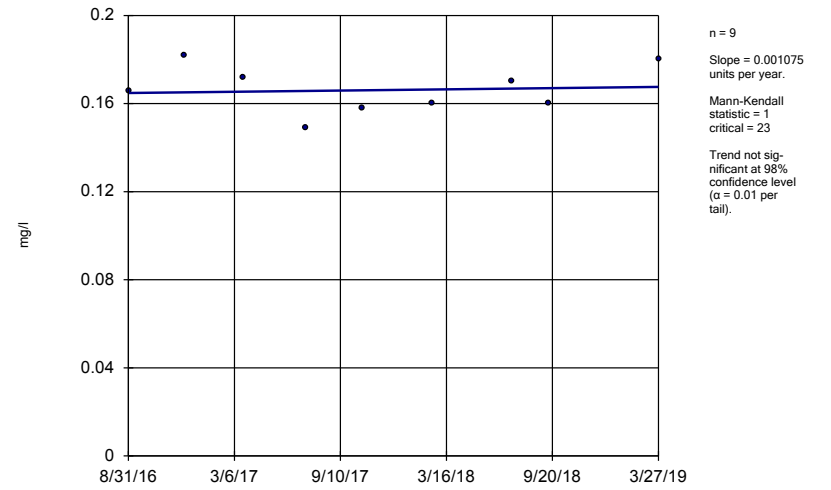


Sen's Slope Estimator  
PZ-19



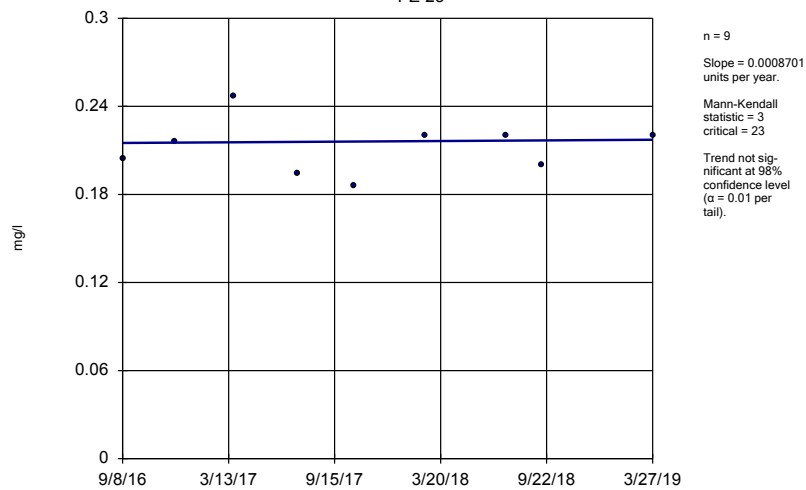
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Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-23



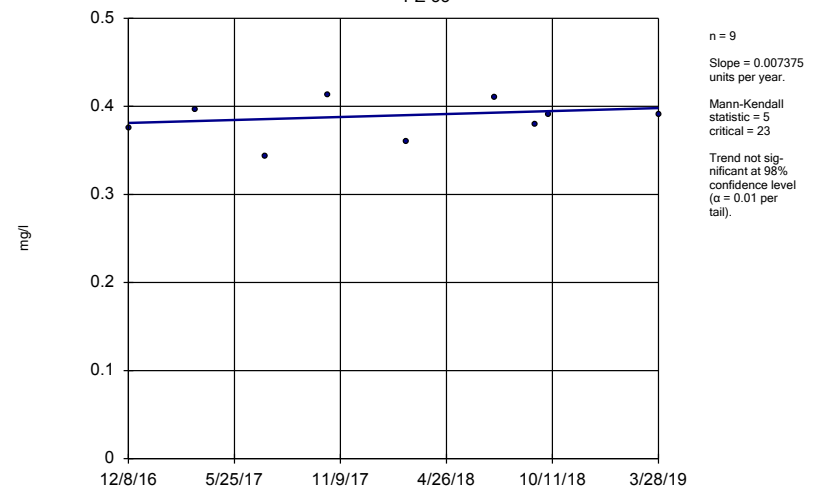
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Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-25



Constituent: Boron Analysis Run 8/6/2019 12:19 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-33



Constituent: Boron Analysis Run 8/6/2019 12:19 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

# Sen's Slope Estimator

Constituent: Boron (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-19
9/7/2016	0.573
12/8/2016	0.588
3/23/2017	0.703
7/12/2017	0.598
10/19/2017	0.66
2/21/2018	0.6
7/12/2018	0.64
9/14/2018	0.57
3/28/2019	0.7

# Sen's Slope Estimator

Constituent: Boron (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-23
8/31/2016	0.166
12/7/2016	0.182
3/21/2017	0.172
7/11/2017	0.149
10/18/2017	0.158
2/20/2018	0.16
7/11/2018	0.17
9/13/2018	0.16
3/27/2019	0.18

# Sen's Slope Estimator

Constituent: Boron (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-25
9/8/2016	0.204
12/8/2016	0.216
3/22/2017	0.247
7/11/2017	0.194
10/18/2017	0.186
2/21/2018	0.22
7/12/2018	0.22
9/13/2018	0.2
3/27/2019	0.22

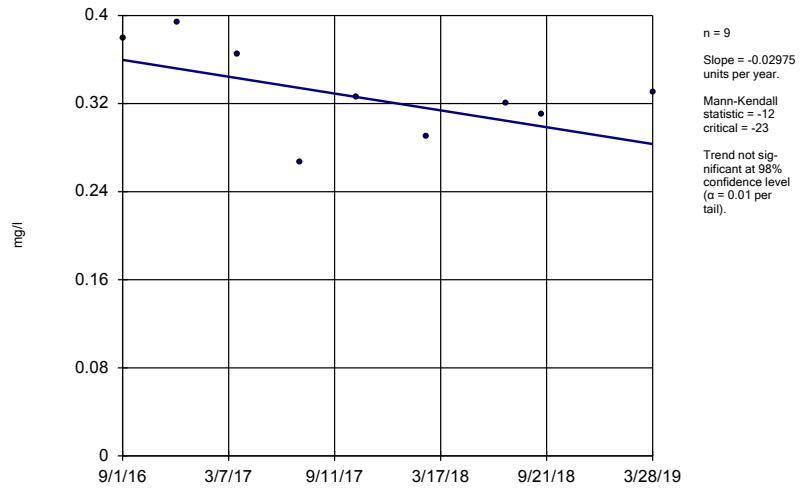
# Sen's Slope Estimator

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Plant Mitchell Client: Southern Company Data: Mitchel V3

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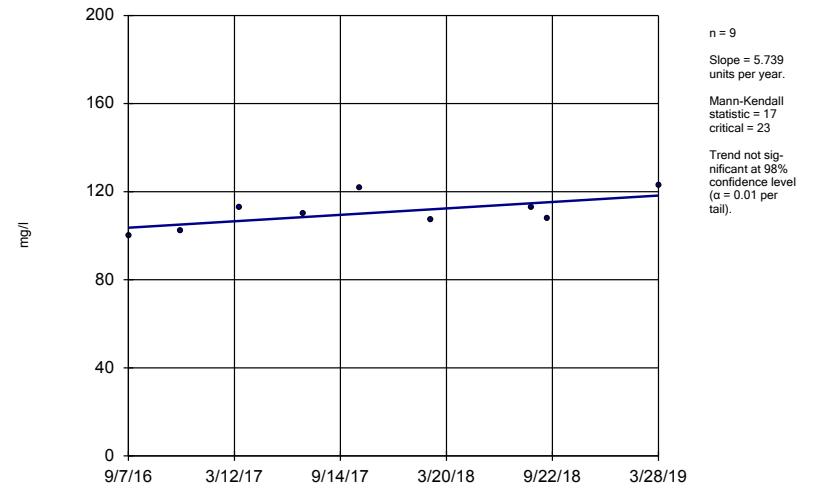
	PZ-33
12/8/2016	0.375
3/23/2017	0.396
7/12/2017	0.343
10/19/2017	0.413
2/21/2018	0.36
7/12/2018	0.41
9/14/2018	0.38
10/4/2018	0.39
3/28/2019	0.39

### Sen's Slope Estimator PZ-7D



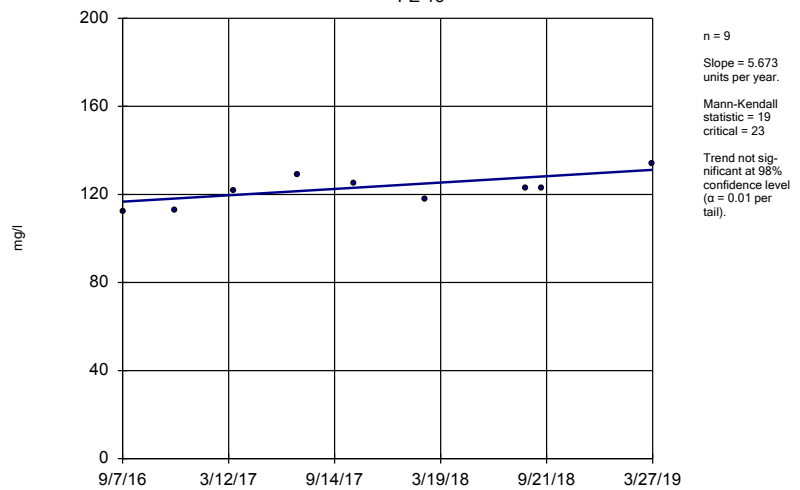
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Plant Mitchell Client: Southern Company Data: Mitchel V3

### Sen's Slope Estimator PZ-17



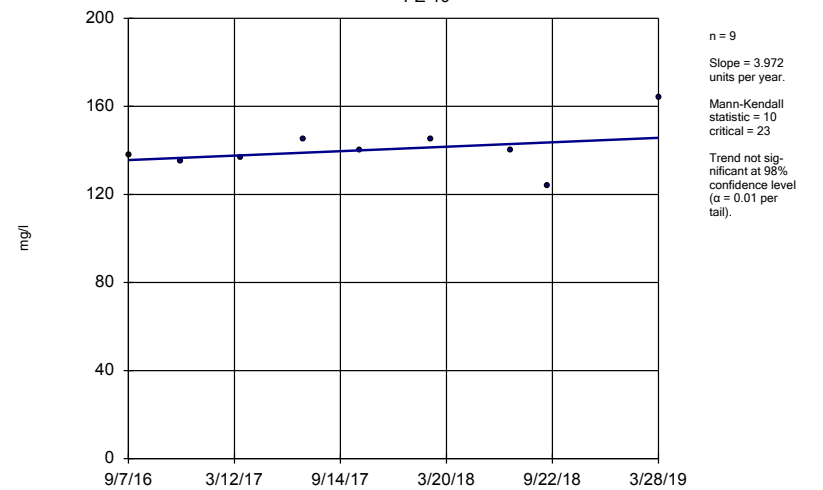
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Plant Mitchell Client: Southern Company Data: Mitchel V3

### Sen's Slope Estimator PZ-18



Constituent: Calcium Analysis Run 8/6/2019 12:19 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

### Sen's Slope Estimator PZ-19



Constituent: Calcium Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

# Sen's Slope Estimator

Constituent: Boron (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-7D
9/1/2016	0.379
12/7/2016	0.394
3/22/2017	0.365
7/12/2017	0.267
10/19/2017	0.326
2/21/2018	0.29
7/12/2018	0.32
9/13/2018	0.31
3/28/2019	0.33

# Sen's Slope Estimator

Constituent: Calcium (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-17
9/7/2016	100
12/8/2016	102
3/22/2017	113
7/12/2017	110
10/18/2017	122
2/21/2018	107
8/16/2018	113
9/14/2018	108
3/28/2019	123



# Sen's Slope Estimator

Constituent: Calcium (mg/l) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-18
9/7/2016	112
12/8/2016	113
3/22/2017	122
7/12/2017	129
10/18/2017	125
2/21/2018	118
8/15/2018	123
9/13/2018	123
3/27/2019	134

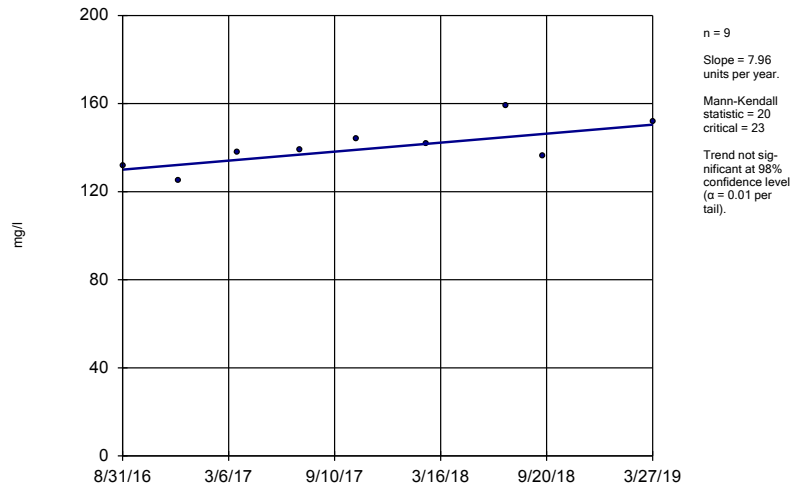
# Sen's Slope Estimator

Constituent: Calcium (mg/l) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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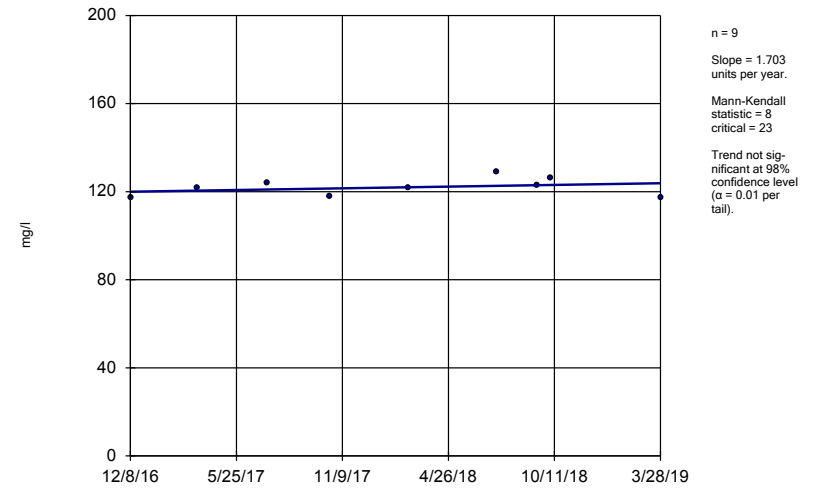
	PZ-19
9/7/2016	138
12/8/2016	135
3/23/2017	137
7/12/2017	145
10/19/2017	140
2/21/2018	145
7/12/2018	140
9/14/2018	124
3/28/2019	164

Sen's Slope Estimator  
PZ-23



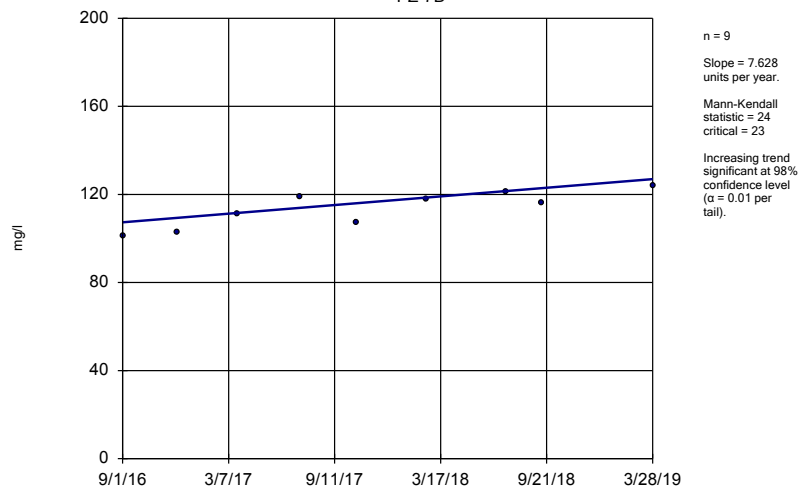
Constituent: Calcium Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-33



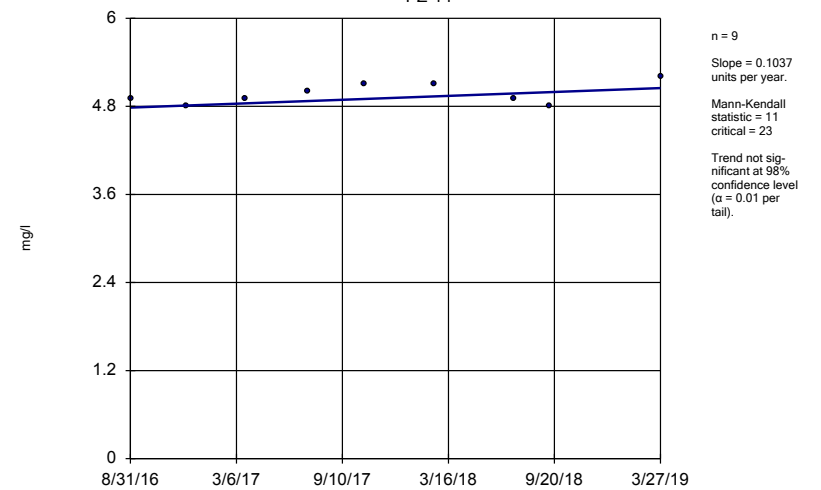
Constituent: Calcium Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-7D



Constituent: Calcium Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-14



Constituent: Chloride Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

# Sen's Slope Estimator

Constituent: Calcium (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-23
8/31/2016	132
12/7/2016	125
3/21/2017	138
7/11/2017	139
10/18/2017	144
2/20/2018	142
7/11/2018	159
9/13/2018	136
3/27/2019	152

# Sen's Slope Estimator

Constituent: Calcium (mg/l) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-33
12/8/2016	117
3/23/2017	122
7/12/2017	124
10/19/2017	118
2/21/2018	122
7/12/2018	129
9/14/2018	123
10/4/2018	126
3/28/2019	117

