REPORT

2019 First Annual Groundwater Monitoring & Corrective Action Report

Georgia Power Company - Plant McDonough-Atkinson
Ash Pond 2, Ash Pond 3, and Ash Pond 4

Submitted to:

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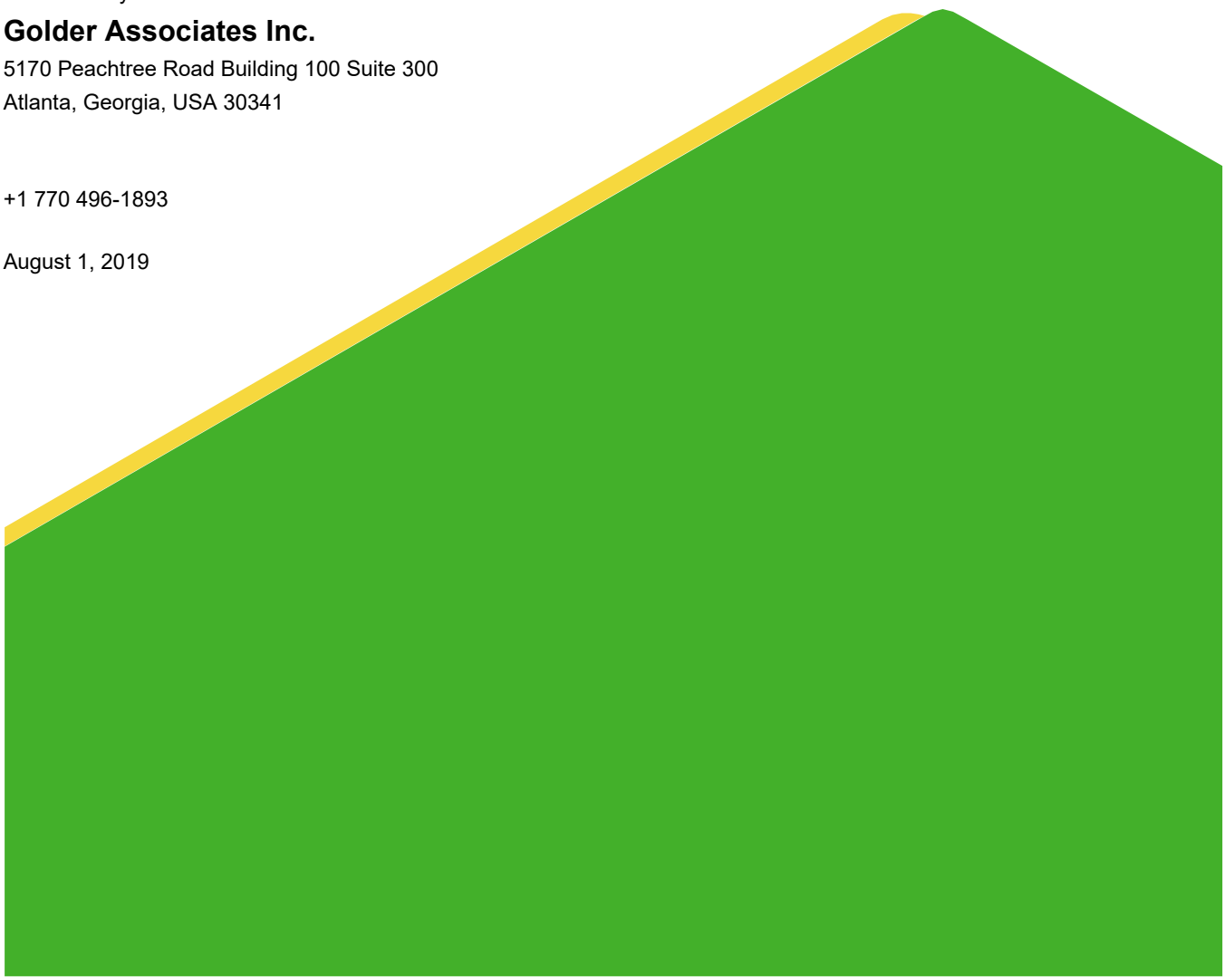

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Certification

This *2019 First Annual Groundwater Monitoring & Corrective Action Report, Georgia Power Company - Plant McDonough-Atkinson – Ash Pond 2 (AP-2), Ash Pond 3 (AP-3), and Ash Pond 4 (AP-4)* has been prepared in compliance with the United States Environmental Protection Agency coal combustion residual rule [40 Code of Federal Regulations (CFR) 257 Subpart D] and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 by a qualified groundwater scientist or engineer with Golder Associates Inc.

GOLDER ASSOCIATES INC.

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1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (USEPA) coal combustion residual (CCR) rule (40 Code of Federal Regulations [CFR] 257 Subpart D) and the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management 391-3-4-.10, this *2019 Annual Groundwater Monitoring and Corrective Action Report* was prepared to document groundwater monitoring activities conducted at Georgia Power Company's (GPC's) Plant McDonough Ash Pond 2 (AP-2), Ash Pond 3 (AP-3), and Ash Pond 4 (AP-4) and satisfies the requirements of § 257.90(e). To specify groundwater monitoring requirements, GA EPD rule 391-3-4-.10(6)(a) incorporates by reference the USEPA CCR rule. For ease of reference, the US EPA CCR rules are cited within this report.

A notification of intent to initiate closure of the inactive CCR surface impoundment was certified on December 7, 2015 for AP-2 and December 8, 2015 for AP-3 and AP-4 and posted to GPC's website. Therefore, groundwater monitoring and reporting for AP-2, AP-3, and AP-4 are being completed in accordance with the alternate schedule in § 257.100(e)(5) of the revised USEPA CCR rule (August 5, 2016) and being done so as a Combined Multi-Unit – CCR Unit AP-2 and Combined CCR Unit AP-3/4.

Groundwater monitoring and reporting for Plant McDonough are also performed in accordance with the requirements of 40 CFR § 257.90 through 257.91 and § 257.93 through 257.98 of the USEPA CCR rule. This report documents the activities completed to establish the groundwater monitoring program and actions through June 2019.

A permit application package for AP-2, AP-3, and AP-4 was submitted to Georgia EPD in November 2018 and is currently under review. Groundwater monitoring has been initiated in order to meet USEPA and GA EPD requirements. This report includes the background data and the initial detection monitoring data for AP-2, AP-3, and AP-4.

1.1 Site Description and Background

Plant McDonough-Atkinson (Plant McDonough), formerly a coal-fired power generating facility, was converted to a natural gas combined-cycle power generating facility in 2011. Located approximately 7 miles northwest of Atlanta in southeast Cobb County (5551 South Cobb Dr SE, Atlanta, GA 30339), the property occupies approximately 390 acres and is bounded on the southeast by the Chattahoochee River. A site location map is included as Figure 1.

Four CCR surface impoundments are located on-site: Ash Pond 1 (AP-1), Ash Pond 2 (AP-2), Ash Pond 3 (AP-3) and Ash Pond 4 (AP-4). AP-3 and AP-4 were historically operated together and are being closed as a Combined Unit AP- 3/4. This report documents the groundwater monitoring program at AP-2 and AP-3/4.

1.2 Regional Geology and Hydrogeologic Setting

The following section and subsections include a general description of regional geologic and hydrogeologic characteristics of formations that occur beneath the site.

The site is located in the Piedmont/Blue Ridge geologic province, which contains some of the oldest rock formations in the southeastern United States. These late Precambrian to late Paleozoic rocks have undergone repeated cycles of igneous intrusions and extrusions, metamorphism, folding, faulting, shearing, and silicification. Rock outcrops near the site consist of biotite gneiss, porphyritic gneiss, mica schist, and quartzite.

Residual soils, primarily clayey/sandy silt, sandy silt with clay, and silty sand, occur as a variably-thick blanket overlying bedrock across most of the site. These residual saprolitic soils along with saprolitic transitionally or partially weathered rock, collectively the overburden, range between approximately 9 to 61 feet in thickness across the site, with an average thickness of approximately 38 feet. Saprolitic rock is considered to be transitionally weathered rock or partially weathered rock (PWR). PWR is defined by Standard Penetration Test (SPT) blow counts that exceed 50 blows/six inches.

A regional, unconfined surficial aquifer system is present at the site, existing within the overburden and weathered and fractured upper bedrock (e.g., approximate first 30 feet), depending on topographic location. Recharge primarily occurs through precipitation and subsequent infiltration. Generally, groundwater flow occurs through intergranular pore spaces in the overburden and is controlled by topography and top of rock variations. However, a relatively higher transmissive zone is interpreted to occur at the base of the overburden, at the interface of weathered bedrock and competent bedrock and is believed to be the primary groundwater flow path. The overburden has an average horizontal hydraulic conductivity of 10^{-4} centimeters per second (cm/s) and is interpreted to flow south-southeast.

A limited and localized bedrock aquifer system also occurs beneath the site. The upper bedrock is fractured and weathered, connected hydraulically with the overburden groundwater, and is considered part of the uppermost aquifer. The overlying silt/clay-rich overburden may act to retard recharge into the bedrock aquifer system. However, deeper bedrock (i.e., approximately 30 feet into the bedrock) is unweathered with few discontinuities (e.g., fractures) available to store groundwater.

1.3 Groundwater Monitoring Network

Pursuant to § 257.91, a groundwater monitoring system was installed within the uppermost aquifer at AP-2 and AP-3/4 (AP-2, 3/4) to monitor groundwater passing the waste boundary. Wells were located to monitor upgradient and downgradient groundwater conditions based on groundwater flow direction. The monitoring well network was certified by a Professional Engineer in Georgia on April 17, 2019, and the certification is maintained in the Operating Record pursuant to § 257.90(f).