# Sen's Slope Estimator

Constituent: Calcium (mg/l) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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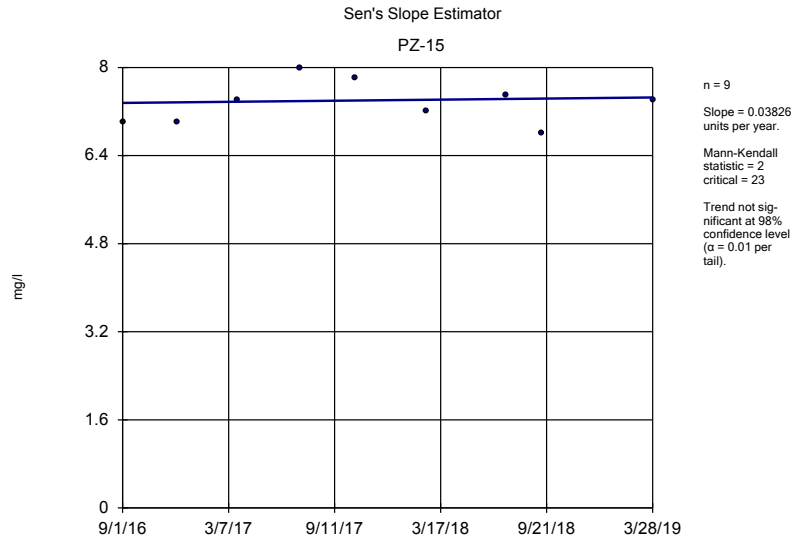
	PZ-7D
9/1/2016	101
12/7/2016	103
3/22/2017	111
7/12/2017	119
10/19/2017	107
2/21/2018	118
7/12/2018	121
9/13/2018	116
3/28/2019	124

# Sen's Slope Estimator

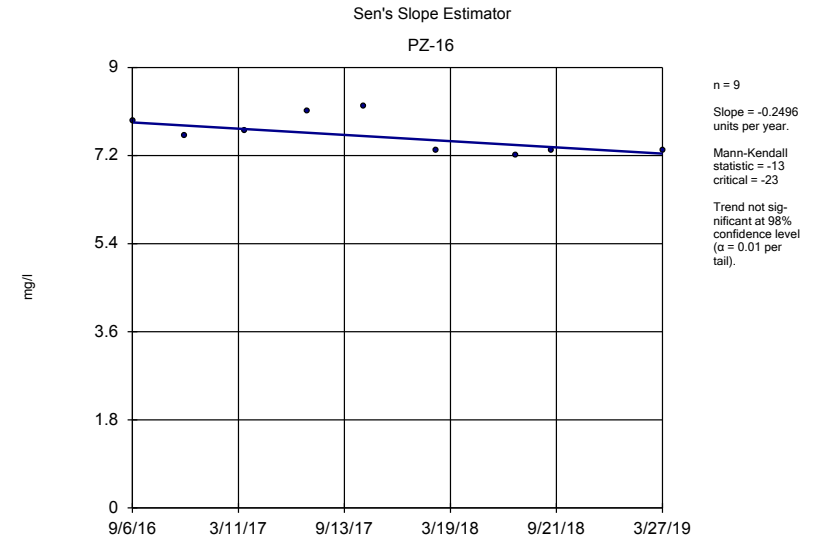
Constituent: Chloride (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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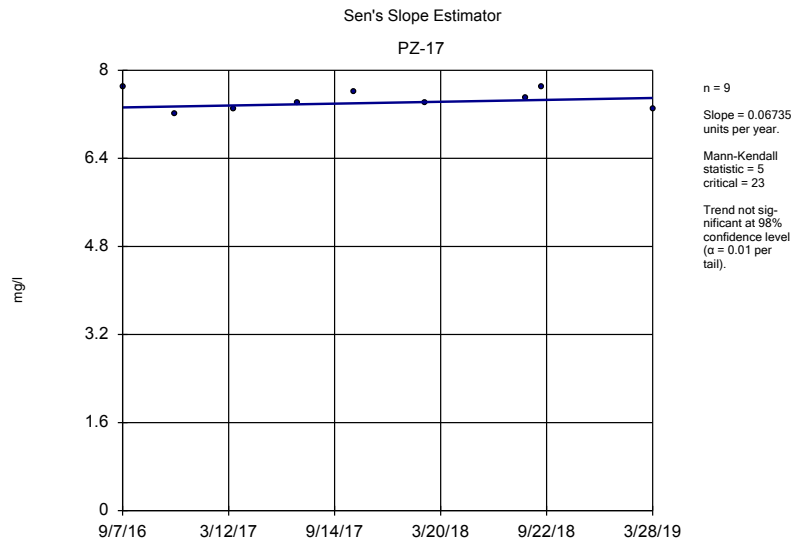
	PZ-14
8/31/2016	4.9
12/7/2016	4.8
3/21/2017	4.9
7/11/2017	5
10/18/2017	5.1
2/20/2018	5.1
7/11/2018	4.9
9/12/2018	4.8
3/27/2019	5.2



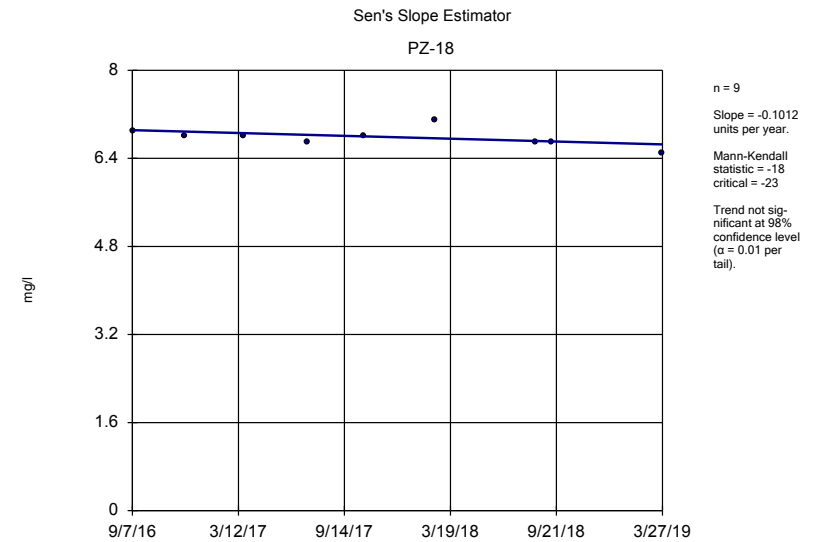
Constituent: Chloride Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Chloride Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Chloride Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Chloride Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3



# Sen's Slope Estimator

Constituent: Chloride (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-15
9/1/2016	7
12/7/2016	7
3/22/2017	7.4
7/12/2017	8
10/18/2017	7.8
2/21/2018	7.2
7/12/2018	7.5
9/13/2018	6.8
3/28/2019	7.4

# Sen's Slope Estimator

Constituent: Chloride (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-16
9/6/2016	7.9
12/7/2016	7.6
3/22/2017	7.7
7/11/2017	8.1
10/18/2017	8.2
2/21/2018	7.3
7/12/2018	7.2
9/13/2018	7.3
3/27/2019	7.3

# Sen's Slope Estimator

Constituent: Chloride (mg/l) Analysis Run 8/6/2019 12:22 PM View: Appl III Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-17
9/7/2016	7.7
12/8/2016	7.2
3/22/2017	7.3
7/12/2017	7.4
10/18/2017	7.6
2/21/2018	7.4
8/16/2018	7.5
9/14/2018	7.7
3/28/2019	7.3

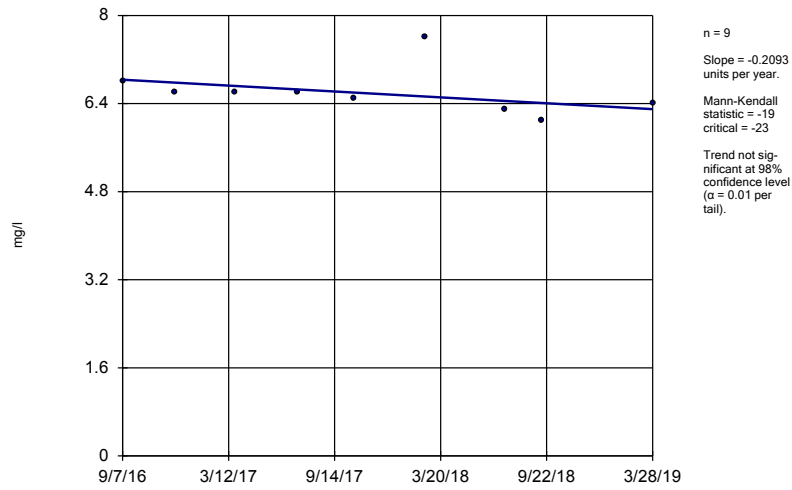
# Sen's Slope Estimator

Constituent: Chloride (mg/l) Analysis Run 8/6/2019 12:22 PM View: Appl III Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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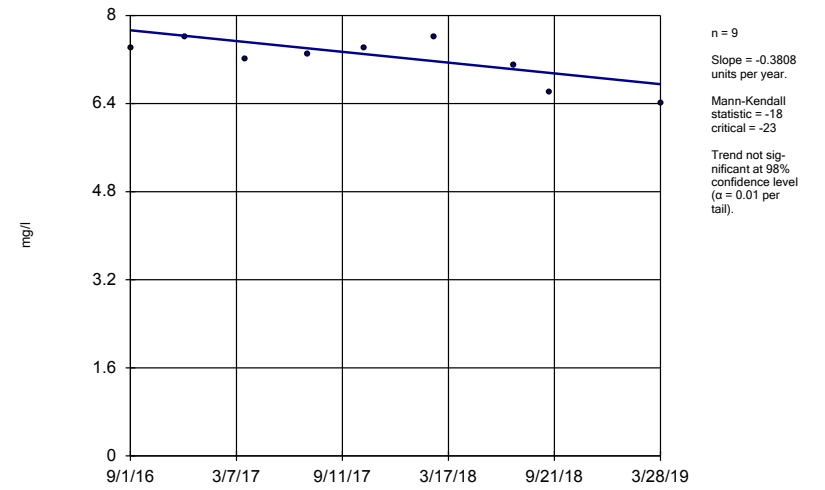
	PZ-18
9/7/2016	6.9
12/8/2016	6.8
3/22/2017	6.8
7/12/2017	6.7
10/18/2017	6.8
2/21/2018	7.1
8/15/2018	6.7
9/13/2018	6.7
3/27/2019	6.5

Sen's Slope Estimator  
PZ-19



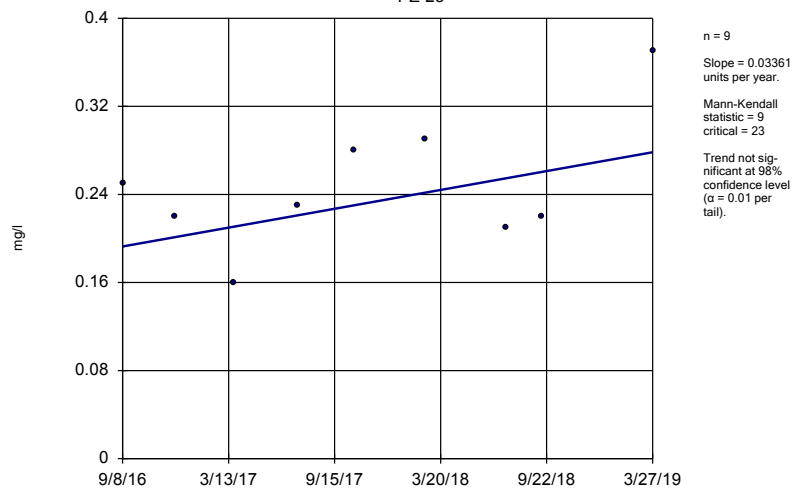
Constituent: Chloride Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-7D



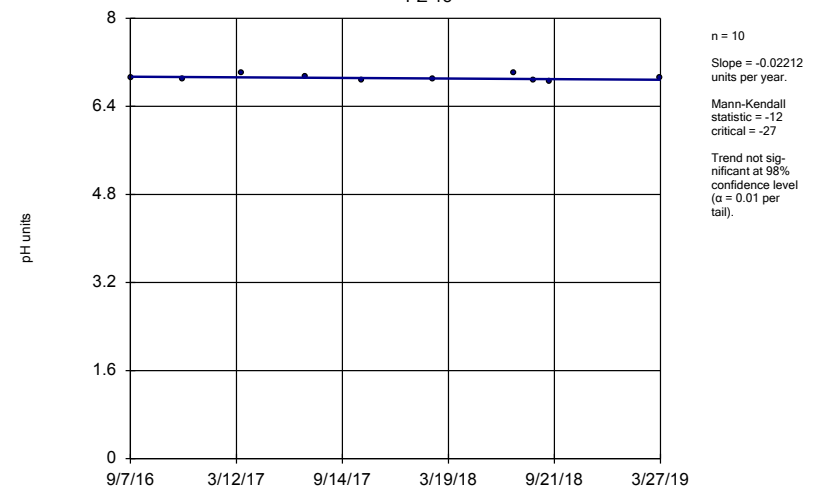
Constituent: Chloride Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-25



Constituent: Fluoride Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-18



Constituent: pH Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

# Sen's Slope Estimator

Constituent: Chloride (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-19
9/7/2016	6.8
12/8/2016	6.6
3/23/2017	6.6
7/12/2017	6.6
10/19/2017	6.5
2/21/2018	7.6
7/12/2018	6.3
9/14/2018	6.1
3/28/2019	6.4

# Sen's Slope Estimator

Constituent: Chloride (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-7D
9/1/2016	7.4
12/7/2016	7.6
3/22/2017	7.2
7/12/2017	7.3
10/19/2017	7.4
2/21/2018	7.6
7/12/2018	7.1
9/13/2018	6.6
3/28/2019	6.4

# Sen's Slope Estimator

Constituent: Fluoride (mg/l) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-25
9/8/2016	0.25 (X)
12/8/2016	0.22 (X)
3/22/2017	0.16 (X)
7/11/2017	0.23 (X)
10/18/2017	0.28 (X)
2/21/2018	0.29 (X)
7/12/2018	0.21 (X)
9/13/2018	0.22 (X)
3/27/2019	0.37



# Sen's Slope Estimator

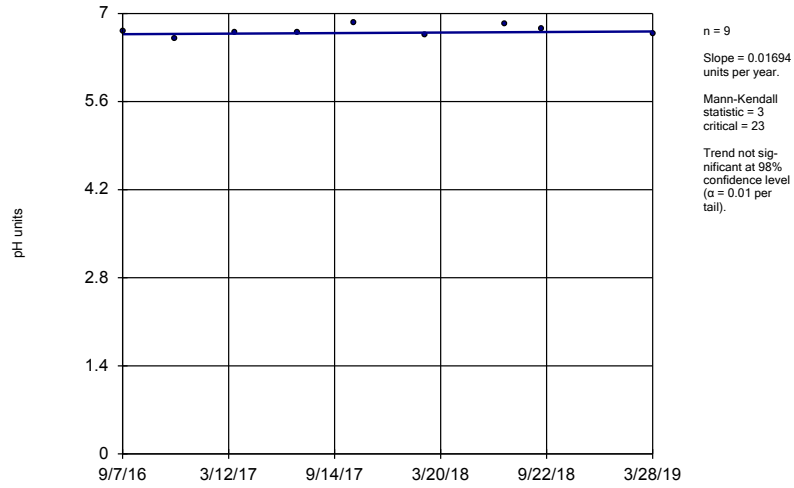
Constituent: pH (pH units) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-18
9/7/2016	6.92
12/8/2016	6.9
3/22/2017	7
7/12/2017	6.95
10/18/2017	6.88
2/21/2018	6.89
7/12/2018	7.01
8/15/2018	6.87
9/13/2018	6.86
3/27/2019	6.92

### Sen's Slope Estimator

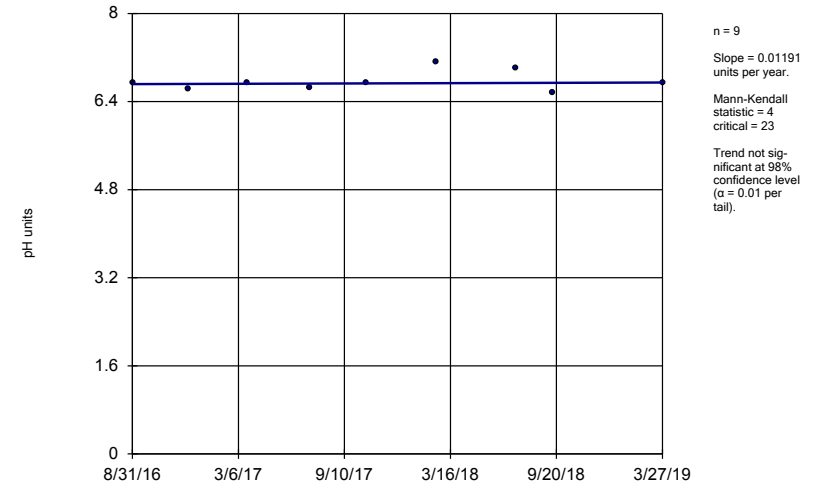
PZ-19



Constituent: pH Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

### Sen's Slope Estimator

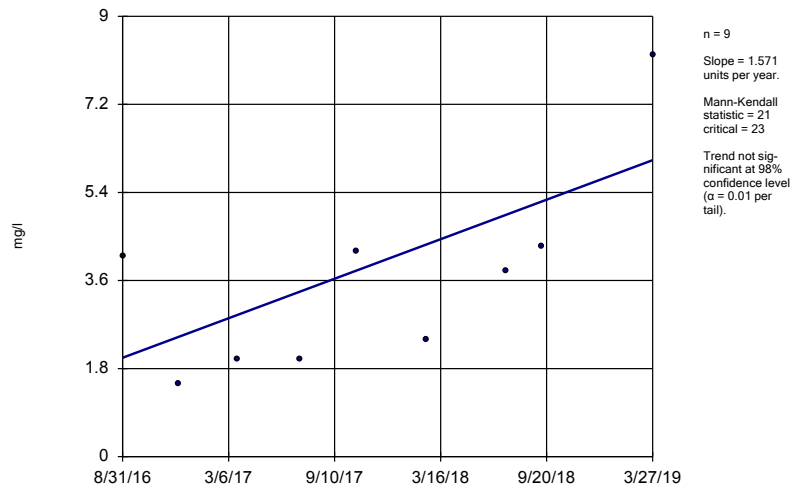
PZ-23



Constituent: pH Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

### Sen's Slope Estimator

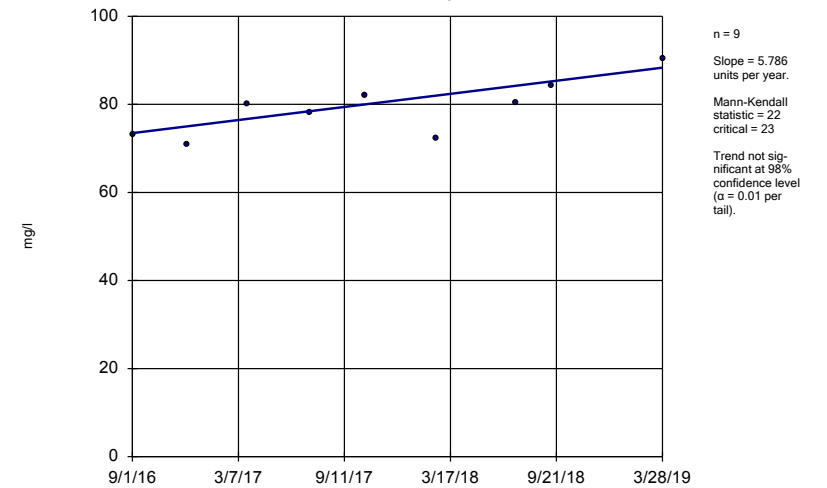
PZ-14



Constituent: Sulfate Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

### Sen's Slope Estimator

PZ-15



Constituent: Sulfate Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

# Sen's Slope Estimator

Constituent: pH (pH units) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-19
9/7/2016	6.71
12/8/2016	6.61
3/23/2017	6.69
7/12/2017	6.69
10/19/2017	6.85
2/21/2018	6.66
7/12/2018	6.84
9/14/2018	6.76
3/28/2019	6.67

# Sen's Slope Estimator

Constituent: pH (pH units) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-23
8/31/2016	6.75
12/7/2016	6.64
3/21/2017	6.73
7/11/2017	6.66
10/18/2017	6.73
2/20/2018	7.11
7/11/2018	7
9/13/2018	6.56
3/27/2019	6.75

# Sen's Slope Estimator

Constituent: Sulfate (mg/l) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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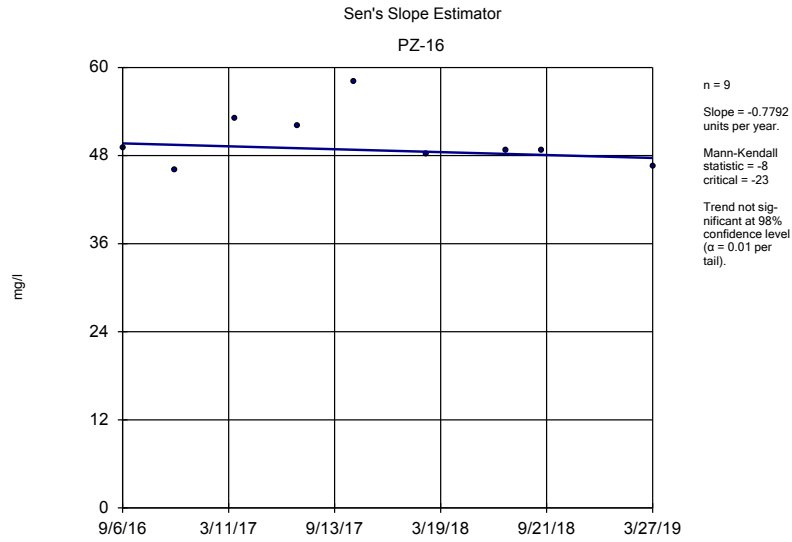
	PZ-14
8/31/2016	4.1
12/7/2016	1.5
3/21/2017	2
7/11/2017	2
10/18/2017	4.2
2/20/2018	2.4
7/11/2018	3.8
9/12/2018	4.3
3/27/2019	8.2

# Sen's Slope Estimator

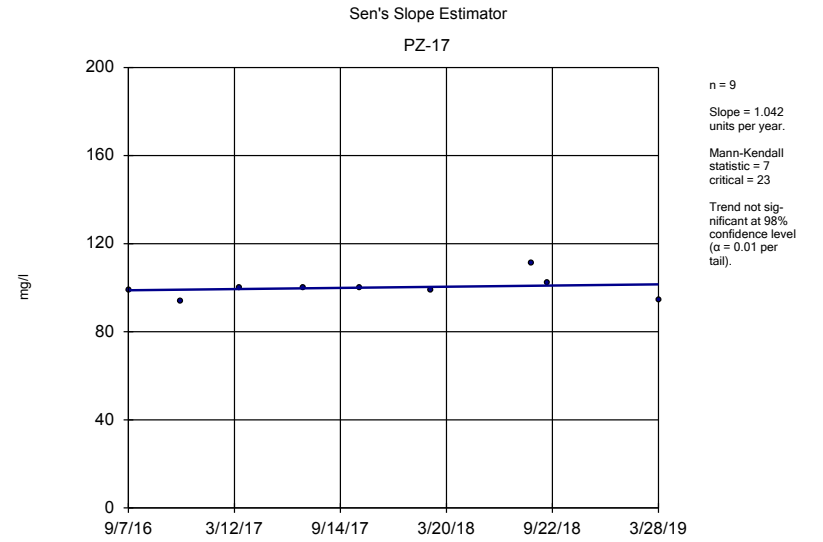
Constituent: Sulfate (mg/l) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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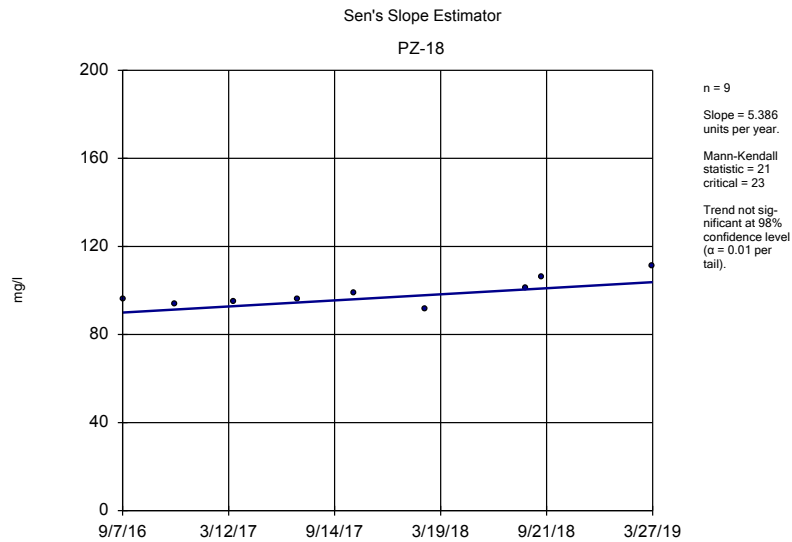
	PZ-15
9/1/2016	73
12/7/2016	71
3/22/2017	80
7/12/2017	78
10/18/2017	82
2/21/2018	72.2
7/12/2018	80.5
9/13/2018	84.4
3/28/2019	90.3



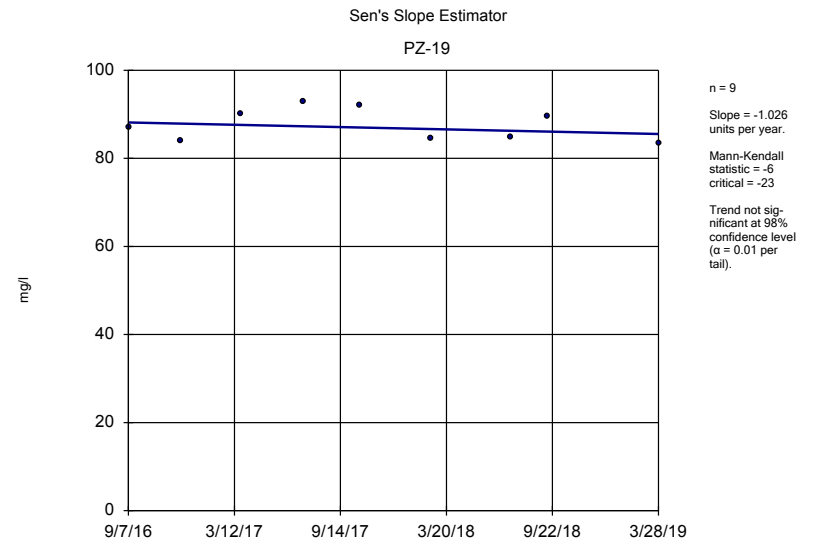
Constituent: Sulfate Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Sulfate Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Sulfate Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Sulfate Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

# Sen's Slope Estimator

Constituent: Sulfate (mg/l) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-16
9/6/2016	49
12/7/2016	46
3/22/2017	53
7/11/2017	52
10/18/2017	58
2/21/2018	48.2
7/12/2018	48.8
9/13/2018	48.7
3/27/2019	46.5



# Sen's Slope Estimator

Constituent: Sulfate (mg/l) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-17
9/7/2016	99
12/8/2016	94
3/22/2017	100
7/12/2017	100
10/18/2017	100
2/21/2018	98.8
8/16/2018	111
9/14/2018	102
3/28/2019	94.7

# Sen's Slope Estimator

Constituent: Sulfate (mg/l) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-18
9/7/2016	96
12/8/2016	94
3/22/2017	95
7/12/2017	96
10/18/2017	99
2/21/2018	91.8
8/15/2018	101
9/13/2018	106
3/27/2019	111

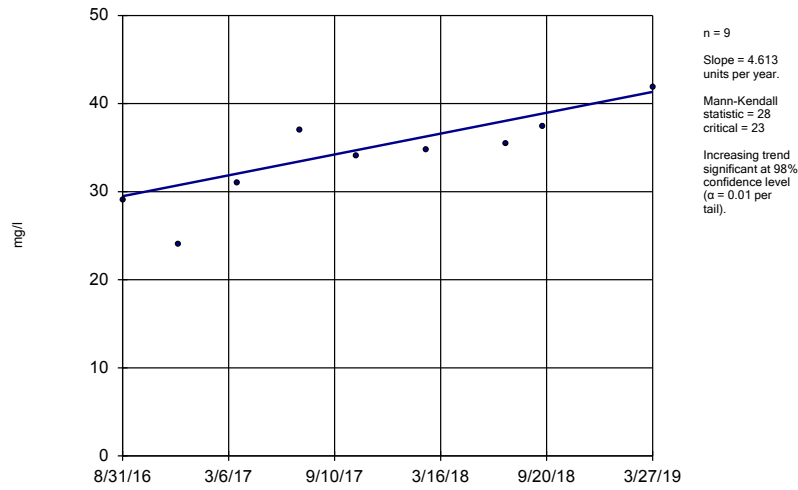
# Sen's Slope Estimator

Constituent: Sulfate (mg/l) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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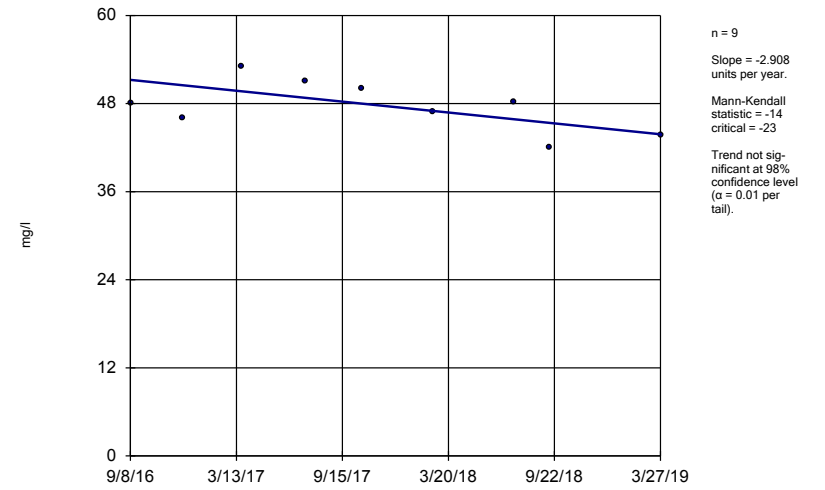
	PZ-19
9/7/2016	87
12/8/2016	84
3/23/2017	90
7/12/2017	93
10/19/2017	92
2/21/2018	84.5
7/12/2018	84.9
9/14/2018	89.5
3/28/2019	83.5

Sen's Slope Estimator  
PZ-23



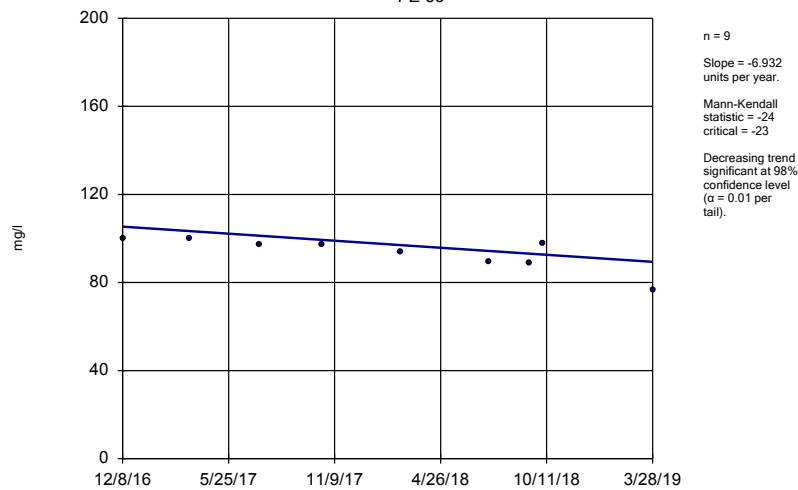
Constituent: Sulfate Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-25



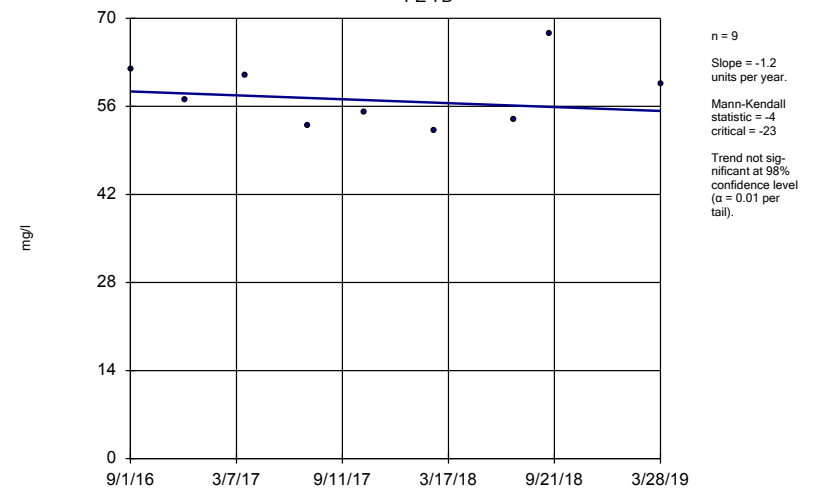
Constituent: Sulfate Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-33



Constituent: Sulfate Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-7D



Constituent: Sulfate Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

# Sen's Slope Estimator

Constituent: Sulfate (mg/l) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-23
8/31/2016	29
12/7/2016	24
3/21/2017	31
7/11/2017	37
10/18/2017	34
2/20/2018	34.7
7/11/2018	35.4
9/13/2018	37.4
3/27/2019	41.9

# Sen's Slope Estimator

Constituent: Sulfate (mg/l) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-25
9/8/2016	48
12/8/2016	46
3/22/2017	53
7/11/2017	51
10/18/2017	50
2/21/2018	46.8
7/12/2018	48.3
9/13/2018	42
3/27/2019	43.7

# Sen's Slope Estimator

Constituent: Sulfate (mg/l) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-33
12/8/2016	100
3/23/2017	100
7/12/2017	97
10/19/2017	97
2/21/2018	93.6
7/12/2018	89.4
9/14/2018	88.9
10/4/2018	97.8
3/28/2019	76.7

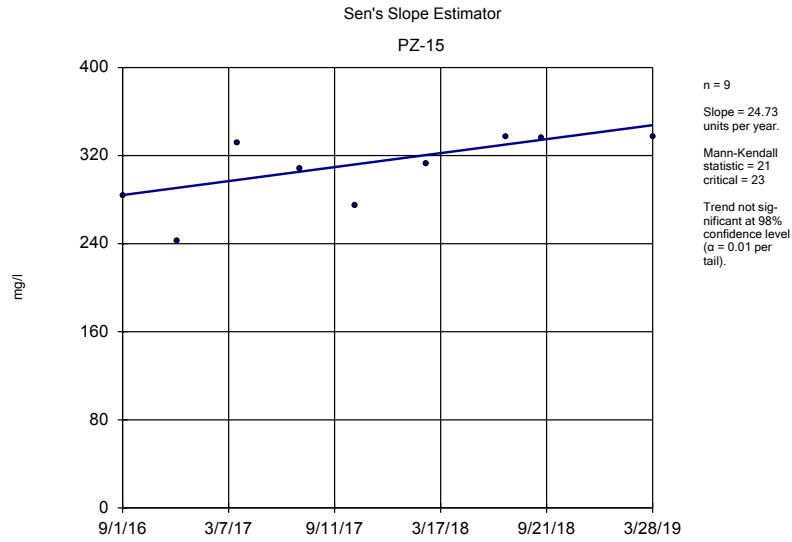
# Sen's Slope Estimator

Constituent: Sulfate (mg/l) Analysis Run 8/6/2019 12:22 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

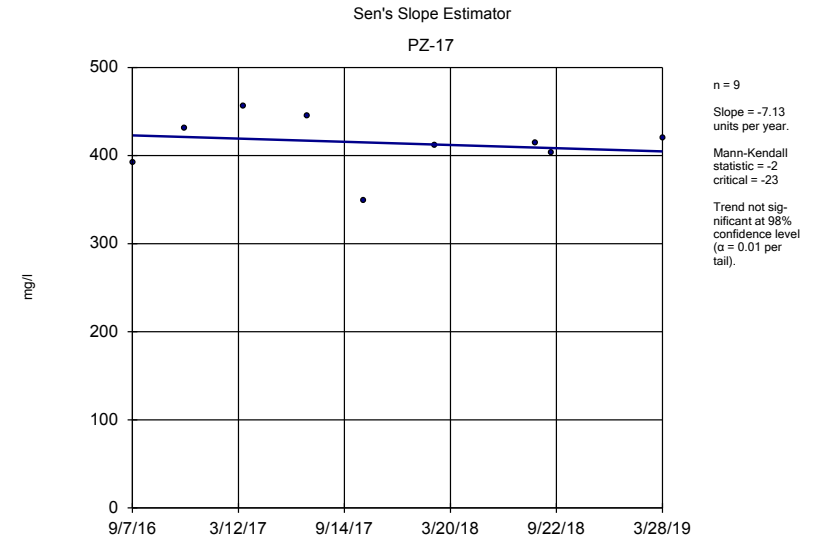
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	PZ-7D
9/1/2016	62
12/7/2016	57
3/22/2017	61
7/12/2017	53
10/19/2017	55
2/21/2018	52.1
7/12/2018	53.9
9/13/2018	67.5
3/28/2019	59.6