The certified monitoring well network for AP-2, 3/4 consists of three (3) upgradient monitoring wells and twenty (20) downgradient monitoring wells (Figure 2). Table 1A includes well construction details for the AP-2, 3/4 monitoring well network. Additionally, a series of piezometers were installed at AP-2, 3/4 to measure groundwater elevations. Table 1B includes construction details for these piezometers.

2.0 GROUNDWATER MONITORING ACTIVITIES

In accordance with 40 CFR § 257.90(e), the following section describes monitoring-related activities for sampling performed August 2016 through June 2019. Because this is the first *Annual Groundwater Monitoring and Corrective Action Report*, it describes monitoring well installation and maintenance, background monitoring, and the initial detection monitoring. Groundwater sampling was performed in accordance with 40 CFR § 257.93. Samples were collected from each well in the certified monitoring network. The location of each of these monitoring wells is shown on Figure 2.

Table 2 presents a summary of groundwater sampling events completed for AP-2, 3/4.

2.1 Monitoring Well Installation and Maintenance

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

- Installation of a groundwater monitoring system to adequately monitor groundwater conditions at AP-2, 3/4 and installation of supplemental piezometers to gauge groundwater elevations. Monitoring well and piezometer construction details are presented on Tables 1A and 1B, respectively, and the locations of each are shown on Figures 2 and 3, respectively.
- Visual inspection and documentation of well conditions and performing exterior maintenance on wells as needed.
- Well redevelopment when well yield is reduced or turbid.

2.1.1 Background Monitoring

In accordance with § 257.94(b), a minimum of eight (8) independent samples were collected from the certified well network for AP-2, 3/4 and analyzed for the constituents listed in Appendix III and IV. Pursuant to § 257.90(e)(3), data reports for the background sampling are included in Appendix A, Analytical Results & Field Data Forms. Tables A-1 through A-26 presents a tabulation of the background data for each well.

2.1.2 Initial Detection Monitoring

Following completion of the minimum eight (8) independent sampling events, groundwater samples were collected in March 2019 and analyzed for Appendix III constituents as part of the first detection monitoring event. Data reports for this sampling event are included in Appendix A.

3.0 SAMPLE METHODOLOGY AND ANALYSIS

Sampling events completed from August 2016 through November 2018 for AP-2, 3/4 represent the background data collection monitoring events. The March 2019 sampling event represents the first detection monitoring event for AP-2, 3/4.

3.1 Groundwater Elevation Measurement

Prior to each sampling event, groundwater levels were measured at monitoring wells and piezometers. Groundwater elevations recorded during background and detection monitoring events are summarized in Table 3.

Groundwater level data from the uppermost aquifer measured in March 2019 indicate the water table elevation ranges between approximately 838 feet above mean sea level (msl) at upgradient well DGWA-71 to approximately 753 feet msl at downgradient piezometer B-63. The March 2019 groundwater elevation data were used to develop a generalized potentiometric surface map of the uppermost aquifer (Figure 3). Localized groundwater flow directions within this aquifer are influenced by topographic and top of rock variations on site. AP-3/4 is on a topographic high, creating radial flow around the ponds, with the exception of the one upland high upgradient of AP-3/4. Dewatering at AP-4 is creating an upgradient area northeast of AP-3/4. Currently, AP-2 is over excavated into subgrade soils, creating a topographic low point and low hydraulic gradient. Regionally groundwater is interpreted to flow south-southeast from the topographic high northwest of AP-3/4 towards AP-2.

The groundwater flow pattern interpreted using the March 2019 elevation data is consistent with previous observations.

3.2 Groundwater Gradient and Flow Velocity

Hydraulic gradient is calculated as the difference in groundwater elevation (in feet) divided by the distance between two piezometers or wells (in feet). March 2019 groundwater elevation data from three piezometer and/or well pairings; DGWA-53/DGWC-13, DGWA-71/DGWC-5, and B-26/DGWC-48, located along the groundwater flow path and perpendicular to the potentiometric contours were used to calculate hydraulic gradients for AP-2, 3/4. The hydraulic gradients for these pairings are 0.028 feet/feet (ft/ft), 0.036 ft/ft, and 0.029 ft/ft, respectively. An overall average hydraulic gradient for AP-2, 3/4 derived using these individual calculated gradients is 0.031 ft/ft.

Average groundwater flow velocities at the site were calculated using hydraulic gradient data, hydraulic conductivity data generated from slug testing results, and an estimated effective porosity of the screened portion of the uppermost aquifer. Based on slug test data, the average hydraulic conductivity for the uppermost aquifer is 5.0 x 10^{-4} cm/s; 8.4 x 10^{-4} cm/s in the overburden and 1.6 x 10^{-4} cm/s in the upper bedrock, respectively. Assumed effective porosity of 20 percent for overburden was used based on the default values for effective porosity recommended by USEPA for a silty sand-type soil (USEPA, 1996). Assumed effective porosity of 9 percent was used for bedrock (Daniel and Dahlen, 2002; Dowd and Marshall, 1995). The hydraulic gradient was calculated between well pairs as discussed above and shown on Table 4.

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

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

Where:

V = Groundwater flow velocity $\left(\frac{feet}{day}\right)$

K = Average hydraulic conductivity of the aquifer $\left(\frac{feet}{day}\right)$

i = Horizontal hydraulic gradient $\left(\frac{feet}{feet}\right)$

n_e = Effective porosity

Using this equation, groundwater flow velocities were calculated for AP-2, 3/4 using March 2019 groundwater elevation data. Table 4 presents the velocities calculated using groundwater elevation data from the March 2019 sampling event.

Calculated (horizontal) flow velocities range from approximately 121 feet per year (ft/yr) to 158 ft/yr and 51 ft/yr to 67 ft/yr in the regolith and upper bedrock. These estimated flow velocities are consistent with historical data observed at AP-2, 3/4 and are also generally consistent with other published velocities for regolith-upper bedrock aquifers of the Piedmont (Heath, R.C., 1982).

3.3 Groundwater Sampling

Groundwater samples were collected in accordance with § 257.93(a) and using USEPA Region 4 Field Quality and Technical Procedures as a guide (USEPA, 2001). Monitoring wells were purged and sampled using low-flow sampling procedures. Non-dedicated, low-flow pneumatic bladder pumps and peristaltic pumps were used to purge and sample the wells. Field equipment was decontaminated prior to use and between wells using USEPA

Science and Ecosystem Support Division (SESD) Operating Procedure for Field Equipment Cleaning and Decontamination as a guide (USEPA, 2015). A SmarTroll® (In-Situ® field instrument) was used to monitor and record field water quality parameters [temperature, specific conductance, dissolved oxygen (DO), pH, and oxidation-reduction potential (ORP)] during purging. Turbidity was monitored using a LaMotte 2020we turbidimeter. Groundwater samples were collected when the following stabilization criteria were met for a minimum of three consecutive readings:

- ±0.1 standard units for pH
- ±5% for specific conductance
- ±10% for DO where DO>0.5 mg/L; if DO<0.5 mg/L, no stabilization criteria apply
- ≤10 Nephelometric Turbidity Units (NTUs) for turbidity

Any deviation from stabilization criteria, if applicable, is identified on field sampling forms. Where sample turbidity was greater than 5 NTU and all other stabilization criteria were met, samplers continued purging for up to 3 additional hours in order to reduce the turbidity to 5 NTU or less. If turbidity remained above 5 NTU, but was less than 10 NTU, and all other parameters were stabilized, the well was sampled. Where turbidity remained above 10 NTU, an unfiltered sample was collected followed by a filtered sample that passed through an in-line 0.45-micron filtered attached to the discharge (sample collection) tube. The unfiltered sample data are used for compliance monitoring and in the statistical analysis database. Filtered sample data are used to assess the impacts of turbidity on groundwater quality. Additional details regarding filtered samples are recorded on the field information form and filtered samples are clearly identified as “filtered” on the laboratory reports.

Following well stabilization, unfiltered samples were collected directly into appropriately preserved laboratory supplied sample containers, placed in ice-packed coolers, and submitted to the laboratory following standard chain-of-custody protocol. Field information forms, generated directly from the SmarTroll®, and chain-of-custody records are included in Appendix A.

3.4 Laboratory Analysis

Groundwater samples were collected for Appendix III and Appendix IV parameters during background monitoring. Groundwater samples collected in March 2019 for detection monitoring were analyzed for Appendix III monitoring parameters only. Analytical methods used for groundwater monitoring parameters can be found in the analytical data reports in Appendix A.

Laboratory analyses for all events were performed by Pace Analytical Services, LLC (Pace) in Norcross, Georgia. Pace is accredited by the National Environmental Laboratory Accreditation Program (NELAP) and maintains NELAP certification for all parameters analyzed for this project. Groundwater data, chain-of-custody records, and NELAP certifications for the monitoring events are presented in Appendix A.

3.5 Quality Assurance and Quality Control

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

Groundwater quality data in this report was independently validated in accordance with USEPA guidance (USEPA, 2011) and the analytical methods. Data validation generally consisted of reviewing sample integrity, holding times, laboratory method blanks, laboratory control samples, matrix spikes/matrix spike duplicate recoveries and relative percent differences (RPDs), post digestion spikes, laboratory and field duplicate RPDs, field and equipment blanks, and reporting limits. Where appropriate, validation qualifiers and flags were applied to the data using USEPA procedures as guidance (USEPA, 2017). Flagged data are identified in the statistical analysis reports in Appendix B and described in the following section.

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

4.0 STATISTICAL ANALYSIS

Statistical analysis of Appendix III groundwater monitoring data was performed pursuant to 40 CFR § 257.93 and following the PE-certified statistical method for AP-2, 3/4 (Golder, 2019; Groundwater Stats Consulting, 2019).

4.1 Statistical Method

The selected statistical method used for AP-2, 3/4 was developed in accordance with 40 CFR § 257.93(f), using methodology presented in Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance, March 2009, USEPA 530/R-09-007 (Unified Guidance; USEPA, 2009). The Sanitas™ groundwater statistical software was used to perform the statistical analyses. Sanitas™ is a decision-support software package, that incorporates the statistical tests required of Subtitle C and D facilities by USEPA regulations and guidance as recommended in the USEPA Unified Guidance (2009) document.

The statistical test used to evaluate the groundwater monitoring data was interwell prediction limits with an optional 1-of-2 verification resampling plan for Appendix III parameters. Using this method, upgradient well data were pooled to establish a background prediction limit (PL). An exceedance occurs when a parameter of a downgradient well exceeds the PL. If data from a sampling event initially exceed the PL, resampling is allowed to verify the result. In 1-of-2 resampling, one independent resample is allowed within 90 days to determine whether the initial exceedance is verified. If the result of the resample exceeds the PL, the initial exceedance is verified and a statistically significant increase (SSI) is determined. If the initial finding is not verified by resampling, the resampled value will replace the initial finding and there is no SSI. If resampling is not performed, the initial exceedance is a confirmed exceedance. Data from the March 2019 detection monitoring event are compared to the statistical prediction limit to determine whether any concentrations exceed background levels.

The Sen’s Slope/Mann Kendall trend test was used to statically evaluate concentration levels over time and determine whether concentrations are increasing, decreasing, or stabilizing.

The following table provides a summary of the statistical methodology used at AP-2, 3/4 for the first detection monitoring conducted in March 2019 and will be used for any future routine detection monitoring.

PLANT MCDONOUGH AP-2, 3/4 STATISTICAL METHOD SUMMARY		
Monitoring Well Network	Upgradient Wells	DGWA-53, DGWA-70A, DGWA-71
	Downgradient Wells	DGWC-2, DGWC-4, DGWC-5, DGWC-8, DGWC-9, DGWC-10, DGWC-11, DGWC-12, DGWC-13, DGWC-14, DGWC-15, DGWC-17, DGWC-19, DGWC-20, DGWC-21, DGWC-22, DGWC-23, DGWC-42, DGWC-47, DGWC-48
CCR Monitoring Parameters	Appendix III (Detection Monitoring)	Boron, Calcium, Chloride, Fluoride, pH, Sulfate, TDS
	Appendix IV (Assessment Monitoring)	Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium, and Thallium, Radium (226 + 228)
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 constituent 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.
	Confidence Intervals	Used in Assessment and Corrective Action monitoring.
	No Statistical Testing	Statistical testing is not required for parameters with 100% non-detects.
	Verification Resample Plan (Optional)	1-of-3 with minimum of 8 samples per well for interwell testing. ▪ Initial statistical exceedance warrants independent resampling within 90 days. ▪ If resample passes, well/parameter is not a confirmed statistically significant increase (SSI). ▪ If resample exceeds, well/parameter has a confirmed SSI. ▪ If no resample is collected, the original result is deem verified.

The following guidance is also applicable to the statistical analytical method:

- Statistical analyses are not performed on the analytes containing 100% non-detects (USPEA Unified Guidance, 2009, Chapter 6).

- When data contain less than or equal to 15% no-detects in background, simple substitution of one-half the RL is utilized in the statistical analysis. The RL utilized for non-detects is the practical quantitation limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, a non-detect adjustment such as the Kaplan-Meier or Regression on Order Statistics (ROS) method for adjustment of the mean and standard deviation will be used prior to constructing a parametric prediction limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

4.2 Statistical Analysis Results

Verification resampling to confirm initial SSIs was not performed; therefore, initial SSIs are considered verified. The statistical results of the March 2019 monitoring event are included in Appendix B.

Based on the statistical results presented in Appendix B, the following summarizes verified SSIs from the March 2019 sampling event:

AP-2, 3/4 Inter-Well Prediction Limit Statistically Significant Increase Summary	
Appendix III Parameter	**AP-2, 3/4 Monitoring Wells**
Boron	DGWC-2, DGWC-4, DGWC-5, DGWC-8, DGWC-9, DGWC-10, DGWC-11, DGWC-12, DGWC-13, DGWC-15, DGWC-17, DGWC-19, DGWC-20, DGWC-21, DGWC-22, DGWC-23, DGWC-42, DGWC-47, DGWC-48
Calcium	DGWC-2, DGWC-4, DGWC-5, DGWC-8, DGWC-9, DGWC-10, DGWC-11, DGWC-12, DGWC-13, DGWC-19, DGWC-20, DGWC-21, DGWC-22, DGWC-23, DGWC-42, DGWC-48
Chloride	DGWC-4, DGWC-5, DGWC-8, DGWC-9, DGWC-10, DGWC-11, DGWC-12, DGWC-13, DGWC-15, DGWC-17, DGWC-19, DGWC-20, DGWC-21, DGWC-22, DGWC-23, DGWC-42, DGWC-47, DGWC-48
Fluoride	DGWC-9, DGWC-10, DGWC-20, DGWC-47, DGWC-48
pH	DGWC-5, DGWC-8, DGWC-9, DGWC-17, DGWC-19, DGWC-20, DGWC-47, DGWC-48
Sulfate	DGWC-2, DGWC-4, DGWC-5, DGWC-8, DGWC-9, DGWC-10, DGWC-11, DGWC-12, DGWC-13, DGWC-14, DGWC-15, DGWC-17, DGWC-19, DGWC-20, DGWC-21, DGWC-22, DGWC-23, DGWC-42, DGWC-47, DGWC-48
Total Dissolved Solids	DGWC-4, DGWC-5, DGWC-8, DGWC-9, DGWC-10, DGWC-11, DGWC-12, DGWC-13, DGWC-17, DGWC-20, DGWC-21, DGWC-22, DGWC-23, DGWC-42, DGWC-47, DGWC-48

Pursuant to 40 CFR § 257.94(e), within 90 days from determining an SSI, GPC will either (1) prepare a demonstration that a source other than the AP-2, 3/4 was the cause, or (2) implement assessment monitoring per § 257.95.

Pursuant to § 257.95, Appendix IV groundwater quality data is statistically analyzed and compared to groundwater protection standards if assessment monitoring is implemented. To date only detection monitoring per § 257.94 has been completed for the monitoring network at AP-2, 3/4. As of June 30, 2019, assessment monitoring has not been implemented, and therefore, statistical analysis of Appendix IV data has not been performed.

5.0 MONITORING PROGRAM STATUS

Plant McDonough AP-2, 3/4 is in detection monitoring. Table 2 presents the status of each well within the certified monitoring network for AP-2, 3/4. SSIs of Appendix III parameters have been identified. GPC will address the reported SSIs in accordance with the requirements, and options, of 40 CFR § 257.94(e)(1-3) and (f).

6.0 CONCLUSIONS AND FUTURE ACTIONS

This *2019 First Annual Groundwater Monitoring & Corrective Action Report, Georgia Power Company Plant McDonough-Atkinson – Ash Pond 2 (AP-2), Ash Pond 3 (AP-3), and Ash Pond 4 (AP-4)* was prepared to fulfill the requirements of USEPA CCR rule 40 CFR 257 Subpart D and Georgia EPD rule 391-3-4-.10.

Statistical evaluations of the groundwater monitoring data for AP-2, 3/4 identified SSIs of Appendix III groundwater monitoring parameters. In accordance with 40 CFR § 257.94(e)(1-2), GPC will prepare an alternate source demonstration or initiate an assessment monitoring program within 90 days.

The next sampling event is scheduled for August 2019.