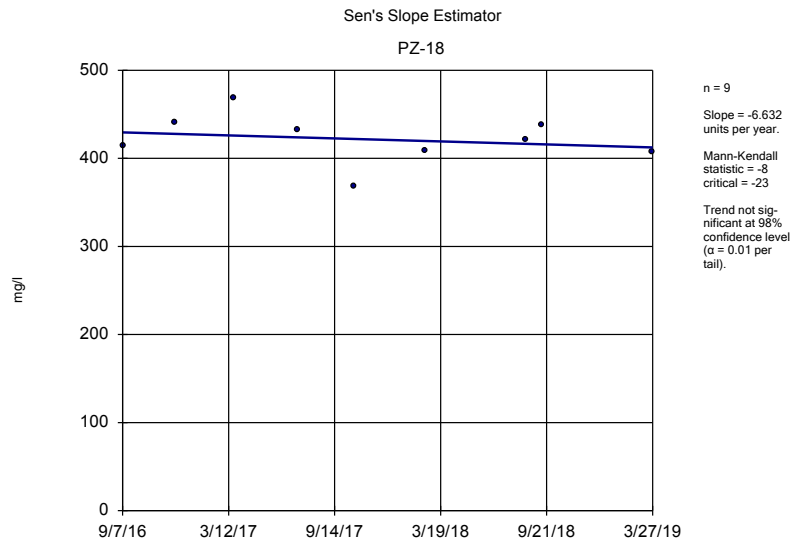




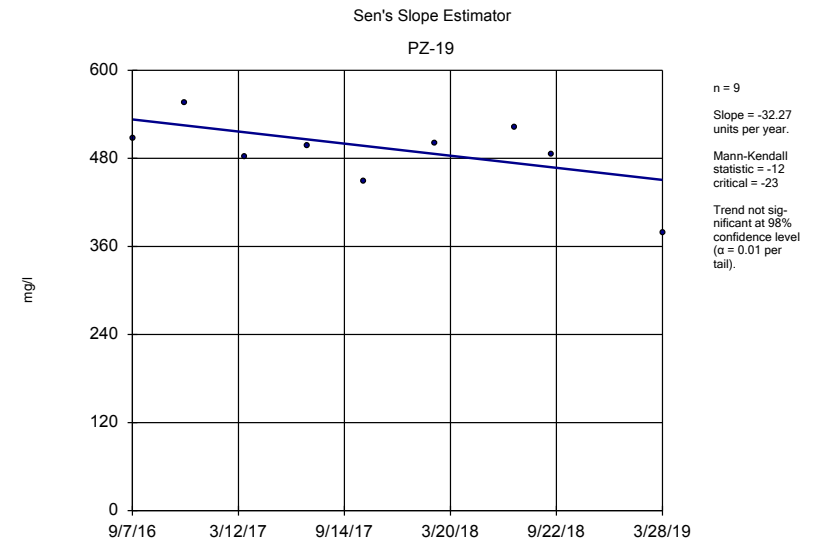
Constituent: Total Dissolved Solids Analysis Run 8/6/2019 12:20 PM View: App\III Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Total Dissolved Solids Analysis Run 8/6/2019 12:20 PM View: App\III Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Total Dissolved Solids Analysis Run 8/6/2019 12:20 PM View: App\III Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Total Dissolved Solids Analysis Run 8/6/2019 12:20 PM View: App\III Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

# Sen's Slope Estimator

Constituent: Total Dissolved Solids (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-15
9/1/2016	284
12/7/2016	242
3/22/2017	332
7/12/2017	308
10/18/2017	275
2/21/2018	312
7/12/2018	337
9/13/2018	336
3/28/2019	337

# Sen's Slope Estimator

Constituent: Total Dissolved Solids (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-17
9/7/2016	392
12/8/2016	431
3/22/2017	456
7/12/2017	445
10/18/2017	349
2/21/2018	411
8/16/2018	415
9/14/2018	403
3/28/2019	420

# Sen's Slope Estimator

Constituent: Total Dissolved Solids (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes

Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-18
9/7/2016	415
12/8/2016	441
3/22/2017	469
7/12/2017	432
10/18/2017	368
2/21/2018	409
8/15/2018	422
9/13/2018	438
3/27/2019	408

# Sen's Slope Estimator

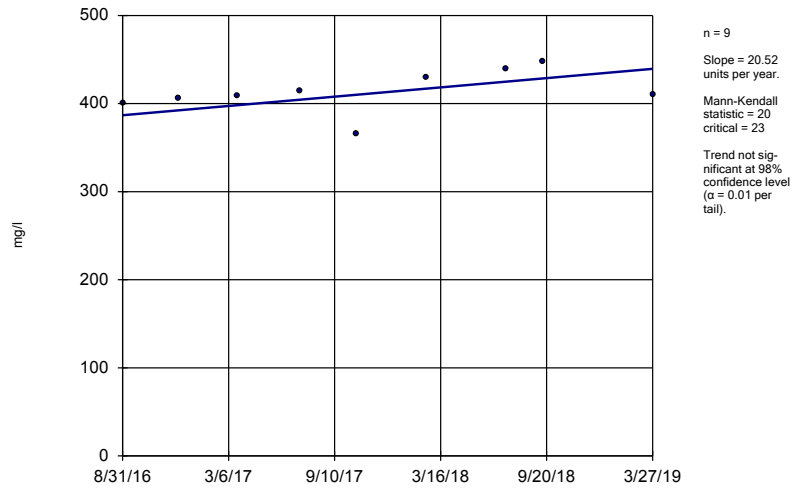
Constituent: Total Dissolved Solids (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes

Plant Mitchell Client: Southern Company Data: Mitchel V3

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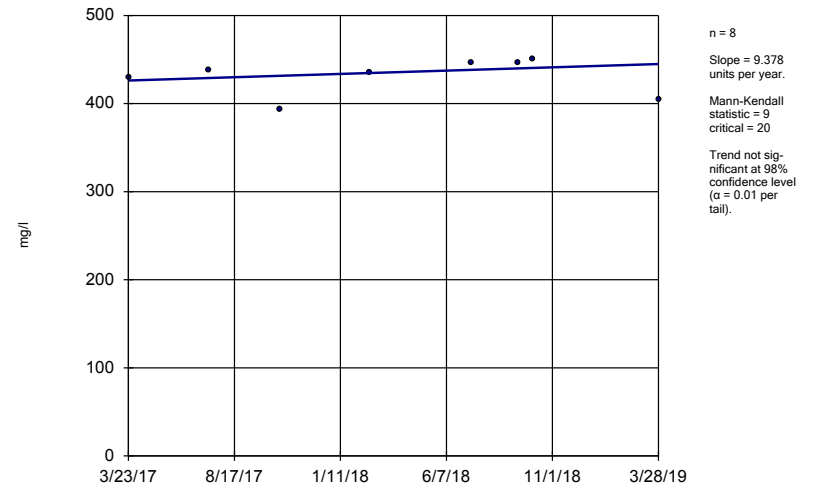
	PZ-19
9/7/2016	508
12/8/2016	556
3/23/2017	482
7/12/2017	497
10/19/2017	448
2/21/2018	500
7/12/2018	523
9/14/2018	486
3/28/2019	378 (X)

Sen's Slope Estimator  
PZ-23



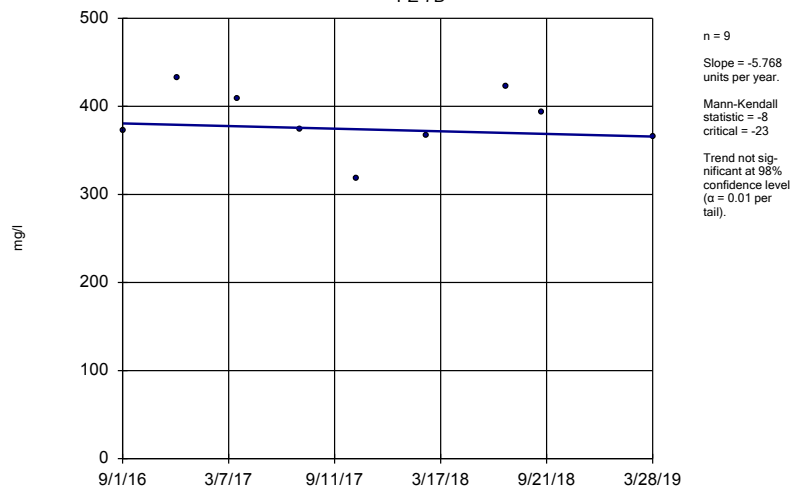
Constituent: Total Dissolved Solids Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-33



Constituent: Total Dissolved Solids Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-7D



Constituent: Total Dissolved Solids Analysis Run 8/6/2019 12:20 PM View: AppIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

# Sen's Slope Estimator

Constituent: Total Dissolved Solids (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-23
8/31/2016	400
12/7/2016	406
3/21/2017	409
7/11/2017	414
10/18/2017	366
2/20/2018	429
7/11/2018	440
9/13/2018	448
3/27/2019	410

# Sen's Slope Estimator

Constituent: Total Dissolved Solids (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-33
12/8/2016	503 (O)
3/23/2017	430
7/12/2017	438
10/19/2017	393
2/21/2018	435
7/12/2018	447
9/14/2018	447
10/4/2018	450
3/28/2019	405



# Sen's Slope Estimator

Constituent: Total Dissolved Solids (mg/l) Analysis Run 8/6/2019 12:22 PM View: ApplIII Sen Slopes  
Plant Mitchell Client: Southern Company Data: Mitchel V3

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	PZ-7D
9/1/2016	373
12/7/2016	433
3/22/2017	409
7/12/2017	374
10/19/2017	318
2/21/2018	367
7/12/2018	423
9/13/2018	394
3/28/2019	365

# Trend Test Upgradient Wells - Significant

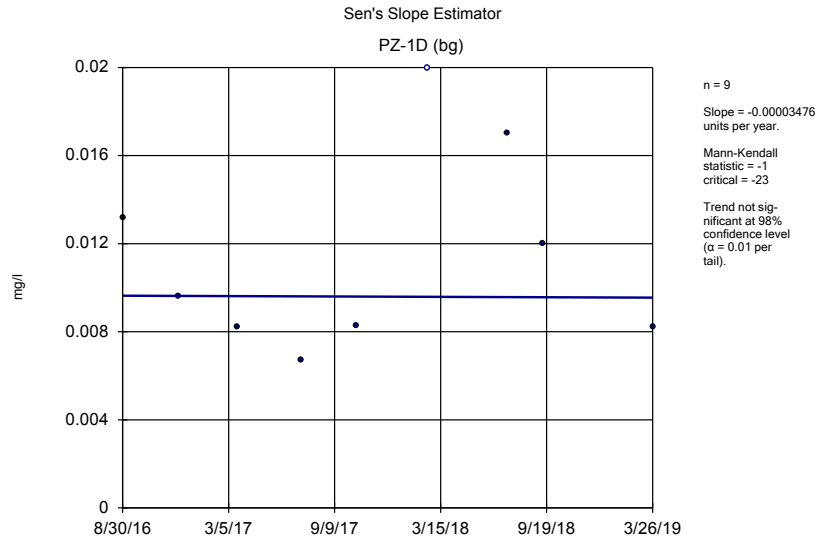
Plant Mitchell Client: Southern Company Data: Mitchel V3 Printed 8/6/2019, 10:07 AM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
<b>pH (pH units)</b>	<b>PZ-2D (bg)</b>	<b>-0.9321</b>	<b>-24</b>	<b>-23</b>	<b>Yes</b>	<b>9</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.02</b>	<b>NP</b>

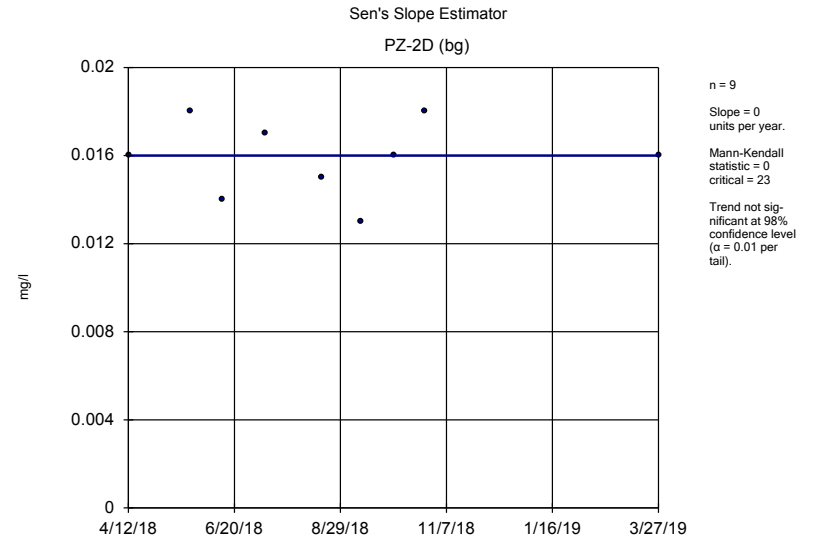
# Trend Test Upgradient Wells

Plant Mitchell   Client: Southern Company   Data: Mitchel V3   Printed 8/6/2019, 10:07 AM

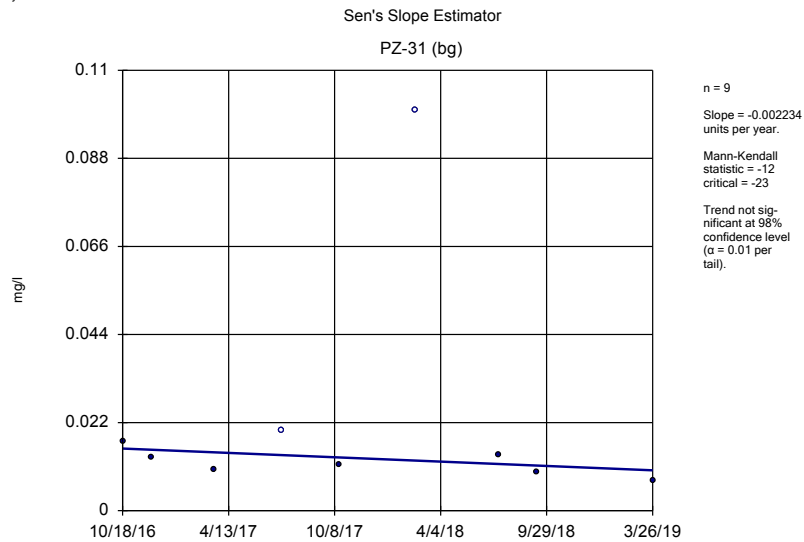
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/l)	PZ-1D (bg)	-0.00...	-1	-23	No	9	11.11	n/a	n/a	0.02	NP
Boron (mg/l)	PZ-2D (bg)	0	0	23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/l)	PZ-31 (bg)	-0.00...	-12	-23	No	9	22.22	n/a	n/a	0.02	NP
Boron (mg/l)	PZ-32 (bg)	-0.00...	-11	-23	No	9	22.22	n/a	n/a	0.02	NP
Calcium (mg/l)	PZ-1D (bg)	2.324	7	20	No	8	0	n/a	n/a	0.02	NP
Calcium (mg/l)	PZ-2D (bg)	14.9	16	23	No	9	11.11	n/a	n/a	0.02	NP
Calcium (mg/l)	PZ-31 (bg)	0.7467	3	23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/l)	PZ-32 (bg)	0.785	4	23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/l)	PZ-1D (bg)	-0.06309	-9	-23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/l)	PZ-2D (bg)	0.1043	6	23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/l)	PZ-31 (bg)	-0.4814	-22	-23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/l)	PZ-32 (bg)	-0.2623	-18	-23	No	9	0	n/a	n/a	0.02	NP
Fluoride (mg/l)	PZ-1D (bg)	0.03324	10	23	No	9	33.33	n/a	n/a	0.02	NP
Fluoride (mg/l)	PZ-2D (bg)	0	2	23	No	9	33.33	n/a	n/a	0.02	NP
Fluoride (mg/l)	PZ-31 (bg)	-0.00...	-3	-23	No	9	11.11	n/a	n/a	0.02	NP
Fluoride (mg/l)	PZ-32 (bg)	0	13	23	No	9	66.67	n/a	n/a	0.02	NP
pH (pH units)	PZ-1D (bg)	-0.06481	-15	-23	No	9	0	n/a	n/a	0.02	NP
<b>pH (pH units)</b>	<b>PZ-2D (bg)</b>	<b>-0.9321</b>	<b>-24</b>	<b>-23</b>	<b>Yes</b>	<b>9</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.02</b>	<b>NP</b>
pH (pH units)	PZ-31 (bg)	-0.01435	-4	-23	No	9	0	n/a	n/a	0.02	NP
pH (pH units)	PZ-32 (bg)	-0.00...	-4	-23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/l)	PZ-1D (bg)	0.08102	7	23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/l)	PZ-2D (bg)	0.6518	1	23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/l)	PZ-31 (bg)	-1.699	-14	-23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/l)	PZ-32 (bg)	0.05192	3	23	No	9	11.11	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/l)	PZ-1D (bg)	11.51	13	23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/l)	PZ-2D (bg)	68.86	16	23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/l)	PZ-31 (bg)	-5.859	-7	-23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/l)	PZ-32 (bg)	3.287	7	23	No	9	0	n/a	n/a	0.02	NP



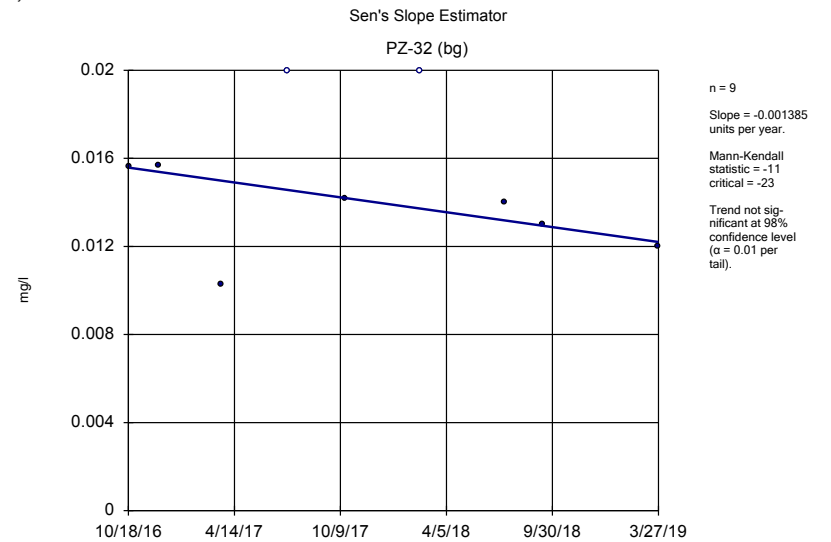
Constituent: Boron Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Boron Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Boron Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3

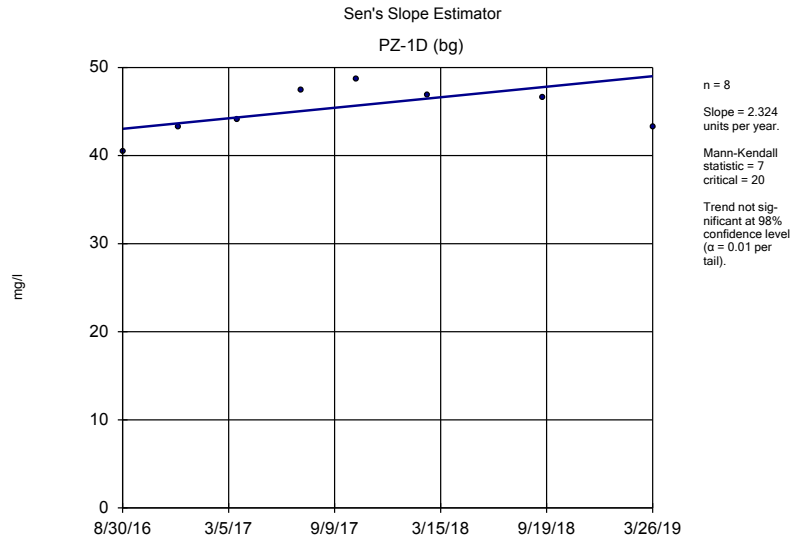


Constituent: Boron Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3

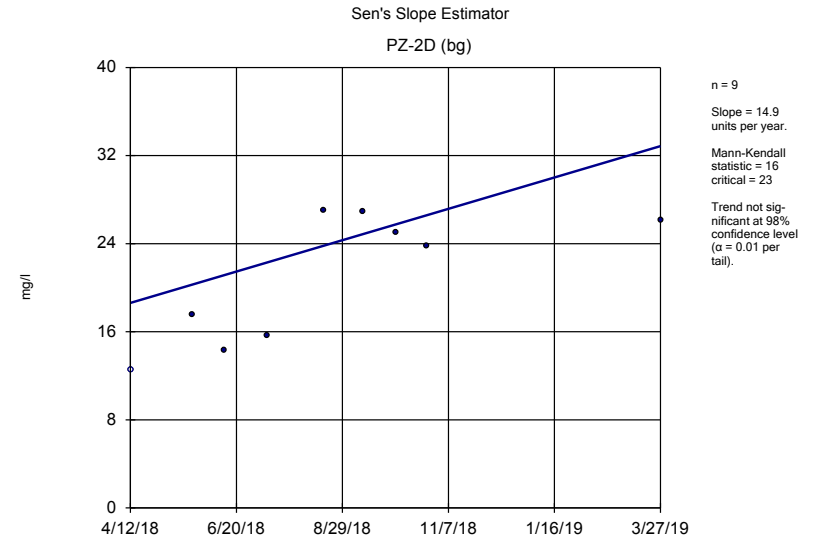
# Sen's Slope Estimator

Constituent: Boron    Analysis Run 8/6/2019 10:07 AM    View: App III Sen Slope Upgradient  
Plant Mitchell    Client: Southern Company    Data: Mitchel V3

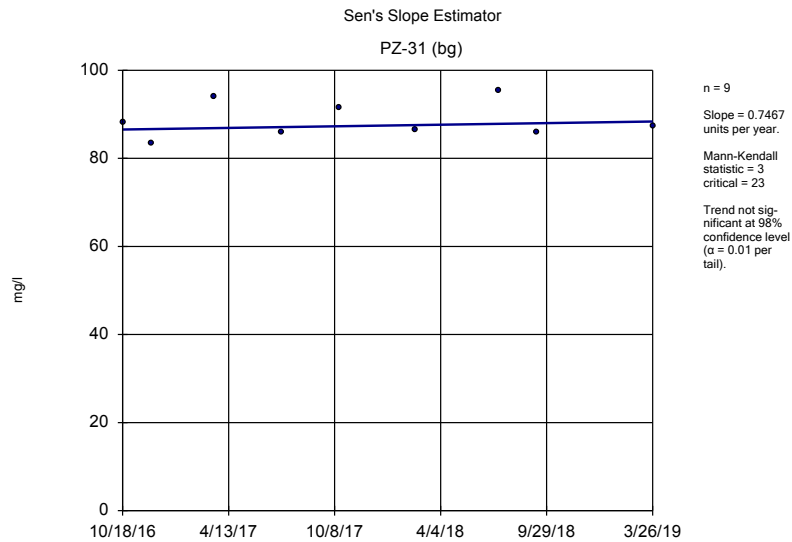
	PZ-1D (bg)	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)
8/30/2016	0.0132 (X)			
10/18/2016			0.0174 (X)	0.0156 (X)
12/6/2016	0.0096 (X)		0.0133 (X)	
12/7/2016				0.0157 (X)
3/21/2017	0.0082 (X)		0.0103 (X)	
3/23/2017				0.0103 (X)
7/11/2017	0.0067 (X)		<0.04	<0.04
10/17/2017	0.0083 (X)		0.0116 (X)	0.0142 (X)
2/20/2018	<0.04		<0.2	<0.04
4/12/2018		0.016 (X)		
5/23/2018		0.018 (X)		
6/13/2018		0.014 (X)		
7/11/2018	0.017 (X)	0.017 (X)	0.014 (X)	0.014 (X)
8/17/2018		0.015 (X)		
9/12/2018	0.012 (X)	0.013 (X)	0.0098 (X)	
9/13/2018				0.013 (X)
10/4/2018		0.016 (X)		
10/24/2018		0.018 (X)		
3/26/2019	0.0082 (X)		0.0076 (X)	
3/27/2019		0.016 (X)		0.012 (X)



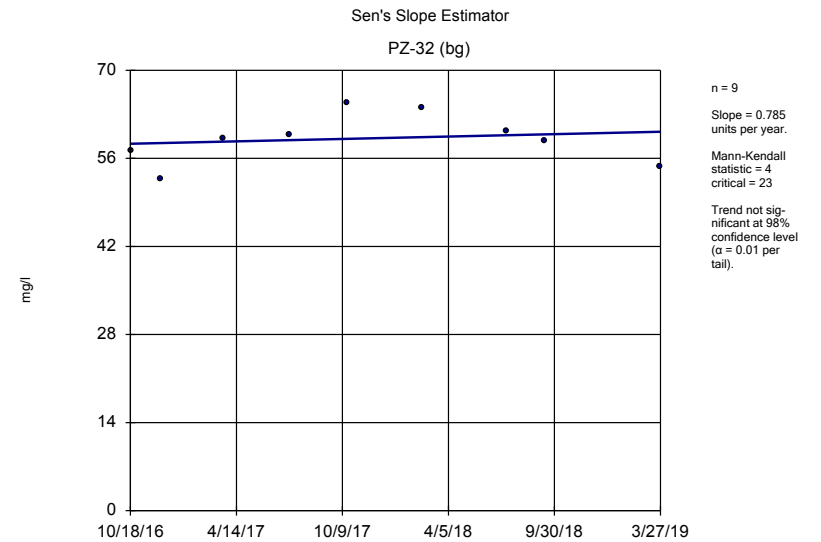
Constituent: Calcium Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Calcium Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Calcium Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3



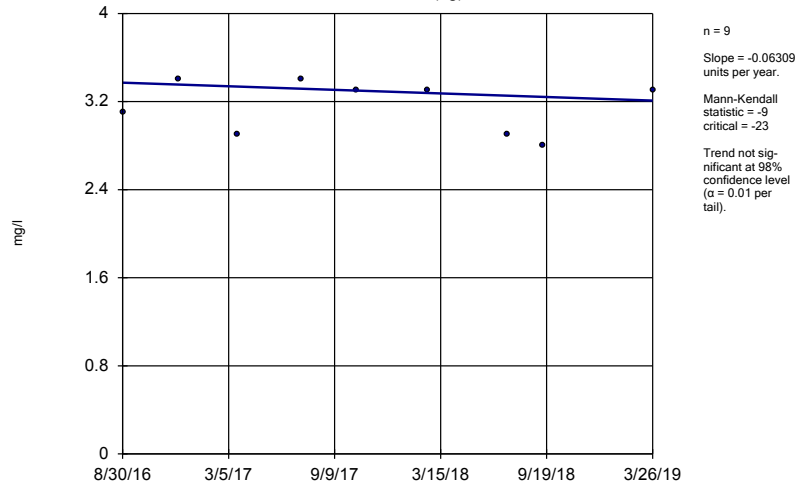
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Plant Mitchell Client: Southern Company Data: Mitchel V3

# Sen's Slope Estimator

Constituent: Calcium Analysis Run 8/6/2019 10:07 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3

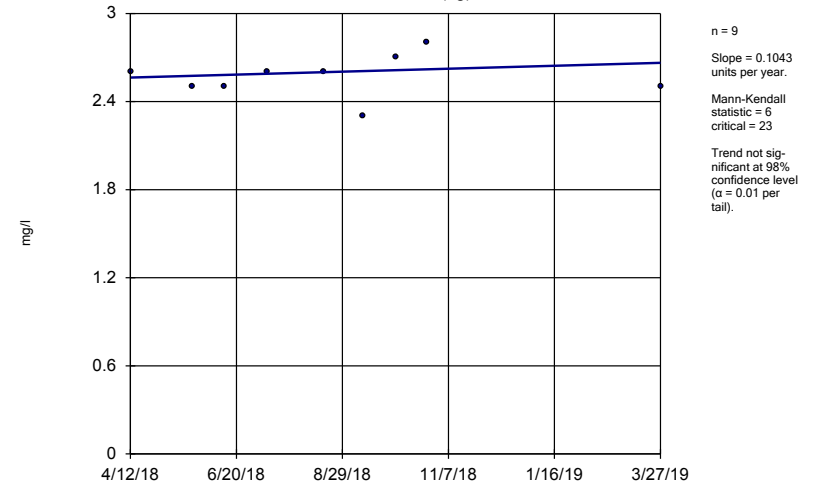
	PZ-1D (bg)	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)
8/30/2016	40.4			
10/18/2016			88.3	57.2
12/6/2016	43.3		83.4	
12/7/2016				52.8
3/21/2017	44.1		94	
3/23/2017				59.1
7/11/2017	47.4		86	59.7
10/17/2017	48.7		91.6	64.9
2/20/2018	46.8		86.5	64.1
4/12/2018		<25		
5/23/2018		17.6 (X)		
6/13/2018		14.3		
7/11/2018		15.6	95.4	60.4
8/17/2018		27		
9/12/2018	46.6	26.9	86	
9/13/2018				58.7
10/4/2018		25		
10/24/2018		23.8		
3/26/2019	43.3		87.3	
3/27/2019		26.1		54.6

Sen's Slope Estimator  
PZ-1D (bg)



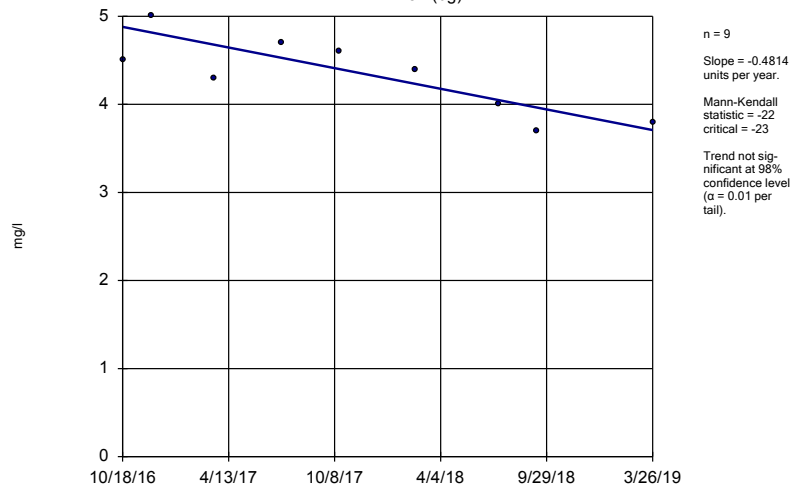
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Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-2D (bg)



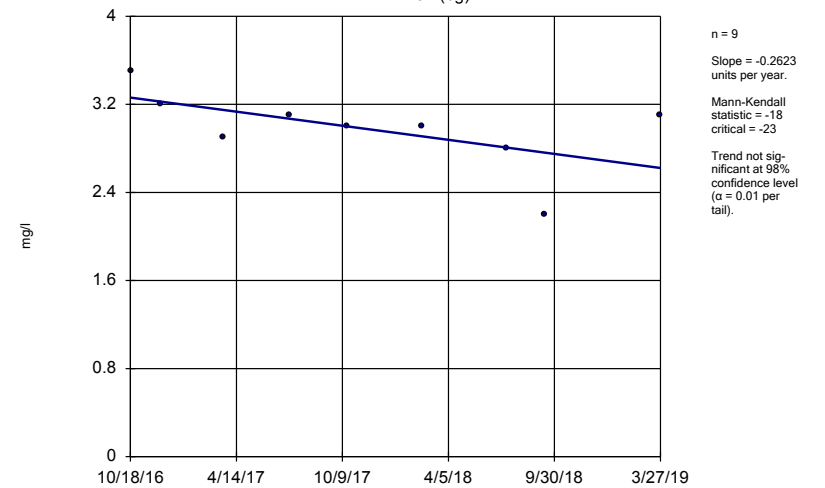
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Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-31 (bg)



Constituent: Chloride Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-32 (bg)



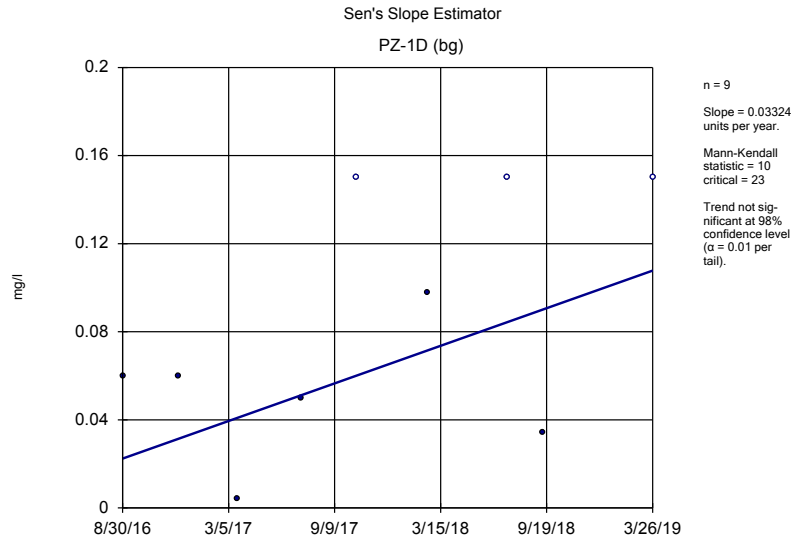
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Plant Mitchell Client: Southern Company Data: Mitchel V3



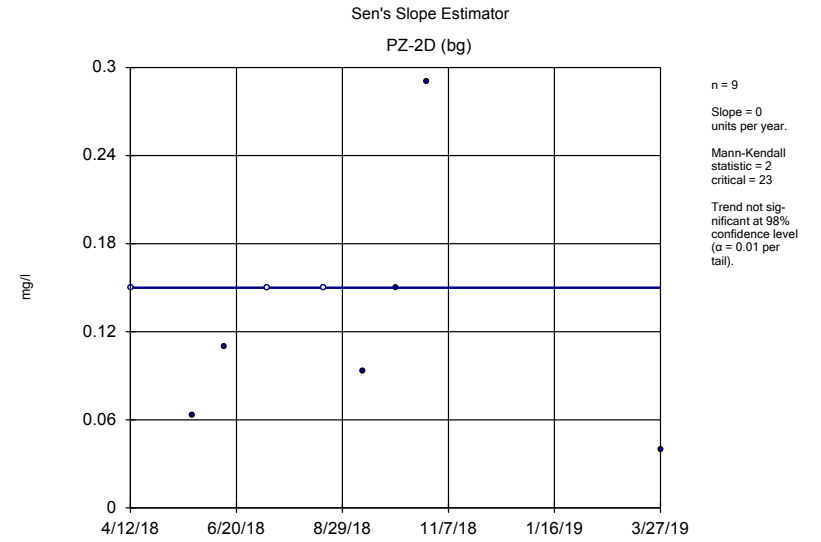
# Sen's Slope Estimator

Constituent: Chloride Analysis Run 8/6/2019 10:07 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3