7.0 REFERENCES

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Tables & Figures

TABLE 1A
MONITORING WELL NETWORK SUMMARY

Georgia Power Company - Plant McDonough
Atlanta, GA

Well-ID	Former Well-ID	Boring ID	Hydraulic Location	Geologic Unit Screened	Northing	Easting	Top of Casing Elevation (feet msl)	Ground Surface Elevation (feet msl)	Total Depth (feet bgs)	Top of Screen Elevation (feet msl)	Bottom of Screen Elevation (feet msl)	Date of Installation
ASH POND 2 and ASH PONDS 3/4 (AP-2, 3/4) MONITORING WELL NETWORK												
DGWA-53	B-53	B-53	Upgradient	Upper Bedrock	1393475.82	2201668.95	850.74	847.24	28.9	830	820	9/24/2016
DGWA-70	B-70	B-70	Upgradient	Overburden	1390167.51	2201107.31	ABANDONED					
DGWA-70A	B-70A	B-70A	Upgradient	Overburden	1390481.13	2200590.67	808.60	805.45	58.9	757	747	5/10/2017
DGWA-71	B-71	B-71	Upgradient	Overburden	1393965.35	2201713.63	863.95	861.05	43.4	828	818	2/28/2017
DGWC-2	DGWA-2	B-2	Downgradient	Overburden/ Upper Bedrock	1393956.84	2202118.69	850.93	847.6	49.0	809	799	10/2/2012
DGWC-4	B-4	B-4	Downgradient	Overburden	1394170.48	2202662.20	814.87	811.4	45.0	777	767	10/3/2012
DGWC-5	B-5	B-5	Downgradient	Overburden/ Upper Bedrock	1394309.25	2202962.79	791.84	788.0	30.0	768	758	10/4/2012
DGWC-8	DGWA-8	B-8	Downgradient	Overburden	1394325.09	2203881.82	826.50	823.5	49.1	785	775	10/10/2012
DGWC-9	DGWA-9	B-9	Downgradient	Overburden	1394056.26	2204166.95	824.39	821.3	30.0	802	792	10/10/2012
DGWC-10	B-10	B-10	Downgradient	Overburden	1393818.47	2204197.80	823.60	820.3	45.4	785	775	10/11/2012
DGWC-11	B-11	B-11	Downgradient	Overburden	1393547.50	2204167.65	800.64	797.5	49.1	759	749	10/15/2012
DGWC-12	B-12	B-12	Downgradient	Overburden	1393151.16	2204125.01	773.90	770.5	25.1	756	746	10/15/2012
DGWC-13	B-13	B-13	Downgradient	Overburden	1392881.61	2204084.66	793.90	791.2	43.8	758	748	11/29/2012
DGWC-14	B-14	B-14	Downgradient	Overburden/ Upper Bedrock	1392575.34	2204013.21	792.36	789.6	34.3	766	756	12/18/2012
DGWC-15	B-15	B-15	Downgradient	Overburden	1392544.70	2203675.77	824.53	820.8	67.1	764	754	11/29/2012
DGWC-17	B-17	B-17	Downgradient	Overburden	1392645.88	2203049.04	837.10	834.1	44.5	800	790	1/9/2013
DGWC-19	B-19	B-19	Downgradient	Overburden	1392342.80	2202600.41	825.53	823.0	39.8	794	784	3/12/2013
DGWC-20	B-20	B-20	Downgradient	Overburden	1392164.35	2202315.15	822.16	819.8	39.7	791	781	3/5/2013
DGWC-21	B-21	B-21	Downgradient	Overburden/ Upper Bedrock	1392068.12	2202062.54	816.33	813.5	69.0	755	745	10/31/2012
DGWC-22	B-22	B-22	Downgradient	Upper Bedrock	1392124.82	2201790.51	816.64	813.1	60.0	763	753	10/25/2012
DGWC-23	B-23	B-23	Downgradient	Upper Bedrock	1392242.10	2201582.86	818.59	815.2	60.1	765	755	10/25/2012
DGWC-42	B-42	B-42	Downgradient	Overburden	1391328.16	2201866.97	804.73	801.4	50.4	761	751	11/12/2012
DGWC-47	B-47	B-47	Downgradient	Overburden/ Upper Bedrock	1391553.90	2202610.11	797.50	794.10	28.8	776	766	6/23/2016
DGWC-48	B-48	B-48	Downgradient	Overburden/ Upper Bedrock	1391315.02	2202287.97	788.34	784.97	30.0	765	755	6/22/2016

Notes:

1. bgs = below ground surface; msl = mean sea level
2. DGWA-70 is not used as monitoring well due to well replacement and modifications to the proposed well network. DGWA-70 was abandoned 5/1/2017.
3. Coordinate system: NAD 1983 State Plane Georgia West (U.S. feet)

TABLE 1B
PIEZOMETER SUMMARY

Georgia Power Company - Plant McDonough
Atlanta, GA

Well-ID	Former Well-ID	Boring ID	Geologic Unit Screened	Northing	Easting	Top of Casing Elevation (feet msl)	Ground Surface Elevation (feet msl)	Total Depth (feet bgs)	Top of Screen Elevation (feet msl)	Bottom of Screen Elevation (feet msl)	Date of Installation
PIEZOMETER NETWORK											
B-3	B-3	B-3	Overburden/ Upper Bedrock	1394043.54	2202411.14	837.82	834.5	37.0	808	798	10/3/2012
B-6	B-6	B-6	Overburden	1394422.57	2203265.55	789.49	785.9	35.4	761	751	10/9/2012
B-7	B-7	B-7	Overburden	1394373.41	2203595.17	809.24	805.4	25.2	791	781	10/9/2012
B-16	B-16	B-16	Overburden	1392596.21	2203313.21	826.50	823.6	43.7	790	780	12/19/2012
B-18	B-18	B-18	Overburden	1392521.15	2202874.99	826.54	823.9	32.6	801	791	1/10/2013
B-24	B-24	B-24	Upper Bedrock	1392480.23	2201451.51	822.27	818.7	79.1	750	740	10/24/2012
B-25	B-25	B-25	Upper Bedrock	1392813.23	2201504.19	836.62	833.1	54.8	789	779	10/24/2012
B-26	DGWA-26	B-26	Upper Bedrock	1393106.18	2201551.86	853.67	850.2	49.3	811	801	10/23/2012
B-27	DGWA-27	B-27	Upper Bedrock	1393423.51	2201744.77	ABANDONED					
B-28	B-28	B-28	Overburden/ Upper Bedrock	1391970.42	2201677.59	816.10	812.8	69.4	754	744	10/31/2012
B-29	B-29	B-29	Overburden	1391891.93	2201420.25	816.45	813.5	54.4	769	759	1/11/2013
B-31	B-31	B-31	Upper Bedrock	1392035.97	2200926.82	797.42	794.8	45.1	760	750	1/22/2013
B-41	B-41	B-41	Overburden	1390922.38	2201749.84	795.22	792.4	60.0	743	733	11/14/2012
B-50	B-50	B-50	Overburden	1391656.94	2201839.72	809.78	806.28	35.2	781	771	6/24/2016
B-51	B-51	B-51	Overburden	1390501.61	2200904.19	765.93	763.00	66.0	708	698	6/27/2016
B-52	B-52	B-52	Overburden	1392309.40	2201314.05	823.22	820.07	50.0	781	771	9/28/2016
B-54	B-54	B-54	Overburden/ Upper Bedrock	1394424.75	2203140.27	785.59	782.09	34.2	758	748	9/26/2016
B-55	B-55	B-55	Overburden	1394143.23	2204146.61	825.11	821.96	52.0	781	771	9/22/2016
B-56	B-56	B-56	Overburden	1393958.64	2204186.27	823.70	820.55	45.0	786	776	10/3/2016
B-57	B-57	B-57	Upper Bedrock	1391397.46	2202735.64	789.22	785.76	50.5	746	736	9/24/2016
B-58	B-58	B-58	Overburden	1391126.84	2202425.23	788.20	784.90	45.0	750	740	9/23/2016
B-59	B-59	B-59	Overburden/ Upper Bedrock	1394349.80	2203000.17	788.16	785.30	30.2	765	755	9/23/2016
B-60	B-60	B-60	Overburden	1391101.88	2202880.57	782.12	778.87	49.8	740	730	9/29/2016
B-61	B-61	B-61	Overburden	1390958.73	2202504.81	782.03	778.58	52.4	737	727	9/29/2016
B-62	B-62	B-62	Upper Bedrock	1389828.91	2201810.02	763.34	759.94	39.9	730	720	10/4/2016
B-63	B-63	B-63	Overburden	1390999.47	2202976.11	777.15	777.45	46.0	742	732	10/6/2016
B-64	B-64	B-64	Overburden	1394383.12	2203029.71	786.02	785.85	30.4	766	756	11/2/2016
B-65	B-65	B-65	Overburden/ Upper Bedrock	1394382.64	2204049.66	822.02	822.27	45.4	788	778	11/15/2016
B-66	B-66	B-66	Overburden	1393860.16	2204276.73	815.96	813.06	55.3	768	758	11/16/2016
B-68	DGWC-68	B-68	Overburden	1391299.56	2200714.04	758.73	758.56	18.0	751	741	3/16/2017

Notes:

1. bgs = below ground surface; msl = mean sea level
2. B-26 and B-68 are not used as monitoring wells due to well replacement, proximity to closure activities, or modifications to the proposed well network.
3. B-27 was abandoned 4/4/2017.
4. Coordinate System: NAD 1983 State Plane Georgia West (U.S. feet)

TABLE 2
GROUNDWATER SAMPLING EVENT SUMMARY

Georgia Power Company - Plant McDonough
Atlanta, GA

Well ID	Hydraulic Location	Summary of Sampling Events												Status of Monitoring Well
		August - September 2016	December 2016	March - April 2017	May 2017	June 2017	July 2017	August 2017	October - November 2017	February - March 2018	July 2018	November 2018	March 2019	
Purpose of Sampling Event		Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Detection	
ASH POND 2 and ASH PONDS 3/4 (AP-2, 3/4) MONITORING WELL NETWORK														
DGWA-53	Upgradient			BG01	BG02	BG03	BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWA-70A	Upgradient				BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
DGWA-71	Upgradient			BG01	BG02	BG03	BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-2	Downgradient			BG01	BG02	BG03	BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-4	Downgradient			BG01	BG02	BG03	BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-5	Downgradient	BG01	BG02	BG03			BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-8	Downgradient	BG01	BG02	BG03			BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-9	Downgradient	BG01	BG02	BG03			BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-10	Downgradient	BG01	BG02	BG03			BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-11	Downgradient	BG01	BG02	BG03			BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-12	Downgradient	BG01	BG02	BG03			BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-13	Downgradient	BG01	BG02	BG03			BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-14	Downgradient	BG01	BG02	BG03			BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-15	Downgradient	BG01	BG02	BG03			BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-17	Downgradient	BG01	BG02	BG03			BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-19	Downgradient	BG01	BG02	BG03			BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-20	Downgradient	BG01	BG02	BG03			BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-21	Downgradient	BG01	BG02	BG03			BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-22	Downgradient	BG01	BG02	BG03			BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-23	Downgradient			BG01	BG02	BG03	BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-42	Downgradient	BG01	BG02	BG03			BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-47	Downgradient	BG01	BG02	BG03			BG04		BG05	BG06	BG07	BG08	D01	Detection
DGWC-48	Downgradient	BG01	BG02	BG03			BG04		BG05	BG06	BG07	BG08	D01	Detection

Notes:

1. BG## = Background Event Number
2. D## = Detection Event Number

GOLDER

TABLE 3
SUMMARY OF GROUNDWATER ELEVATIONS

Georgia Power Company - Plant McDonough
Atlanta, GA

Well ID	Top of Casing Elevation (feet/msl)	Groundwater Elevation (feet msl)								
		8/29/2016	12/5/2016	3/27/2017	7/10/2017	10/23/2017	2/26/2018	7/9/2018	11/5/2018	3/11/2019
ASH POND 2 and ASH PONDS 3/4 (AP-2, 3/4) MONITORING WELLS										
DGWA-53	850.74	NM	840.16	841.21	844.59	840.73	842.64	842.00	828.02	831.04
DGWA-70	778.20	NM	NM	752.10	ABANDONED					
DGWA-70A	808.60	NM	NM	NM	767.37	766.93	767.76	768.62	767.73	771.92
DGWA-71	863.95	NM	NM	834.80	835.84	835.32	835.56	835.70	834.78	837.74
DGWC-2	850.93	822.66	821.27	820.00	822.53	821.22	820.39	820.73	819.05	822.11
DGWC-4	814.87	797.89	797.37	798.47	798.95	796.24	795.91	794.37	793.07	794.83
DGWC-5	791.84	785.98	786.33	785.90	786.18	785.74	785.48	784.54	784.02	784.89
DGWC-8	826.50	812.00	808.38	807.69	811.43	805.36	799.81	797.87	795.21	798.35
DGWC-9	824.39	810.40	808.16	807.19	812.39	805.03	802.88	801.13	799.61	802.55
DGWC-10	823.60	802.79	802.30	800.80	806.57	800.33	797.50	796.22	794.05	796.58
DGWC-11	800.64	791.49	792.56	791.44	795.26	791.15	790.61	789.86	787.57	789.89
DGWC-12	773.90	765.72	766.17	766.27	767.20	765.64	767.13	765.54	765.14	766.40
DGWC-13	793.90	760.19	760.30	760.39	761.49	NM	768.46	760.44	759.55	760.10
DGWC-14	792.36	770.41	769.77	770.44	771.56	771.69	771.31	771.67	771.46	773.96
DGWC-15	824.53	786.06	785.21	785.13	786.08	786.06	785.28	785.79	785.38	786.89
DGWC-17	837.10	809.35	808.83	809.08	810.77	809.75	809.19	808.34	807.56	809.02
DGWC-19	825.53	804.25	803.58	803.81	806.11	804.73	805.36	804.70	804.16	805.05
DGWC-20	822.16	802.21	801.24	801.05	802.43	801.30	801.72	800.68	800.20	801.71
DGWC-21	816.33	802.74	801.41	800.77	800.50	799.79	799.85	799.03	798.47	799.09
DGWC-22	816.64	805.02	803.20	802.84	801.71	799.88	800.84	799.69	798.25	800.74
DGWC-23	818.59	804.61	804.84	804.88	803.89	802.66	804.02	801.83	800.61	803.75
DGWC-42	804.73	778.08	775.93	775.01	775.21	774.13	774.24	773.80	773.28	774.84
DGWC-47	797.50	776.88	776.70	778.54	780.25	778.16	779.78	780.70	779.15	782.01
DGWC-48	788.34	771.45	770.67	771.66	773.33	771.63	772.84	772.88	771.60	774.90
PIEZOMETERS										
B-3	837.82	811.85	810.09	811.86	811.36	808.91	807.28	806.10	804.82	805.58
B-6	789.49	787.40	786.35	786.98	787.04	786.72	786.18	785.43	785.19	785.89
B-7	809.24	799.54	797.50	796.76	797.04	795.51	792.92	791.26	791.04	792.20
B-16	826.50	802.60	802.25	802.61	804.41	800.02	800.71	799.59	798.25	800.45
B-18	826.54	809.19	808.33	808.53	811.84	810.19	810.71	809.21	808.21	810.41
B-24	822.27	806.65	804.87	807.18	808.10	804.72	806.23	805.47	803.00	809.86
B-25	836.62	821.63	822.51	823.42	823.85	822.68	824.06	822.50	821.06	824.12
B-26	853.67	829.13	827.14	829.97	831.02	827.90	829.45	828.59	826.26	833.30
B-27	850.29	830.16	828.94	836.76	ABANDONED					
B-28	816.10	793.30	792.40	792.42	792.12	789.56	791.14	790.07	787.90	791.89
B-29	816.45	790.87	790.42	792.15	792.30	789.57	791.80	790.69	788.83	793.96
B-31	797.42	764.17	764.31	764.68	766.38	763.81	765.11	765.23	763.62	766.88
B-41	795.22	774.74	773.24	772.28	772.46	770.97	771.32	771.01	770.28	771.76
B-50	809.78	783.18	781.78	781.93	782.49	781.16	782.32	782.04	781.00	783.83
B-51	765.93	753.69	753.90	753.57	753.89	754.08	753.86	753.44	753.26	754.15
B-52	823.22	NM	796.52	799.44	800.17	797.09	798.56	798.66	795.73	803.49
B-54	785.59	NM	781.24	780.81	780.91	781.23	780.67	780.09	780.28	780.44
B-55	825.11	NM	812.13	810.46	815.77	807.47	805.77	804.55	803.08	805.21
B-56	823.70	NM	805.57	804.87	810.59	802.42	799.29	797.00	795.42	798.40
B-57	789.22	NM	766.42	767.55	769.46	768.51	768.52	770.71	768.67	773.56
B-58	788.20	NM	764.20	765.36	767.61	766.40	766.63	768.59	766.37	771.75
B-59	788.16	NM	782.84	782.46	782.58	782.62	782.22	781.46	781.51	781.83
B-60	782.12	NM	748.58	748.44	749.87	749.49	749.48	751.13	749.78	755.46
B-61	782.03	NM	758.46	759.12	761.86	760.30	760.82	762.98	760.50	766.59
B-62	763.34	NM	745.89	745.33	745.89	751.03	749.15	748.04	745.82	754.34
B-63	777.15	NM	745.02	745.46	746.75	746.75	746.95	747.38	746.55	753.35
B-64	786.02	NM	781.29	781.40	781.50	781.67	781.20	780.54	780.67	781.01
B-65	822.02	NM	811.62	811.38	814.82	811.24	806.45	805.56	803.98	807.77
B-66	815.96	NM	801.50	799.86	804.66	799.91	798.36	797.80	796.43	798.14
B-68	758.73	NM	NM	755.45	NM	NM	NM	NM	NM	NM

Notes:

1. msl = mean sea level
2. NM = Not Mesured
3. DGWA-70, B-27, and B-68 are not used due to well replacement, proximity to closure activities, or modifications to the proposed well network.

GOLDER

TABLE 4
HORIZONTAL GROUNDWATER FLOW VELOCITY CALCULATIONS - MARCH 2019

Georgia Power Company - Plant McDonough
Atlanta, GA

Flow Paths	Groundwater Elevation (feet msl)	Δ h (feet)[1]	Δ l (feet)[2]	Hydraulic Gradient (Δ h/Δ l)[3]	Average Hydraulic Conductivity, K (centimeter per second)[5]		Assumed Effective Porosity (n_e)[6]		Average Linear Groundwater Velocity			
									(feet per day)[4]	(feet per day)[4]	(feet per year)[4]	(feet per year)[4]
					Overburden	Upper Bedrock	Overburden	Upper Bedrock	Overburden	Upper Bedrock	Overburden	Upper Bedrock
ASH POND 2 AND ASH PONDS 3/4 (AP-2, 3/4)												
DGWA-53/ DGWC-13	831.04	70.94	2550	0.028	0.00084	0.00016	0.2	0.09	0.33	0.14	121	51
	760.10											
DGWA-71/ DGWC-5	837.74	52.85	1450	0.036	0.00084	0.00016	0.2	0.09	0.43	0.18	158	67
	784.89											
B-26/ DGWC-48	833.30	58.4	2000	0.029	0.00084	0.00016	0.2	0.09	0.35	0.15	127	54
	774.90											

Notes:

1. Δ h = Change in groundwater elevation
2. Δ l =Distance along flow path
3. I = Δ h / Δ l
4. Velocity = (I * K)/n_e
5. Hydraulic conductivity based on historic aquifer performance tests
6. Assumed effective porosities for overburden was based on the default values recommended by USEPA for a silty sand-type soil (1996). Assumed effective porosity for bedrock was derived from Daniel and Dahlen (2002) and Dowd and Marshall (1995).

GOLDER

TABLE 5
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - March 2019
Georgia Power Company - Plant McDonough
Atlanta, GA

	Substance	MCL/ (SMCL)	Well ID															
			DGWA-53	DGWA-70A	DGWA-71	DGWC-2	DGWC-4	DGWC-5	DGWC-8	DGWC-9	DGWC-10	DGWC-11	DGWC-12	DGWC-13	DGWC-14	DGWC-15	DGWC-17	DGWC-19
			3/13/2019	3/12/2019	3/12/2019	3/12/2019	3/12/2019	3/12/2019	3/12/2019	3/12/2019	3/12/2019	3/12/2019	3/12/2019	3/13/2019	3/13/2019	3/14/2019	3/13/2019	3/13/2019
APPENDIX III	Boron	N/R	0.080	ND (0.0073 J)	ND (0.0068 J)	0.72	4.6	4.3	1.5	1.2	0.98	1.2	4.8	0.62	0.047	1.6	0.76	2.6
	Calcium	N/R	26.7	5.1	5.5	52.2	295	110	54.3	78.1	83.5	61.4	62.1	42.1	9.7	34.7	ND (11.9 J)	76.9
	Chloride	(250)	3.6	2.5	3.3	3.1	24.2	10.6	10.7	8.5	12.1	14.5	12.1	12.4	3.4	24.0	19.9	40.1
	Fluoride	4	ND (0.13 J)	ND (0.039 J)	ND	ND (0.052 J)	ND (0.082 J)	0.31	0.35	0.97	1.7	ND (0.052 J)	ND (0.065 J)	ND (0.13 J)	ND (0.042 J)	ND (0.057 J)	ND (0.084 J)	ND (0.22 J)
	Sulfate	(250)	23.7	ND (0.35 J)	7.0	159	987	484	295	362	297	275	284	179	41.2	195	268	299
	TDS	(500)	201	43.0	74.0	297	1490	711	438	493	436	433	465	656	280	340	802	113
APPENDIX IV	Antimony	0.006	Appendix IV consituents not analyzed															
	Arsenic	0.01																
	Barium	2																
	Beryllium	0.004																
	Cadmium	0.005																
	Chromium	0.1																
	Cobalt	N/R																
	Lead	0.015																
	Lithium	N/R																
	Mercury	0.002																
	Molybdenum	N/R																
	Radium	5																
	Selenium	0.05																
	Thallium	0.002																