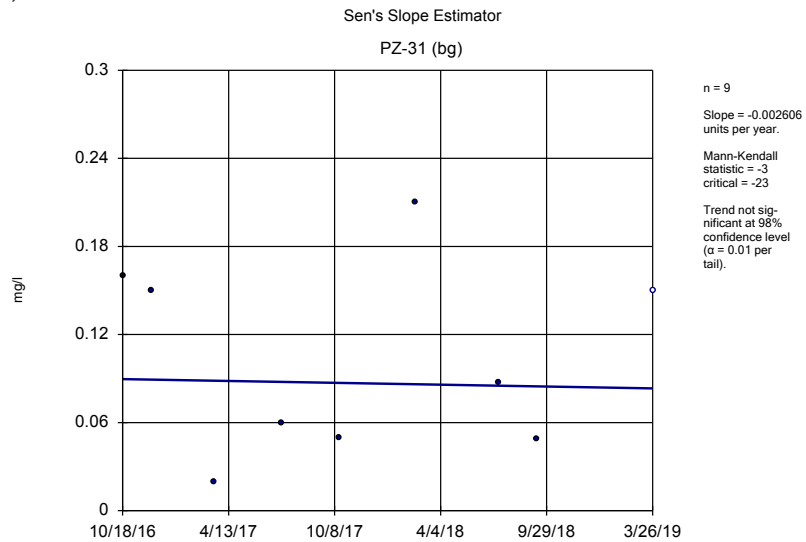
	PZ-1D (bg)	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)
8/30/2016	3.1			
10/18/2016			4.5	3.5
12/6/2016	3.4		5	
12/7/2016				3.2
3/21/2017	2.9		4.3	
3/23/2017				2.9
7/11/2017	3.4		4.7	3.1
10/17/2017	3.3		4.6	3
2/20/2018	3.3		4.4	3
4/12/2018		2.6		
5/23/2018		2.5		
6/13/2018		2.5		
7/11/2018	2.9	2.6	4	2.8
8/17/2018		2.6		
9/12/2018	2.8	2.3	3.7	
9/13/2018				2.2
10/4/2018		2.7		
10/24/2018		2.8		
3/26/2019	3.3		3.8	
3/27/2019		2.5		3.1



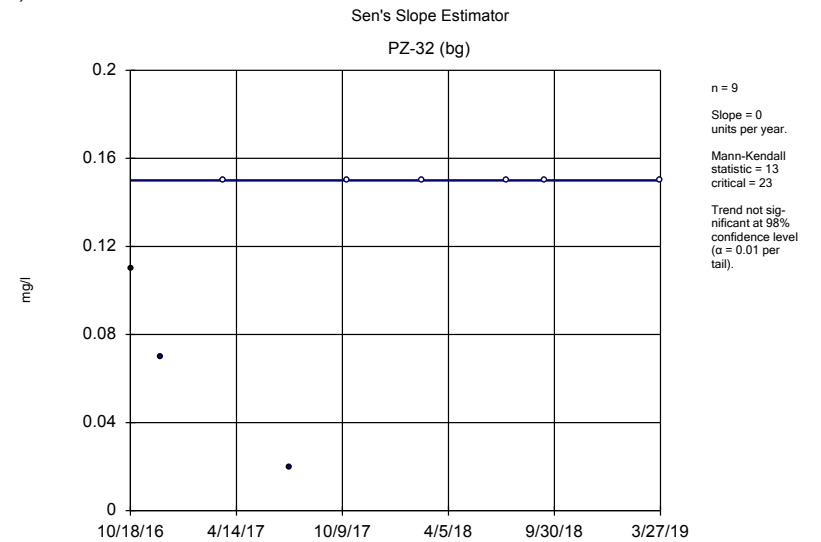
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Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Fluoride Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Fluoride Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3



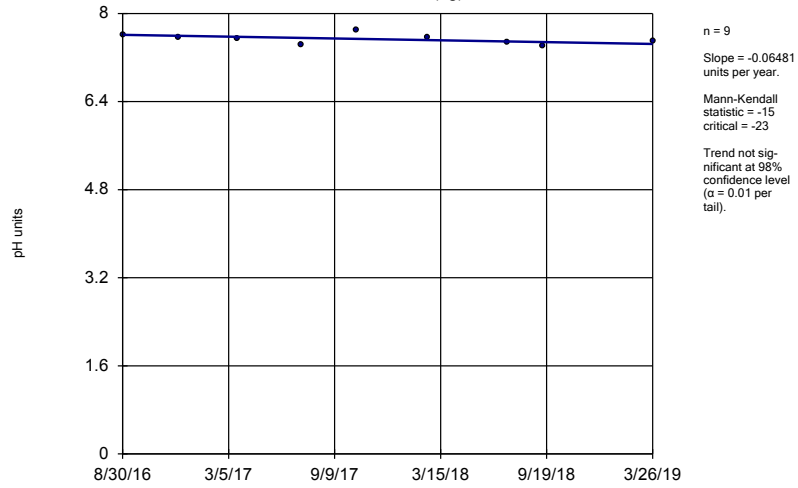
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Plant Mitchell Client: Southern Company Data: Mitchel V3

# Sen's Slope Estimator

Constituent: Fluoride Analysis Run 8/6/2019 10:07 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3

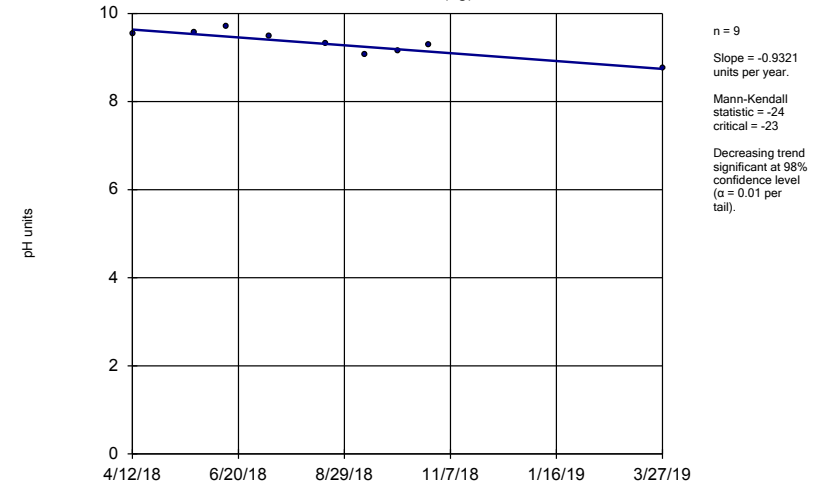
	PZ-1D (bg)	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)
8/30/2016	0.06 (X)			
10/18/2016			0.16 (X)	0.11 (X)
12/6/2016	0.06 (X)		0.15 (X)	
12/7/2016				0.07 (X)
3/21/2017	0.004 (X)		0.02 (X)	
3/23/2017				<0.3
7/11/2017	0.05 (X)		0.06 (X)	0.02 (X)
10/17/2017	<0.3		0.05 (X)	<0.3
2/20/2018	0.098 (X)		0.21 (X)	<0.3
4/12/2018		<0.3		
5/23/2018		0.063 (X)		
6/13/2018		0.11 (X)		
7/11/2018	<0.3	<0.3	0.087 (X)	<0.3
8/17/2018		<0.3		
9/12/2018	0.034 (X)	0.093 (X)	0.049 (X)	
9/13/2018				<0.3
10/4/2018		0.15 (X)		
10/24/2018		0.29 (X)		
3/26/2019	<0.3		<0.3	
3/27/2019		0.04 (X)		<0.3

Sen's Slope Estimator  
PZ-1D (bg)



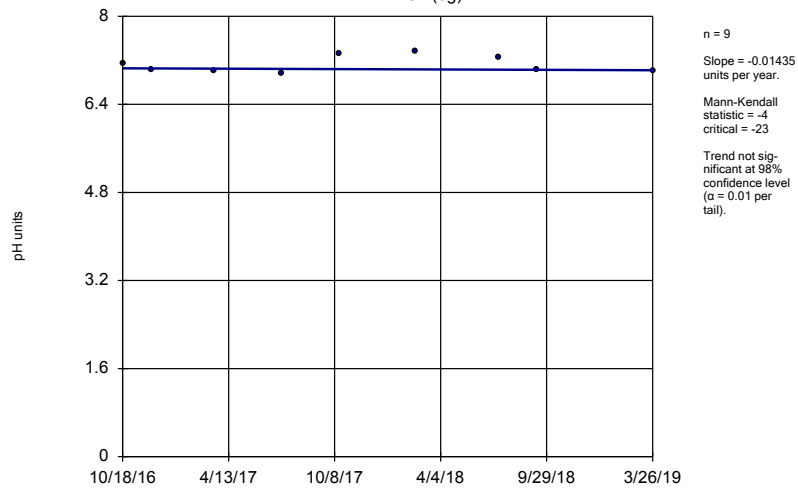
Constituent: pH Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-2D (bg)



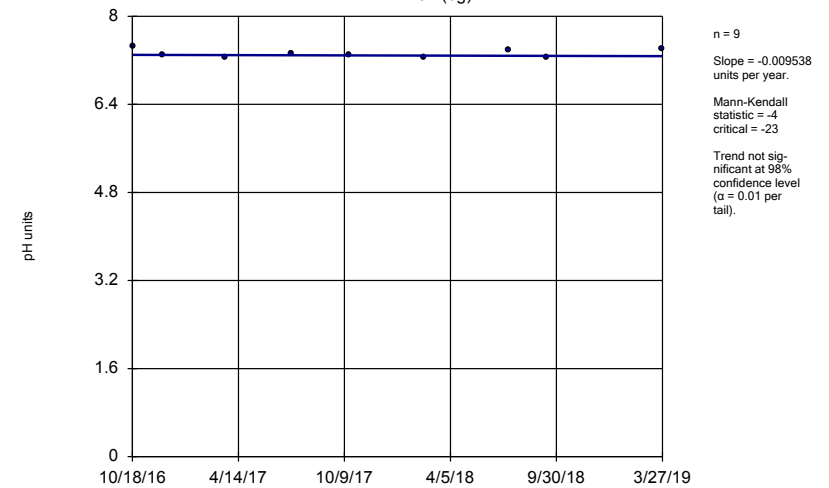
Constituent: pH Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-31 (bg)



Constituent: pH Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Sen's Slope Estimator  
PZ-32 (bg)



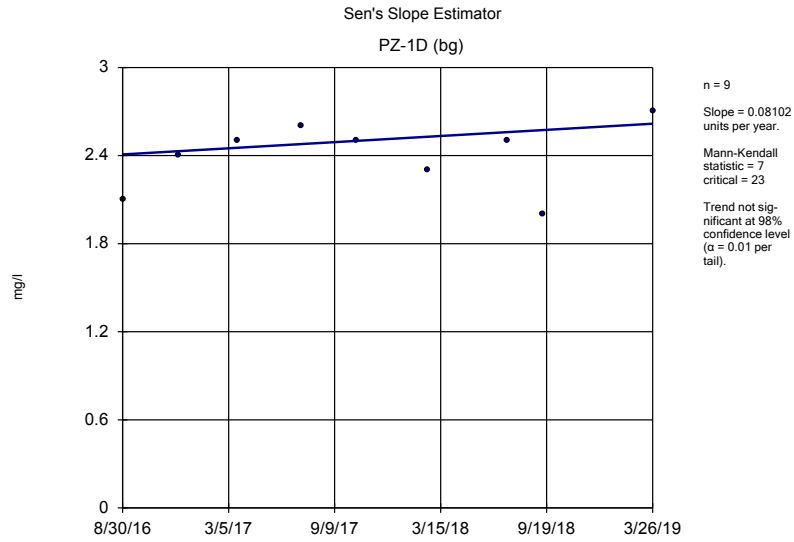
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Plant Mitchell Client: Southern Company Data: Mitchel V3

# Sen's Slope Estimator

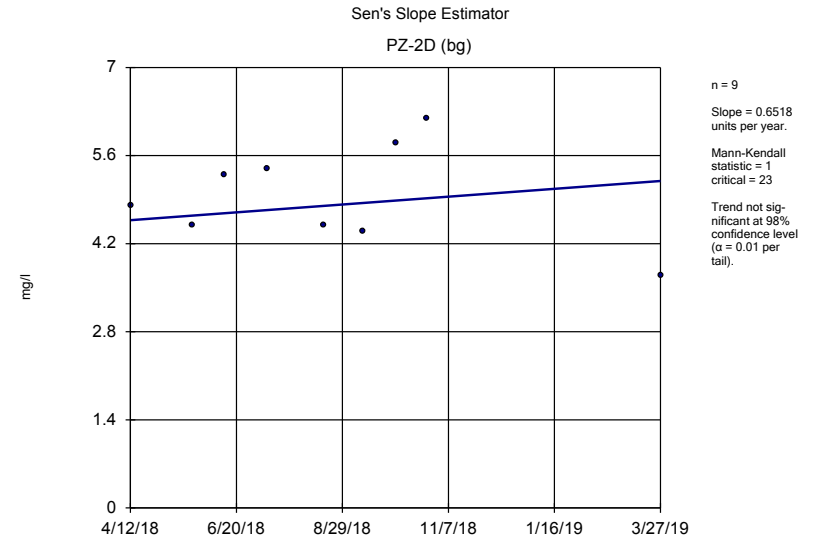
Constituent: pH Analysis Run 8/6/2019 10:07 AM View: App III Sen Slope Upgradient

Plant Mitchell Client: Southern Company Data: Mitchel V3

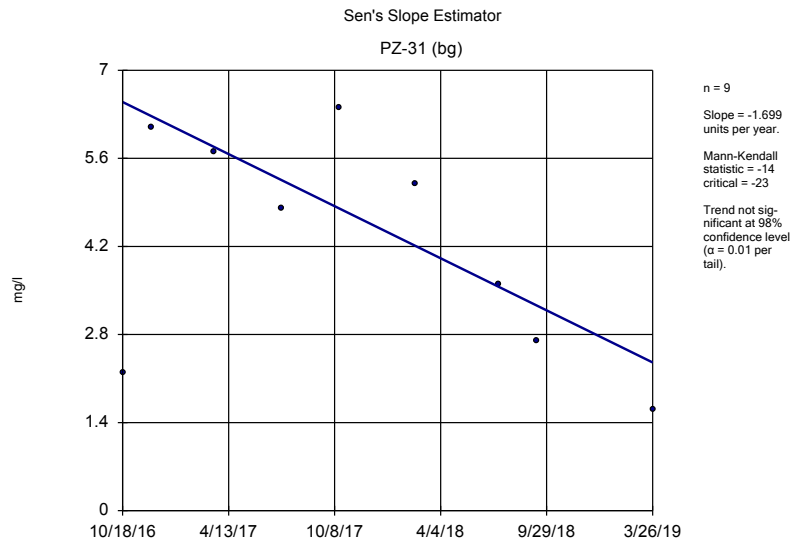
	PZ-1D (bg)	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)
8/30/2016	7.62			
10/18/2016			7.15	7.45
12/6/2016	7.57		7.04	
12/7/2016				7.29
3/21/2017	7.54		7.01	
3/23/2017				7.26
7/11/2017	7.43		6.96	7.31
10/17/2017	7.7		7.31	7.29
2/20/2018	7.57		7.37	7.26
4/12/2018		9.54		
5/23/2018		9.57		
6/13/2018		9.71		
7/11/2018	7.48	9.48	7.26	7.39
8/17/2018		9.31		
9/12/2018	7.41	9.07	7.02	
9/13/2018				7.25
10/4/2018		9.16		
10/24/2018		9.29		
3/26/2019	7.49		7	
3/27/2019		8.76		7.42



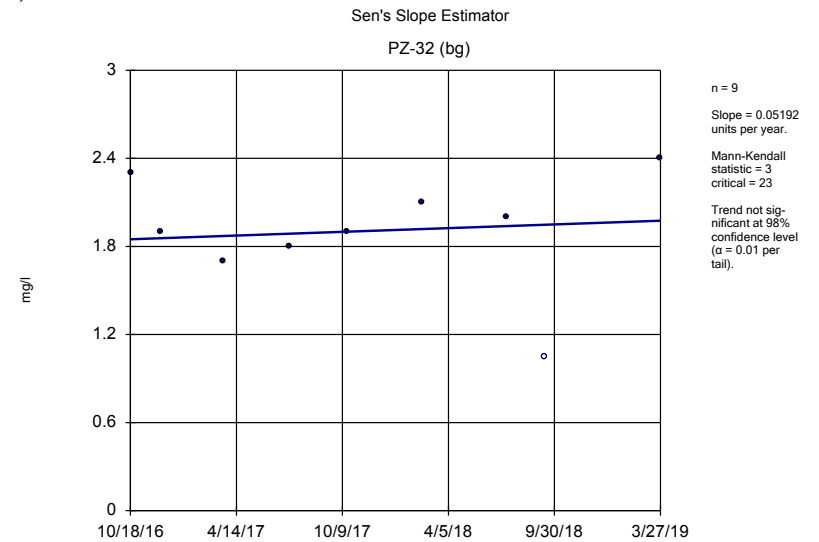
Constituent: Sulfate Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Sulfate Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Sulfate Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3

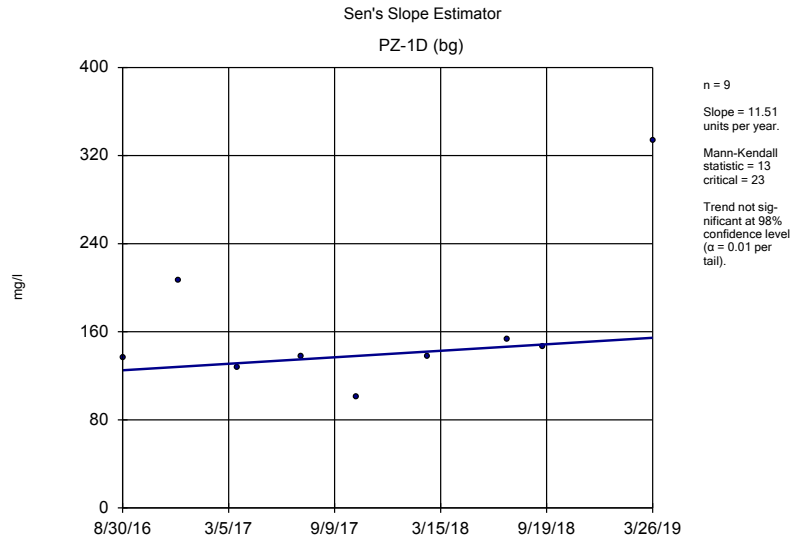


Constituent: Sulfate Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3

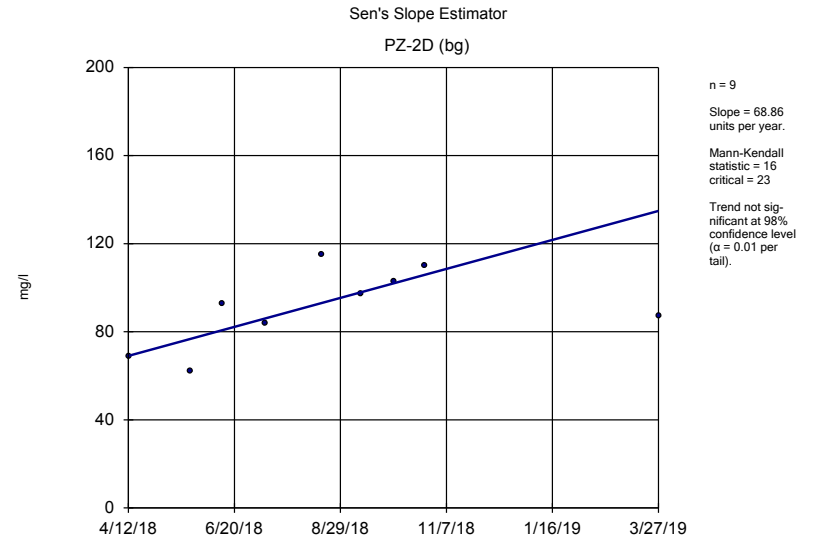
# Sen's Slope Estimator

Constituent: Sulfate Analysis Run 8/6/2019 10:07 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3