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

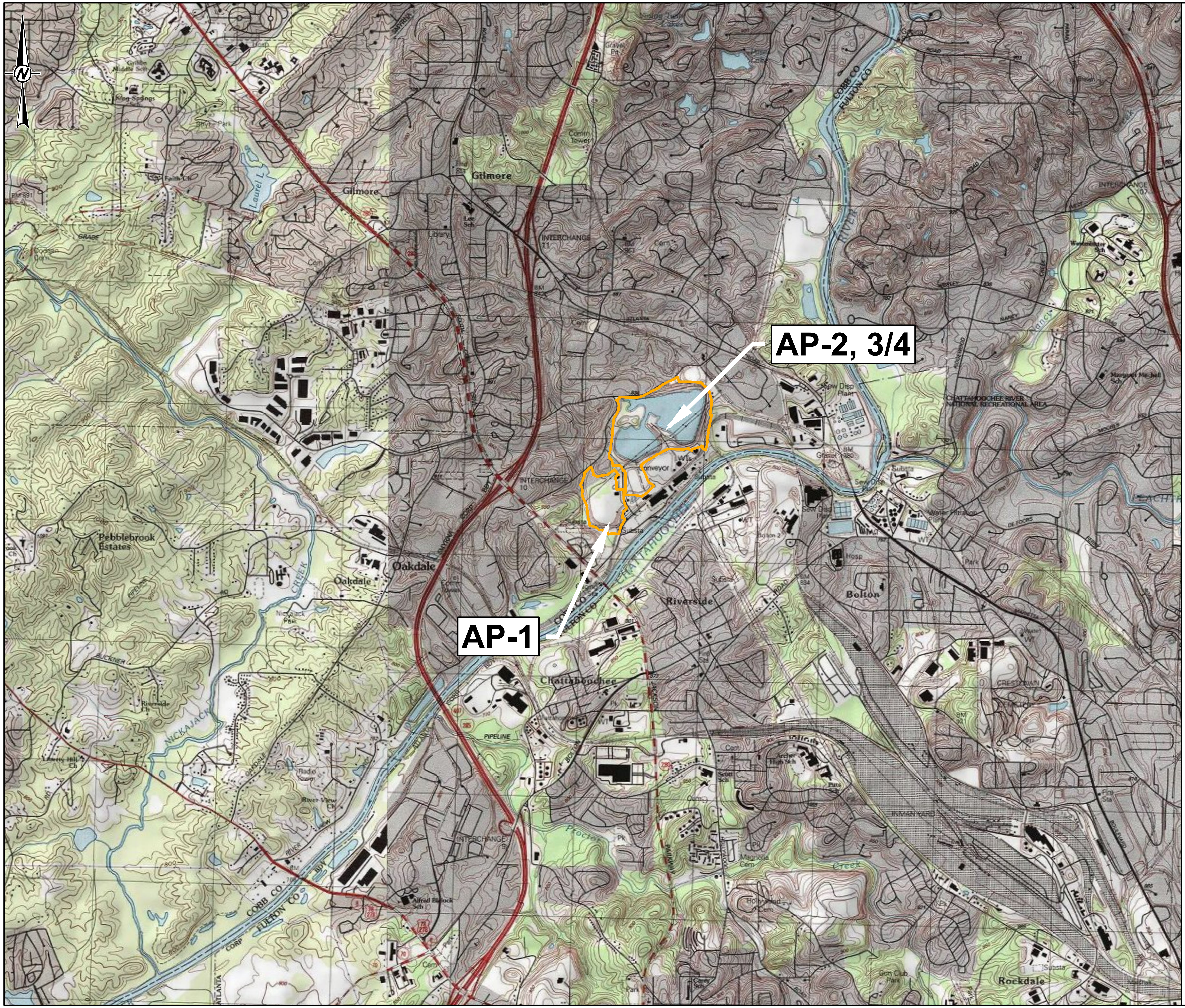
GOLDER

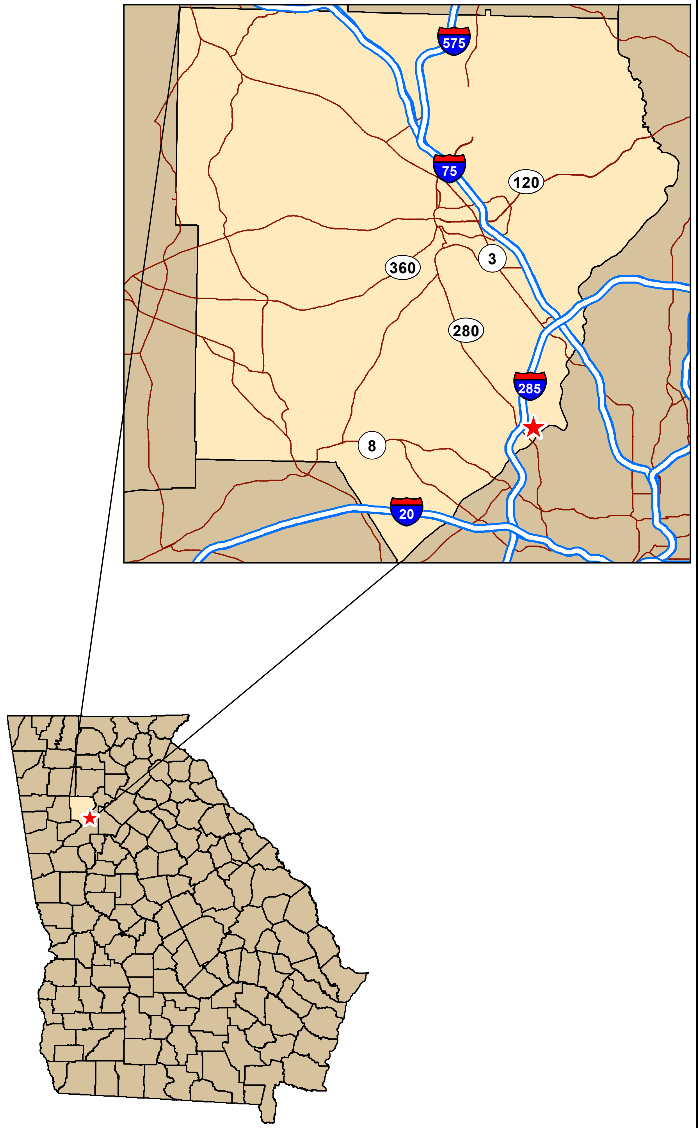
TABLE 5
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - March 2019
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID						
			DGWC-20	DGWC-21	DGWC-22	DGWC-23	DGWC-42	DGWC-47	DGWC-48
			3/13/2019	3/13/2019	3/14/2019	3/14/2019	3/14/2019	3/14/2019	3/14/2019
APPENDIX III	Boron	N/R	5.6	6.2	4.1	4.7	0.89	0.26	0.72
	Calcium	N/R	86.4	79.9	64.8	73.2	43.5	36.6	74.6
	Chloride	(250)	24.8	21.3	26.3	15.2	24.8	6.6	10.2
	Fluoride	4	0.45	ND (0.043 J)	ND (0.042 J)	ND (0.092 J)	ND	1.6	1.4
	Sulfate	(250)	539	312	297	266	404	238	450
	TDS	(500)	639	486	491	453	630	378	625
APPENDIX IV	Antimony	0.006	Appendix IV consituents not analyzed						
	Arsenic	0.01							
	Barium	2							
	Beryllium	0.004							
	Cadmium	0.005							
	Chromium	0.1							
	Cobalt	N/R							
	Lead	0.015							
	Lithium	N/R							
	Mercury	0.002							
	Molybdenum	N/R							
	Radium	5							
	Selenium	0.05							
	Thallium	0.002							

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

GOLDER





REFERENCE

SERVICE LAYER CREDITS: COPYRIGHT:© 2013 NATIONAL GEOGRAPHIC SOCIETY, I-CUBED

0 0.5 1

1 INCH=0.5 MILES

CLIENT
GEORGIA POWER COMPANY
PLANT MCDONOUGH

PROJECT
ANNUAL GROUNDWATER MONITORING REPORT
PLANT MCDONOUGH

TITLE
SITE LOCATION MAP

CONSULTANT		
GOLDER	YYYY-MM-DD	2019-1-31
	PREPARED	SEB
	DESIGN	SEB
	REVIEW	KNJ
	APPROVED	TIR

PROJECT No.	Rev.	FIGURE
166849618	0	1

LEGEND

- UPGRADIENT WELL
- AP-2, 3/4 MONITORING WELL
- AP-2, 3/4 PERMIT BOUNDARY
- PROPERTY BOUNDARY

NOTES

1. ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.

REFERENCE

1. SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY.

2. COORDINATE SYSTEM: NAD 1983 STATE PLANE GEORGIA WEST (U.S. FEET).

3. MONITORING WELL LOCATIONS PROVIDED BY SOUTHERN COMPANY SERVICES.

4. APPROXIMATE PROPERTY BOUNDARY PROVIDED BY SOUTHERN COMPANY (2018). DATE OF PHOTOGRAPHY 09-7-2018.

0 600 1,200

1 IN= 600 FT

CLIENT
GEORGIA POWER COMPANY
PLANT MCDONOUGH

PROJECT
ANNUAL GROUNDWATER MONITORING REPORT
PLANT MCDONOUGH

TITLE
ASH POND 2 (AP-2) & ASH PONDS 3/4 (AP-3/4) SITE PLAN & MONITORING WELL LOCATION MAP

CONSULTANT
GOLDER

YYYY-MM-DD	2019-1-31
PREPARED	SEB
DESIGN	SEB
REVIEW	KNJ
APPROVED	TIR

PROJECT No. 166849618
Rev. 0
FIGURE 2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM: ANSI B

Path: G:\GIS\Southern Company\166849\r-SCS-Plant McDonough\figures\AshPonds_2and3-4_WellLocationMap_SEB.mxd

LEGEND

- UPGRADIENT WELL
- AP-1 MONITORING WELL
- AP-2, 3/4 MONITORING WELL
- PIEZOMETER
- ABANDONED PIEZOMETER OR MONITORING WELL
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- GROUNDWATER SURFACE CONTOUR (FAMSL)
- PERMIT BOUNDARY
- PROPERTY BOUNDARY

NOTES

1. ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.

2. GROUNDWATER ELEVATION MEAUSREMENTS OBTAINED MARCH 11, 2019 BY GOLDER ASSOCIATES.

3. GROUNDWATER ELEVATIONS DISPLAYED IN FEET ABOVE MEAN SEA LEVEL (FAMSL).

4. B-27, B-68, AND DGWA-70 ARE NOT USED DUE TO WELL REPLACEMENT, PROXIMITY TO CLOSURE ACTIVITIES, OR MODIFICATIONS TO THE PROPOSED WELL NETWORK.

5. WATER LEVEL AT B-68 NOT COLLECTED DURING MARCH 11, 2019 EVENT.

REFERENCE

1. SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY.

2. COORDINATE SYSTEM: NAD 1983 STATE PLANE GEORGIA WEST (U.S. FEET).

3. MONITORING WELL/PIEZOMETER LOCATIONS PROVIDED BY SOUTHERN COMPANY SERVICES.

4. APPROXIMATE PROPERTY BOUNDARY PROVIDED BY SOUTHERN COMPANY (2018). DATE OF PHOTOGRAPHY 09-7-2018.

0 600 1,200

1 IN= 600 FT

CLIENT
GEORGIA POWER COMPANY
PLANT MCDONOUGH

PROJECT
ANNUAL GROUNDWATER MONITORING REPORT
PLANT MCDONOUGH

TITLE
SITE POTENTIOMETRIC MAP

CONSULTANT
GOLDER

YYYY-MM-DD	2019-5-13
PREPARED	SEB
DESIGN	SEB
REVIEW	KNJ
APPROVED	TIR

PROJECT No. 166849618
Rev. 0
FIGURE 3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM: ANSI B

Path: Q:\GIS\Southern Company\166849\6-SCS-Plant McDonough\figures\SitePotentiometricMap_SEB.mxd

APPENDIX A

Laboratory Analytical Data & Field Sampling Reports

TABLE A-1
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID								
			DGWA-53	DGWA-53	DGWA-53	DGWA-53	DGWA-53	DGWA-53	DGWA-53	DGWA-53	DGWA-53
			3/28/2017	5/11/2017	6/15/2017	7/12/2017	10/24/2017	11/15/2017*	3/8/2018	7/12/2018	11/8/2018
APPENDIX III	Boron	N/R	0.0612	0.0805	0.0725	0.0735	0.0770	NS	ND (0.13 J)	0.076	0.073
	Calcium	N/R	30.8	35.8	36.0	40.3	30.3	NS	39.8	34.7	28.6
	Chloride	(250)	3.7	2.3	2.6	2.3	2.7	2.2	2.4	2.2	2.3
	Fluoride	4	ND (0.12 J)	ND (0.07 J)	ND (0.19 J)	ND (0.10 J)	ND (0.06 J)	ND (0.05 J)	ND (0.25 J)	ND (0.071 J)	ND
	Sulfate	(250)	49	21	16	10	15	3.8	9.7	8.0	12.8
	TDS	(500)	202	241	251	218	671	241	213	198	200
APPENDIX IV	Antimony	0.006	ND	ND	ND (0.0006 J)	ND	ND	NS	ND	ND	ND
	Arsenic	0.01	ND (0.0005 J)	ND (0.0005 J)	ND	ND	ND	NS	ND	ND	ND (0.00090 J)
	Barium	2	0.134	0.126	0.140	0.173	0.109	NS	0.19	0.18	0.15
	Beryllium	0.004	ND	ND	ND	ND	ND	NS	ND	ND	ND
	Cadmium	0.005	ND	ND (0.00008 J)	ND	ND	ND	NS	ND	ND (0.00013 J)	ND
	Chromium	0.1	ND	ND	ND	ND	ND	NS	ND	ND	ND
	Cobalt	N/R	0.0250	0.0281	0.0322	0.0247	0.0267	NS	0.027	0.024	0.018
	Lead	0.015	ND	ND	ND	ND	ND	NS	ND	ND	ND
	Lithium	N/R	ND (0.0108 J)	ND (0.0087 J)	ND (0.0088 J)	ND (0.0075 J)	ND (0.0103 J)	NS	ND (0.011 J)	ND (0.0084 J)	ND (0.0077 J)
	Mercury	0.002	ND	ND	ND (0.00008 J)	ND	ND	NS	ND	ND	ND
	Molybdenum	N/R	0.0242	0.0375	0.0409	0.0321	0.0227	NS	0.035	0.034	0.029
	Radium	5	6.36	3.45	4.58	4.37	4.46	NS	2.14	4.65	3.05
	Selenium	0.05	ND	ND	ND	ND	ND	NS	ND	ND	ND
	Thallium	0.002	ND	ND	ND	ND	ND	NS	ND	ND	ND

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-2
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWA-70A	DGWA-70A	DGWA-70A	DGWA-70A	DGWA-70A	DGWA-70A	DGWA-70A	DGWA-70A
			5/15/2017	6/15/2017	7/11/2017	8/8/2017	10/24/2017	2/27/2018	7/10/2018	11/6/2018
APPENDIX III	Boron	N/R	ND (0.0073 J)	ND	ND	ND	ND (0.0082 J)	ND (0.0062 J)	ND (0.0077 J)	ND (0.0065 J)
	Calcium	N/R	6.50	5.38	5.96	5.20	4.93	5.6	5.0	5.5
	Chloride	(250)	2.2	2.0	2.1	2.2	2.4	2.5	1.9	2.3
	Fluoride	4	ND (0.005 J)	ND (0.02 J)	ND (0.06 J)	ND (0.04 J)	ND	ND	ND (0.082 J)	ND
	Sulfate	(250)	1.0	ND (0.86 J)	1.4	1.5	1.4	ND (0.54 J)	ND (0.25 J)	ND (0.12 J)
	TDS	(500)	88	65	25	53	49	43.0	80.0	65.0
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	0.0181	0.0277	0.0306	0.0277	0.0333	0.034	0.037	0.037
	Beryllium	0.004	ND	ND	ND	ND	ND	ND (0.000063 J)	ND (0.000095 J)	ND (0.00012 J)
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.0006 J)	ND (0.0006 J)	ND (0.0005 J)	ND (0.0005 J)	ND (0.0005 J)	ND	ND	ND
	Cobalt	N/R	ND (0.0024 J)	ND (0.0014 J)	ND (0.0007 J)	ND (0.0007 J)	ND	ND	ND	ND
	Lead	0.015	ND (0.0001 J)	ND (0.0002 J)	ND	ND (0.00007 J)	ND	ND	ND	ND
	Lithium	N/R	ND (0.0020 J)	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND (0.00007 J)	ND	ND	ND	ND	ND (0.000055 J)	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.288 U	1.01 U	0.254 U	1.48	0.472 U	1.22	0.362 U	0.859 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-3
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID								
			DGWA-71	DGWA-71	DGWA-71	DGWA-71	DGWA-71	DGWA-71	DGWA-71	DGWA-71	DGWA-71
			3/28/2017	5/12/2017	6/16/2017	7/11/2017	10/24/2017	11/15/2017*	2/27/2018	7/10/2018	11/6/2018
APPENDIX III	Boron	N/R	ND (0.0097 J)	ND (0.0082 J)	ND (0.0085 J)	ND (0.0077 J)	ND (0.0083 J)	NS	ND (0.0069 J)	ND (0.0059 J)	ND (0.0067 J)
	Calcium	N/R	8.31	8.04	7.66	7.71	6.86	NS	6.1	5.7	5.7
	Chloride	(250)	3.6	3.8	3.4	3.1	3.2	3.1	3.2	2.5	2.6
	Fluoride	4	ND (0.06 J)	ND	ND (0.008 J)	ND (0.007 J)	ND	ND	ND	ND	ND
	Sulfate	(250)	17	17	11	11	9.6	7.8	7.4	7.2	7.3
	TDS	(500)	90	92	100	59	117	90	79.0	88.0	85.0
APPENDIX IV	Antimony	0.006	ND (0.0007 J)	ND	ND (0.0007 J)	ND	ND	NS	ND	ND	ND
	Arsenic	0.01	ND	ND (0.0004 J)	ND	ND	ND	NS	ND	ND	ND
	Barium	2	0.0378	0.0400	0.0369	0.0362	0.0313	NS	0.029	0.027	0.026
	Beryllium	0.004	ND (0.00009 J)	ND	ND (0.0001 J)	ND	ND	NS	ND (0.000092 J)	ND (0.000091 J)	ND (0.00013 J)
	Cadmium	0.005	ND	ND	ND	ND	ND	NS	ND	ND	ND
	Chromium	0.1	ND (0.0023 J)	ND (0.0004 J)	ND (0.0005 J)	ND	ND	NS	ND	ND	ND
	Cobalt	N/R	ND (0.0033 J)	ND (0.0016 J)	ND (0.0011 J)	ND (0.0008 J)	ND (0.0004 J)	NS	ND	ND	ND
	Lead	0.015	ND	ND (0.00008 J)	ND	ND	ND	NS	ND	ND	ND
	Lithium	N/R	ND (0.0025 J)	ND (0.0016 J)	ND (0.0016 J)	ND	ND	NS	ND (0.0013 J)	ND (0.0012 J)	ND (0.0014 J)
	Mercury	0.002	ND	ND (0.00006 J)	ND (0.00007 J)	ND	ND	NS	ND	ND (0.00010 J)	ND (0.000041 J)
	Molybdenum	N/R	ND (0.0009 J)	ND	ND	ND	ND	NS	ND	ND	ND
	Radium	5	0.257 U	0.165 U	0.732 U	0.461 U	0.724 U	NS	0.714 U	0.426 U	0.455 U
	Selenium	0.05	ND	ND	ND	ND	ND	NS	ND	ND	ND
	Thallium	0.002	ND (0.00006 J)	ND	ND	ND	ND	NS	ND	ND	ND