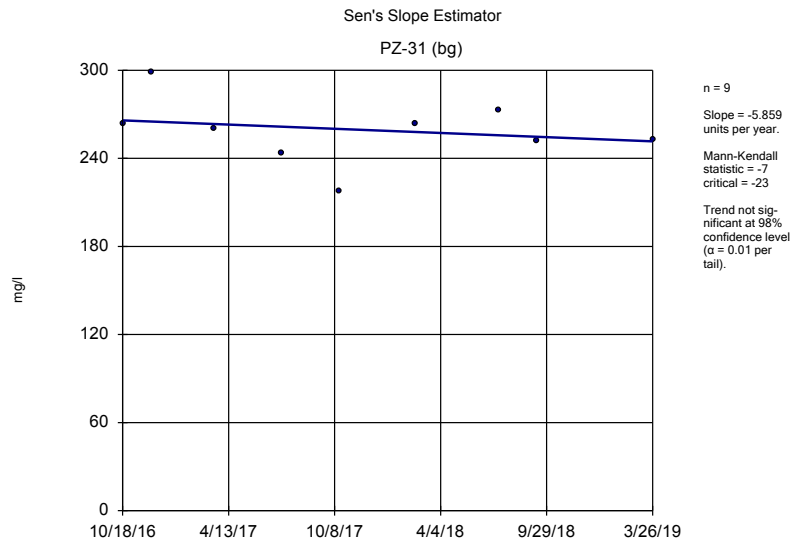
	PZ-1D (bg)	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)
8/30/2016	2.1			
10/18/2016			2.2	2.3
12/6/2016	2.4		6.1	
12/7/2016				1.9
3/21/2017	2.5		5.7	
3/23/2017				1.7
7/11/2017	2.6		4.8	1.8
10/17/2017	2.5		6.4	1.9
2/20/2018	2.3		5.2	2.1
4/12/2018		4.8		
5/23/2018		4.5		
6/13/2018		5.3		
7/11/2018	2.5	5.4	3.6	2
8/17/2018		4.5		
9/12/2018	2	4.4	2.7	
9/13/2018				<2.1 (*)
10/4/2018		5.8		
10/24/2018		6.2		
3/26/2019	2.7		1.6	
3/27/2019		3.7		2.4



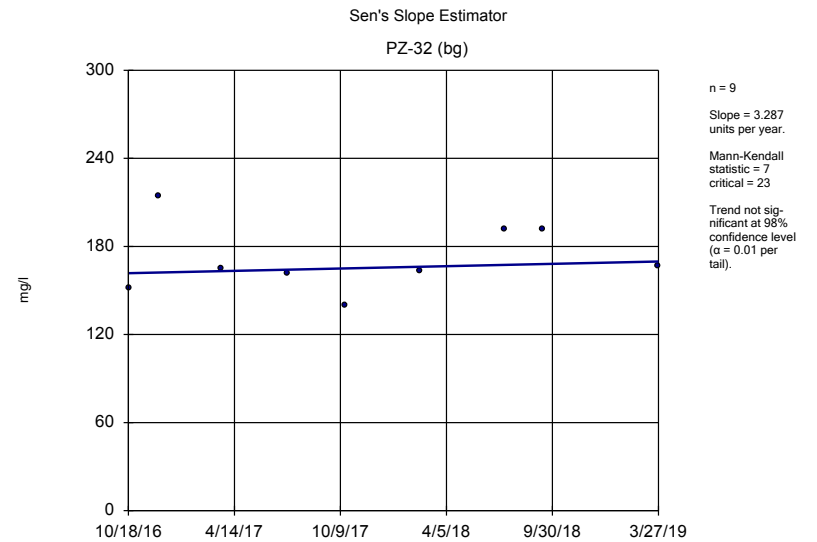
Constituent: Total Dissolved Solids Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Total Dissolved Solids Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Total Dissolved Solids Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3



Constituent: Total Dissolved Solids Analysis Run 8/6/2019 10:06 AM View: App III Sen Slope Upgradient  
Plant Mitchell Client: Southern Company Data: Mitchel V3



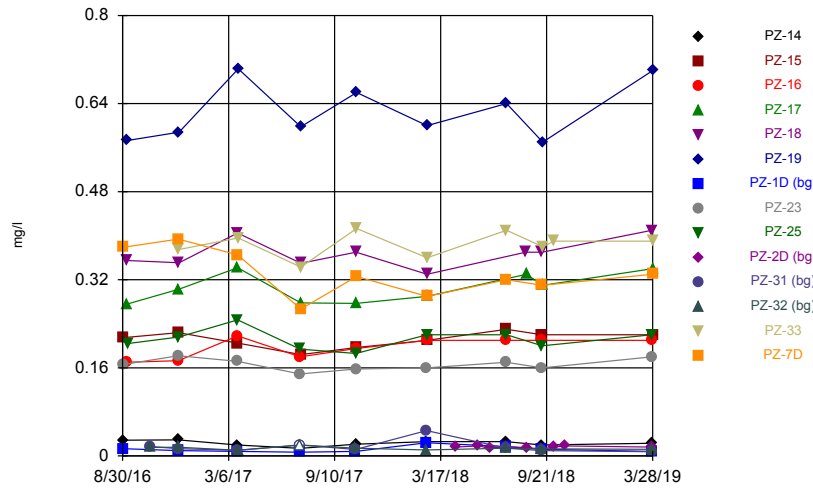
# Sen's Slope Estimator

Constituent: Total Dissolved Solids Analysis Run 8/6/2019 10:08 AM View: App III Sen Slope Upgradient

Plant Mitchell Client: Southern Company Data: Mitchel V3

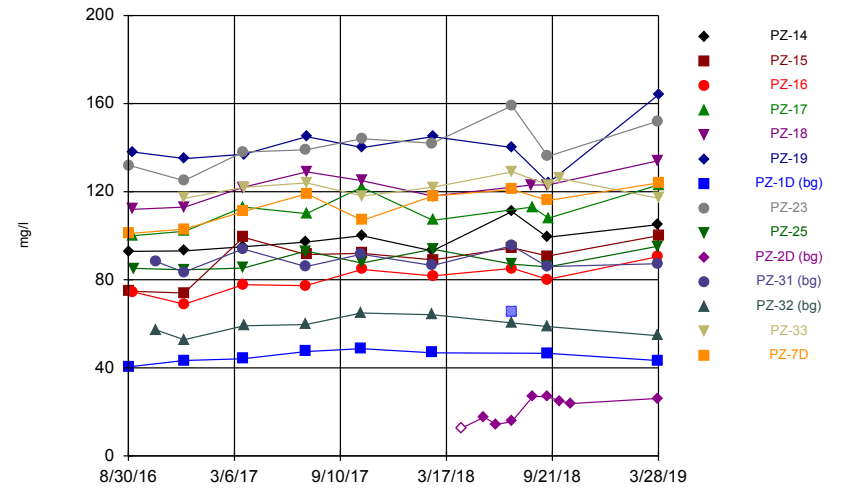
	PZ-1D (bg)	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)
8/30/2016	136			
10/18/2016			264	152
12/6/2016	207		299	
12/7/2016				214
3/21/2017	128		260	
3/23/2017				165
7/11/2017	138		244	162
10/17/2017	101		218	140
2/20/2018	138		264	163
4/12/2018		69		
5/23/2018		62		
6/13/2018		93		
7/11/2018	153	84	273	192
8/17/2018		115		
9/12/2018	146	97	252	
9/13/2018				192
10/4/2018		103		
10/24/2018		110		
3/26/2019	334		253	
3/27/2019		87		167

Time Series



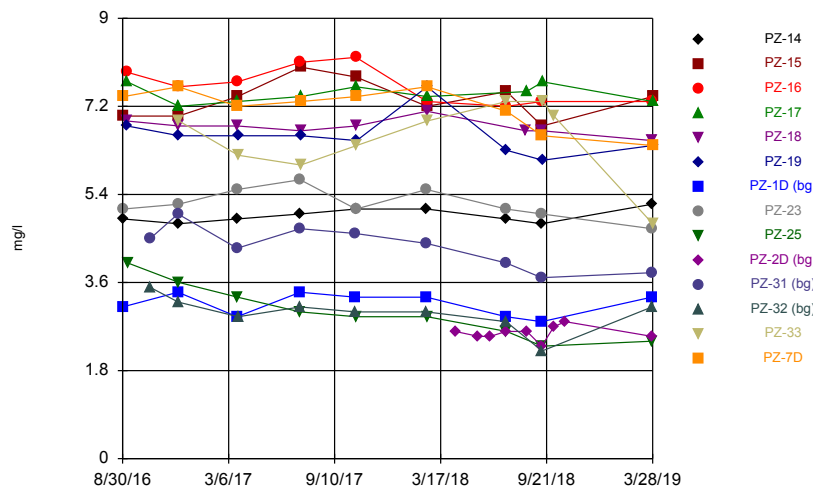
Constituent: Boron Analysis Run 8/6/2019 12:24 PM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Time Series



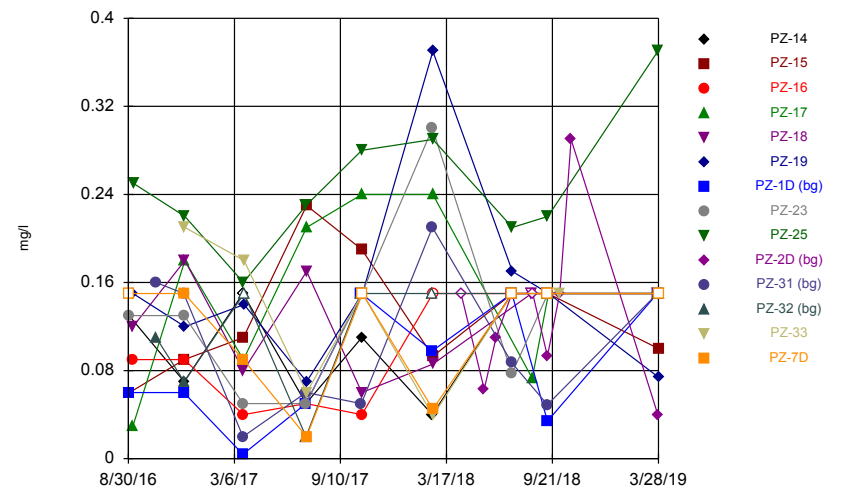
Constituent: Calcium Analysis Run 8/6/2019 12:24 PM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Time Series



Constituent: Chloride Analysis Run 8/6/2019 12:25 PM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Time Series



Constituent: Fluoride Analysis Run 8/6/2019 12:25 PM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

# Time Series

Constituent: Boron (mg/l) Analysis Run 8/6/2019 12:27 PM View: App III Interwell  
 Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-14	PZ-15	PZ-16	PZ-17	PZ-18	PZ-19	PZ-1D (bg)	PZ-23	PZ-25
8/30/2016							0.0132 (X)		
8/31/2016	0.0285 (X)							0.166	
9/1/2016		0.215							
9/6/2016			0.17						
9/7/2016				0.276	0.355	0.573			
9/8/2016									0.204
10/18/2016									
12/6/2016							0.0096 (X)		
12/7/2016	0.0292 (X)	0.224	0.173					0.182	
12/8/2016				0.303	0.351	0.588			0.216
3/21/2017	0.0198 (X)						0.0082 (X)	0.172	
3/22/2017		0.205	0.218	0.342	0.405				0.247
3/23/2017						0.703			
7/11/2017	0.0137 (X)		0.18				0.0067 (X)	0.149	0.194
7/12/2017		0.184		0.278	0.35	0.598			
10/17/2017							0.0083 (X)		
10/18/2017	0.0212 (X)	0.197	0.195	0.277	0.37			0.158	0.186
10/19/2017						0.66			
2/20/2018	0.026 (X)						0.024 (X)	0.16	
2/21/2018		0.21	0.21	0.29	0.33	0.6			0.22
4/12/2018									
5/23/2018									
6/13/2018									
7/11/2018	0.026 (X)						0.017 (X)	0.17	
7/12/2018		0.23	0.21			0.64			0.22
8/15/2018					0.37				
8/16/2018				0.33					
8/17/2018									
9/12/2018	0.02 (X)						0.012 (X)		
9/13/2018		0.22	0.21		0.37			0.16	0.2
9/14/2018				0.31		0.57			
10/4/2018									
10/24/2018									
3/26/2019							0.0082 (X)		
3/27/2019	0.023 (X)		0.21		0.41			0.18	0.22
3/28/2019		0.22		0.34		0.7			

# Time Series

Constituent: Boron (mg/l) Analysis Run 8/6/2019 12:27 PM View: App III Interwell  
 Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)	PZ-33	PZ-7D
8/30/2016					
8/31/2016					
9/1/2016					0.379
9/6/2016					
9/7/2016					
9/8/2016					
10/18/2016		0.0174 (X)	0.0156 (X)		
12/6/2016		0.0133 (X)			
12/7/2016			0.0157 (X)		0.394
12/8/2016				0.375	
3/21/2017		0.0103 (X)			
3/22/2017					0.365
3/23/2017			0.0103 (X)	0.396	
7/11/2017		<0.04	<0.04		
7/12/2017				0.343	0.267
10/17/2017		0.0116 (X)	0.0142 (X)		
10/18/2017					
10/19/2017				0.413	0.326
2/20/2018		0.046 (X)	0.011 (X)		
2/21/2018				0.36	0.29
4/12/2018	0.016 (X)				
5/23/2018	0.018 (X)				
6/13/2018	0.014 (X)				
7/11/2018	0.017 (X)	0.014 (X)	0.014 (X)		
7/12/2018				0.41	0.32
8/15/2018					
8/16/2018					
8/17/2018	0.015 (X)				
9/12/2018	0.013 (X)	0.0098 (X)			
9/13/2018			0.013 (X)		0.31
9/14/2018				0.38	
10/4/2018	0.016 (X)			0.39	
10/24/2018	0.018 (X)				
3/26/2019		0.0076 (X)			
3/27/2019	0.016 (X)		0.012 (X)		
3/28/2019				0.39	0.33

# Time Series

Constituent: Calcium (mg/l) Analysis Run 8/6/2019 12:27 PM View: App III Interwell  
 Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-14	PZ-15	PZ-16	PZ-17	PZ-18	PZ-19	PZ-1D (bg)	PZ-23	PZ-25
8/30/2016							40.4		
8/31/2016	92.9							132	
9/1/2016		74.8							
9/6/2016			74.6						
9/7/2016				100	112	138			
9/8/2016									85.2
10/18/2016									
12/6/2016							43.3		
12/7/2016	93.1	74	68.9					125	
12/8/2016				102	113	135			84.5
3/21/2017	95						44.1	138	
3/22/2017		99.3	77.8	113	122				85.3
3/23/2017						137			
7/11/2017	97.1		77.3				47.4	139	93
7/12/2017		91.4		110	129	145			
10/17/2017							48.7		
10/18/2017	100	92	84.7	122	125			144	87.6
10/19/2017						140			
2/20/2018	93.1						46.8	142	
2/21/2018		89	81.8	107	118	145			93.9
4/12/2018									
5/23/2018									
6/13/2018									
7/11/2018	111						65.3 (O)	159	
7/12/2018		94.5	85.2			140			87.1
8/15/2018					123				
8/16/2018				113					
8/17/2018									
9/12/2018	99.3						46.6		
9/13/2018		90.8	80.2		123			136	85.8
9/14/2018				108		124			
10/4/2018									
10/24/2018									
3/26/2019							43.3		
3/27/2019	105		90.5		134			152	95.2
3/28/2019		100		123		164			

# Time Series

Constituent: Calcium (mg/l) Analysis Run 8/6/2019 12:27 PM View: App III Interwell  
 Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)	PZ-33	PZ-7D
8/30/2016					
8/31/2016					
9/1/2016					101
9/6/2016					
9/7/2016					
9/8/2016					
10/18/2016		88.3	57.2		
12/6/2016		83.4			
12/7/2016			52.8		103
12/8/2016				117	
3/21/2017		94			
3/22/2017					111
3/23/2017			59.1	122	
7/11/2017		86	59.7		
7/12/2017				124	119
10/17/2017		91.6	64.9		
10/18/2017					
10/19/2017				118	107
2/20/2018		86.5	64.1		
2/21/2018				122	118
4/12/2018	<25				
5/23/2018	17.6 (X)				
6/13/2018	14.3				
7/11/2018	15.6	95.4	60.4		
7/12/2018				129	121
8/15/2018					
8/16/2018					
8/17/2018	27				
9/12/2018	26.9	86			
9/13/2018			58.7		116
9/14/2018				123	
10/4/2018	25			126	
10/24/2018	23.8				
3/26/2019		87.3			
3/27/2019	26.1		54.6		
3/28/2019				117	124

# Time Series

Constituent: Chloride (mg/l) Analysis Run 8/6/2019 12:27 PM View: App III Interwell  
 Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-14	PZ-15	PZ-16	PZ-17	PZ-18	PZ-19	PZ-1D (bg)	PZ-23	PZ-25
8/30/2016							3.1		
8/31/2016	4.9							5.1	
9/1/2016		7							
9/6/2016			7.9						
9/7/2016				7.7	6.9	6.8			
9/8/2016									4
10/18/2016									
12/6/2016							3.4		
12/7/2016	4.8	7	7.6					5.2	
12/8/2016				7.2	6.8	6.6			3.6
3/21/2017	4.9						2.9	5.5	
3/22/2017		7.4	7.7	7.3	6.8				3.3
3/23/2017						6.6			
7/11/2017	5		8.1				3.4	5.7	3
7/12/2017		8		7.4	6.7	6.6			
10/17/2017							3.3		
10/18/2017	5.1	7.8	8.2	7.6	6.8			5.1	2.9
10/19/2017						6.5			
2/20/2018	5.1						3.3	5.5	
2/21/2018		7.2	7.3	7.4	7.1	7.6			2.9
4/12/2018									
5/23/2018									
6/13/2018									
7/11/2018	4.9						2.9	5.1	
7/12/2018		7.5	7.2			6.3			2.6
8/15/2018					6.7				
8/16/2018				7.5					
8/17/2018									
9/12/2018	4.8						2.8		
9/13/2018		6.8	7.3		6.7			5	2.3
9/14/2018				7.7		6.1			
10/4/2018									
10/24/2018									
3/26/2019							3.3		
3/27/2019	5.2		7.3		6.5			4.7	2.4
3/28/2019		7.4		7.3		6.4			

# Time Series

Constituent: Chloride (mg/l) Analysis Run 8/6/2019 12:27 PM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)	PZ-33	PZ-7D
8/30/2016					
8/31/2016					
9/1/2016					7.4
9/6/2016					
9/7/2016					
9/8/2016					
10/18/2016		4.5	3.5		
12/6/2016		5			
12/7/2016			3.2		7.6
12/8/2016				6.9	
3/21/2017		4.3			
3/22/2017					7.2
3/23/2017			2.9	6.2	
7/11/2017		4.7	3.1		
7/12/2017				6	7.3
10/17/2017		4.6	3		
10/18/2017					
10/19/2017				6.4	7.4
2/20/2018		4.4	3		
2/21/2018				6.9	7.6
4/12/2018	2.6				
5/23/2018	2.5				
6/13/2018	2.5				
7/11/2018	2.6	4	2.8		
7/12/2018				7.3	7.1
8/15/2018					
8/16/2018					
8/17/2018	2.6				
9/12/2018	2.3	3.7			
9/13/2018			2.2		6.6
9/14/2018				7.3	
10/4/2018	2.7			7	
10/24/2018	2.8				
3/26/2019		3.8			
3/27/2019	2.5		3.1		
3/28/2019				4.8	6.4



# Time Series

Constituent: Fluoride (mg/l) Analysis Run 8/6/2019 12:27 PM View: App III Interwell  
 Plant Mitchell Client: Southern Company Data: Mitchel V3

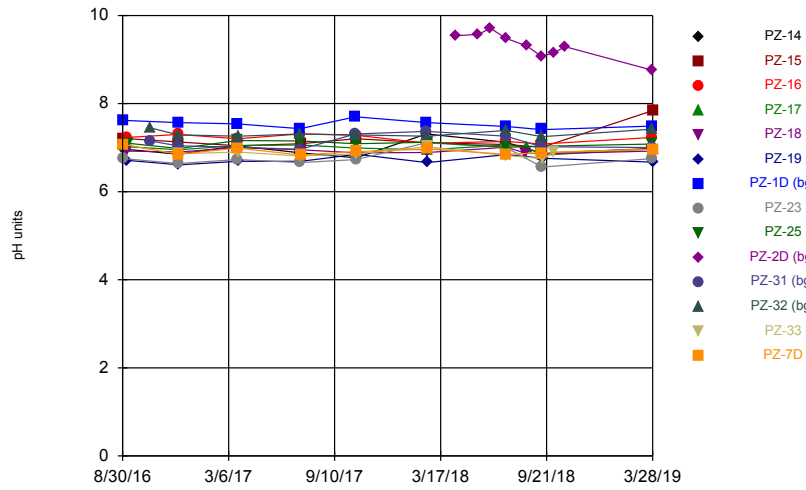
	PZ-14	PZ-15	PZ-16	PZ-17	PZ-18	PZ-19	PZ-1D (bg)	PZ-23	PZ-25
8/30/2016							0.06 (X)		
8/31/2016	0.13 (X)							0.13 (X)	
9/1/2016		0.06 (X)							
9/6/2016			0.09 (X)						
9/7/2016				0.03 (X)	0.12 (X)	0.15 (X)			
9/8/2016									0.25 (X)
10/18/2016									
12/6/2016							0.06 (X)		
12/7/2016	0.07 (X)	0.09 (X)	0.09 (X)					0.13 (X)	
12/8/2016				0.18 (X)	0.18 (X)	0.12 (X)			0.22 (X)
3/21/2017	<0.3						0.004 (X)	0.05 (X)	
3/22/2017		0.11 (X)	0.04 (X)	0.09 (X)	0.08 (X)				0.16 (X)
3/23/2017						0.14 (X)			
7/11/2017	0.05 (X)		0.05 (X)				0.05 (X)	0.05 (X)	0.23 (X)
7/12/2017		0.23 (X)		0.21 (X)	0.17 (X)	0.07 (X)			
10/17/2017							<0.3		
10/18/2017	0.11 (X)	0.19 (X)	0.04 (X)	0.24 (X)	0.06 (X)			<0.3	0.28 (X)
10/19/2017						<0.3			
2/20/2018	0.04 (X)						0.098 (X)	0.3 (X)	
2/21/2018		0.093 (X)	<0.3	0.24 (X)	0.086 (X)	0.37			0.29 (X)
4/12/2018									
5/23/2018									
6/13/2018									
7/11/2018	<0.3						<0.3	0.077 (X)	
7/12/2018		<0.3	<0.3			0.17 (X)			0.21 (X)
8/15/2018					<0.3				
8/16/2018				0.073 (X)					
8/17/2018									
9/12/2018	<0.3						0.034 (X)		
9/13/2018		0.15 (X)	<0.3		<0.3			<0.3	0.22 (X)
9/14/2018				<0.3		<0.3			
10/4/2018									
10/24/2018									
3/26/2019							<0.3		
3/27/2019	<0.3		<0.3		<0.3			<0.3	0.37
3/28/2019		0.1 (X)		0.15 (X)		0.074 (X)			

# Time Series

Constituent: Fluoride (mg/l) Analysis Run 8/6/2019 12:27 PM View: App III Interwell  
 Plant Mitchell Client: Southern Company Data: Mitchel V3

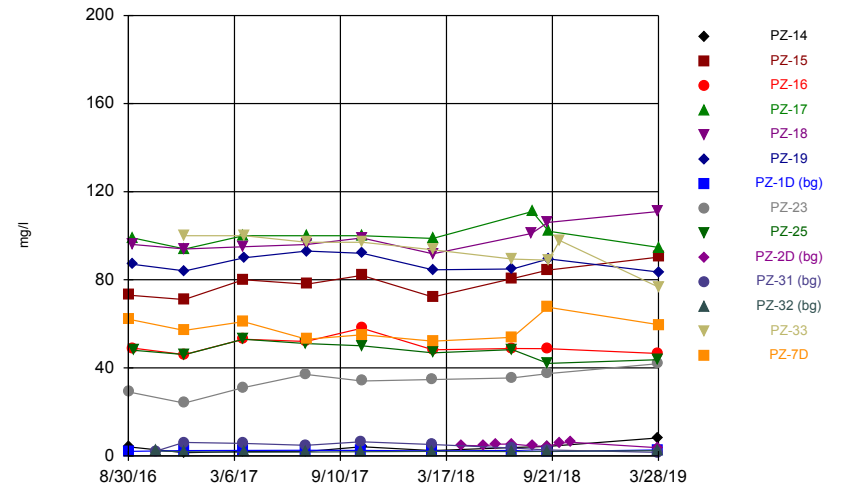
	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)	PZ-33	PZ-7D
8/30/2016					
8/31/2016					
9/1/2016					<0.3
9/6/2016					
9/7/2016					
9/8/2016					
10/18/2016		0.16 (X)	0.11 (X)		
12/6/2016		0.15 (X)			
12/7/2016			0.07 (X)		0.15 (X)
12/8/2016				0.21 (X)	
3/21/2017		0.02 (X)			
3/22/2017					0.09 (X)
3/23/2017			<0.3	0.18 (X)	
7/11/2017		0.06 (X)	0.02 (X)		
7/12/2017				0.06 (X)	0.02 (X)
10/17/2017		0.05 (X)	<0.3		
10/18/2017					
10/19/2017				<0.3	<0.3
2/20/2018		0.21 (X)	<0.3		
2/21/2018				0.039 (X)	0.045 (X)
4/12/2018	<0.3				
5/23/2018	0.063 (X)				
6/13/2018	0.11 (X)				
7/11/2018	<0.3	0.087 (X)	<0.3		
7/12/2018				<0.3	<0.3
8/15/2018					
8/16/2018					
8/17/2018	<0.3				
9/12/2018	0.093 (X)	0.049 (X)			
9/13/2018			<0.3		<0.3
9/14/2018				<0.3	
10/4/2018	0.15 (X)			0.15 (X)	
10/24/2018	0.29 (X)				
3/26/2019		<0.3			
3/27/2019	0.04 (X)		<0.3		
3/28/2019				<0.3	<0.3

Time Series



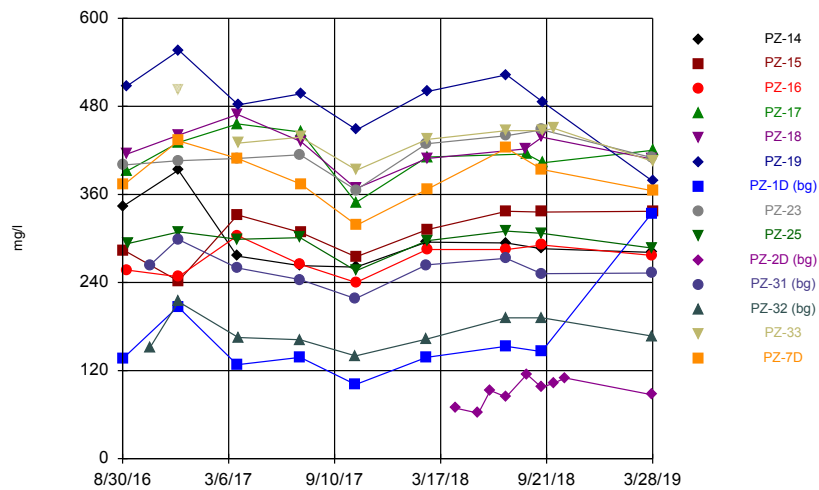
Constituent: pH Analysis Run 8/6/2019 12:25 PM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Time Series



Constituent: Sulfate Analysis Run 8/6/2019 12:25 PM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

Time Series



Constituent: Total Dissolved Solids Analysis Run 8/6/2019 12:25 PM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

# Time Series

Constituent: pH (pH units) Analysis Run 8/6/2019 12:27 PM View: App III Interwell

Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-14	PZ-15	PZ-16	PZ-17	PZ-18	PZ-19	PZ-1D (bg)	PZ-23	PZ-25
8/30/2016							7.62		
8/31/2016	6.97							6.75	
9/1/2016		7.21							
9/6/2016			7.23						
9/7/2016				7.02	6.92	6.71			
9/8/2016									7.1
10/18/2016									
12/6/2016							7.57		
12/7/2016	6.85	7.13	7.3					6.64	
12/8/2016				6.95	6.9	6.61			6.98
3/21/2017	7.04						7.54	6.73	
3/22/2017		7.04	7.2	7.05	7				7.16
3/23/2017						6.69			
7/11/2017	6.88		7.31				7.43	6.66	7.15
7/12/2017		7.09		7.06	6.95	6.69			
10/17/2017							7.7		
10/18/2017	6.77	7.2	7.28	6.99	6.88			6.73	7.09
10/19/2017						6.85			
2/20/2018	7.31						7.57	7.11	
2/21/2018		7.11	7.1	6.95	6.89	6.66			7.12
4/12/2018									
5/23/2018									
6/13/2018									
7/11/2018	7.12						7.48	7	
7/12/2018		7.07	7.14	7.06	7.01	6.84			7.01
8/15/2018					6.87				
8/16/2018				7.01					
8/17/2018									
9/12/2018	6.87						7.41		
9/13/2018		7.01	7.08		6.86			6.56	7.03
9/14/2018				6.83		6.76			
10/4/2018									
10/24/2018									
3/26/2019							7.49		
3/27/2019	6.98		7.23		6.92			6.75	7.08
3/28/2019		7.84		6.97		6.67			

# Time Series

Constituent: pH (pH units) Analysis Run 8/6/2019 12:27 PM View: App III Interwell  
Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)	PZ-33	PZ-7D
8/30/2016					
8/31/2016					
9/1/2016					7.07
9/6/2016					
9/7/2016					
9/8/2016					
10/18/2016		7.15	7.45		
12/6/2016		7.04			
12/7/2016			7.29		6.85
12/8/2016				6.86	
3/21/2017		7.01			
3/22/2017					6.99
3/23/2017			7.26	6.9	
7/11/2017		6.96	7.31		
7/12/2017				6.81	6.83
10/17/2017		7.31	7.29		
10/18/2017					
10/19/2017				6.86	6.91
2/20/2018		7.37	7.26		
2/21/2018				7.02	6.97
4/12/2018	9.54				
5/23/2018	9.57				
6/13/2018	9.71				
7/11/2018	9.48	7.26	7.39		
7/12/2018				6.82	6.85
8/15/2018					
8/16/2018					
8/17/2018	9.31				
9/12/2018	9.07	7.02			
9/13/2018			7.25		6.88
9/14/2018				6.75	
10/4/2018	9.16			6.9	
10/24/2018	9.29				
3/26/2019		7			
3/27/2019	8.76		7.42		
3/28/2019				6.96	6.96

# Time Series

Constituent: Sulfate (mg/l) Analysis Run 8/6/2019 12:27 PM View: App III Interwell

Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-14	PZ-15	PZ-16	PZ-17	PZ-18	PZ-19	PZ-1D (bg)	PZ-23	PZ-25
8/30/2016							2.1		
8/31/2016	4.1							29	
9/1/2016		73							
9/6/2016			49						
9/7/2016				99	96	87			
9/8/2016									48
10/18/2016									
12/6/2016							2.4		
12/7/2016	1.5	71	46					24	
12/8/2016				94	94	84			46
3/21/2017	2						2.5	31	
3/22/2017		80	53	100	95				53
3/23/2017						90			
7/11/2017	2		52				2.6	37	51
7/12/2017		78		100	96	93			
10/17/2017							2.5		
10/18/2017	4.2	82	58	100	99			34	50
10/19/2017						92			
2/20/2018	2.4						2.3	34.7	
2/21/2018		72.2	48.2	98.8	91.8	84.5			46.8
4/12/2018									
5/23/2018									
6/13/2018									
7/11/2018	3.8						2.5	35.4	
7/12/2018		80.5	48.8			84.9			48.3
8/15/2018					101				
8/16/2018				111					
8/17/2018									
9/12/2018	4.3						2		
9/13/2018		84.4	48.7		106			37.4	42
9/14/2018				102		89.5			
10/4/2018									
10/24/2018									
3/26/2019							2.7		
3/27/2019	8.2		46.5		111			41.9	43.7
3/28/2019		90.3		94.7		83.5			

# Time Series

Constituent: Sulfate (mg/l) Analysis Run 8/6/2019 12:27 PM View: App III Interwell  
 Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)	PZ-33	PZ-7D
8/30/2016					
8/31/2016					
9/1/2016					62
9/6/2016					
9/7/2016					
9/8/2016					
10/18/2016		2.2	2.3		
12/6/2016		6.1			
12/7/2016			1.9		57
12/8/2016				100	
3/21/2017		5.7			
3/22/2017					61
3/23/2017			1.7	100	
7/11/2017		4.8	1.8		
7/12/2017				97	53
10/17/2017		6.4	1.9		
10/18/2017					
10/19/2017				97	55
2/20/2018		5.2	2.1		
2/21/2018				93.6	52.1
4/12/2018	4.8				
5/23/2018	4.5				
6/13/2018	5.3				
7/11/2018	5.4	3.6	2		
7/12/2018				89.4	53.9
8/15/2018					
8/16/2018					
8/17/2018	4.5				
9/12/2018	4.4	2.7			
9/13/2018			2.1 (*)		67.5
9/14/2018				88.9	
10/4/2018	5.8			97.8	
10/24/2018	6.2				
3/26/2019		1.6			
3/27/2019	3.7		2.4		
3/28/2019				76.7	59.6

# Time Series

Constituent: Total Dissolved Solids (mg/l) Analysis Run 8/6/2019 12:27 PM View: App III Interwell

Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-14	PZ-15	PZ-16	PZ-17	PZ-18	PZ-19	PZ-1D (bg)	PZ-23	PZ-25
8/30/2016							136		
8/31/2016	344							400	
9/1/2016		284							
9/6/2016			257						
9/7/2016				392	415	508			
9/8/2016									293
10/18/2016									
12/6/2016							207		
12/7/2016	393	242	248					406	
12/8/2016				431	441	556			309
3/21/2017	276						128	409	
3/22/2017		332	304	456	469				299
3/23/2017						482			
7/11/2017	263		265				138	414	301
7/12/2017		308		445	432	497			
10/17/2017							101		
10/18/2017	261	275	240	349	368			366	256
10/19/2017						448			
2/20/2018	295						138	429	
2/21/2018		312	285	411	409	500			297
4/12/2018									
5/23/2018									
6/13/2018									
7/11/2018	294						153	440	
7/12/2018		337	285			523			310
8/15/2018					422				
8/16/2018				415					
8/17/2018									
9/12/2018	286						146		
9/13/2018		336	291		438			448	307
9/14/2018				403		486			
10/4/2018									
10/24/2018									
3/26/2019							334		
3/27/2019	281		277		408			410	287
3/28/2019		337		420		378 (X)			



# Time Series

Constituent: Total Dissolved Solids (mg/l) Analysis Run 8/6/2019 12:27 PM View: App III Interwell  
 Plant Mitchell Client: Southern Company Data: Mitchel V3

	PZ-2D (bg)	PZ-31 (bg)	PZ-32 (bg)	PZ-33	PZ-7D
8/30/2016					
8/31/2016					
9/1/2016					373
9/6/2016					
9/7/2016					
9/8/2016					
10/18/2016		264	152		
12/6/2016		299			
12/7/2016			214		433
12/8/2016				503 (O)	
3/21/2017		260			
3/22/2017					409
3/23/2017			165	430	
7/11/2017		244	162		
7/12/2017				438	374
10/17/2017		218	140		
10/18/2017					
10/19/2017				393	318
2/20/2018		264	163		
2/21/2018				435	367
4/12/2018	69				
5/23/2018	62				
6/13/2018	93				
7/11/2018	84	273	192		
7/12/2018				447	423
8/15/2018					
8/16/2018					
8/17/2018	115				
9/12/2018	97	252			
9/13/2018			192		394
9/14/2018				447	
10/4/2018	103			450	
10/24/2018	110				
3/26/2019		253			
3/27/2019	87		167		
3/28/2019				405	365