Notes:
1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-4
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

	Substance	MCL/ (SMCL)	Well ID							
			DGWC-2	DGWC-2	DGWC-2	DGWC-2	DGWC-2	DGWC-2	DGWC-2	DGWC-2
			3/30/2017	5/11/2017	6/15/2017	7/11/2017	10/24/2017	2/27/2018	7/11/2018	11/6/2018
APPENDIX III	Boron	N/R	1.56	1.65	1.44	1.39	1.18	1.1	0.82	0.90
	Calcium	N/R	103	102	96.2	98.4	86.0	66.7	55.0	54.5
	Chloride	(250)	4.8	4.4	4.8	4.6	4.4	4.1	3.3	3.7
	Fluoride	4	ND (0.06 J)	ND (0.06 J)	ND (0.07 J)	ND (0.04 J)	0.43	ND (0.28 J)	0.60	ND
	Sulfate	(250)	360	340	300	330	260	189	162	190
	TDS	(500)	580	573	626	542	523	401	334	334
APPENDIX IV	Antimony	0.006	ND	ND	ND (0.0006 J)	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	0.0232	0.0231	0.0223	0.0201	0.0206	0.021	0.022	0.021
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND (0.0005 J)	ND (0.0004 J)	ND (0.0003 J)	ND (0.0003 J)	ND (0.0003 J)	ND (0.00062 J)	ND (0.00018 J)	ND (0.00014 J)
	Chromium	0.1	ND (0.0005 J)	ND (0.0005 J)	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	0.0255	0.0284	0.0238	0.0238	0.0292	0.042	0.020	0.024
	Lead	0.015	ND (0.0001 J)	ND (0.00009 J)	ND (0.0001 J)	ND	ND	ND	ND	ND
	Lithium	N/R	0.0807	0.0850	0.0781	0.0731	0.0995	0.088	ND (0.033 J)	ND (0.037 J)
	Mercury	0.002	ND (0.00007 J)	ND (0.000083 J)	ND (0.00008 J)	ND	ND	ND	ND	0.00064
	Molybdenum	N/R	ND (0.0009 J)	ND (0.0009 J)	ND	ND	ND	ND	ND	ND
	Radium	5	0.737 U	0.892 U	0.979 U	0.871 U	1.19	0.863 U	0.663 U	0.664
	Selenium	0.05	ND	ND	ND	ND	ND	ND (0.0017 J)	ND (0.0045 J)	ND (0.0046 J)
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.
12. DGWC-2 reported as DGWA-2 in lab reports.

TABLE A-5
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID								
			DGWC-4	DGWC-4	DGWC-4	DGWC-4	DGWC-4	DGWC-4	DGWC-4	DGWC-4	DGWC-4
			3/28/2017	5/12/2017	6/15/2017	7/11/2017	10/24/2017	11/15/2017*	2/27/2018	7/10/2018	11/6/2018
APPENDIX III	Boron	N/R	4.01	3.58	3.58	3.85	3.82	NS	4.1	4.5	4.1
	Calcium	N/R	229	233	224	249	232	NS	245	275	284
	Chloride	(250)	29	29	28	28	28	27	24.6	24.9	24.8
	Fluoride	4	ND (0.17 J)	ND	ND (0.02 J)	ND (0.02 J)	ND	0.79	ND	0.36	ND
	Sulfate	(250)	680	680	730	740	930	820	811	787	902
	TDS	(500)	1160	1230	1290	1160	229	1330	1380	1390	1480
APPENDIX IV	Antimony	0.006	ND	ND	ND (0.0008 J)	ND	ND	NS	ND	ND	ND
	Arsenic	0.01	ND (0.0005 J)	ND (0.0005 J)	ND	ND (0.0008 J)	ND	NS	ND	ND	ND
	Barium	2	0.0363	0.0337	0.0300	0.0301	0.0351	NS	0.036	0.036	0.035
	Beryllium	0.004	ND (0.0002 J)	ND (0.0002 J)	ND (0.0001 J)	ND (0.0001 J)	ND (0.0002 J)	NS	ND (0.00018 J)	ND (0.00017 J)	ND (0.00021 J)
	Cadmium	0.005	ND (0.0006 J)	ND (0.0006 J)	ND (0.0005 J)	ND (0.0006 J)	ND (0.0007 J)	NS	ND (0.00074 J)	ND (0.00065 J)	ND (0.00071 J)
	Chromium	0.1	ND (0.0005 J)	ND	ND	ND	ND	NS	ND	ND	ND
	Cobalt	N/R	ND (0.0018 J)	ND (0.0015 J)	ND (0.0015 J)	ND (0.0015 J)	ND (0.0017 J)	NS	ND (0.0018 J)	ND (0.0018 J)	ND (0.0018 J)
	Lead	0.015	ND (0.0002 J)	ND	ND	ND	ND	NS	ND	ND	ND
	Lithium	N/R	ND (0.0031 J)	ND (0.0027 J)	ND (0.0025 J)	ND (0.0022 J)	ND (0.0024 J)	NS	ND (0.0027 J)	ND (0.0030 J)	ND (0.0029 J)
	Mercury	0.002	ND	ND (0.000082 J)	ND (0.00008 J)	ND	ND	NS	ND	ND (0.000055 J)	0.00059
	Molybdenum	N/R	ND (0.0080 J)	ND (0.0062 J)	ND (0.0044 J)	ND (0.0041 J)	ND (0.0072 J)	NS	ND (0.0069 J)	ND (0.0044 J)	ND (0.0065 J)
	Radium	5	1.36	1.15	0.765 U	1.13	1.24	NS	1.82	1.37	1.20
	Selenium	0.05	ND	ND	ND	ND	ND	NS	ND	ND	ND
	Thallium	0.002	ND	ND	ND	ND	ND	NS	ND	ND	ND

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-6
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWC-5	DGWC-5	DGWC-5	DGWC-5	DGWC-5	DGWC-5	DGWC-5	DGWC-5
			8/31/2016	12/6/2016	3/28/2017	7/11/2017	10/25/2017	2/27/2018	7/10/2018	11/6/2018
APPENDIX III	Boron	N/R	7.50	5.64	6.16	4.61	4.00	4.3	3.2	4.2
	Calcium	N/R	82.6	73.9	89.1	84.6	95.6	108	71.4	124
	Chloride	(250)	8.6	8.0	9.5	9.0	9.4	9.7	9.7	10.2
	Fluoride	4	1.0	0.76	1.2	0.70	1.4	1.3	0.42	ND (0.040 J)
	Sulfate	(250)	400	460	380	440	510	453	400	556
	TDS	(500)	524	690	545	612	650	698	635	809
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.0035 J)	ND (0.0032 J)	0.0385	0.0203	0.0119	0.0094	0.0057	ND
	Barium	2	0.0266	0.0186	0.0187	ND (0.0174 J)	0.0175	0.017	0.015	0.016
	Beryllium	0.004	0.0054	0.0064	0.0049	0.0050	0.0069	0.0086	0.0048	0.010
	Cadmium	0.005	ND (0.0002 J)	ND (0.0004 J)	ND (0.0002 J)	ND (0.0003 J)	ND (0.0006 J)	ND (0.00072 J)	ND (0.00034 J)	ND (0.00098 J)
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	0.0550	0.0432	0.0400	ND (0.0351 J)	0.0209	0.024	0.025	0.019
	Lead	0.015	ND (0.0002 J)	ND (0.0004 J)	ND	ND	ND (0.0024 J)	ND	ND	ND
	Lithium	N/R	ND (0.0026 J)	ND (0.0046 J)	ND (0.0028 J)	ND (0.0031 J)	ND (0.0055 J)	ND (0.0066 J)	ND (0.0034 J)	ND (0.0082 J)
	Mercury	0.002	ND (0.00015 J)	ND (0.00012 J)	ND (0.00017 J)	ND (0.00020 J)	ND (0.00009 J)	ND (0.000090 J)	ND (0.00018 J)	0.00055
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	2.49	0.348 U	0.693 U	1.38	2.06	1.97	1.03 U	1.13
	Selenium	0.05	0.0182	0.0120	0.168	0.0607	0.0340	0.035	0.019	ND (0.0026 J)
	Thallium	0.002	ND	ND	ND (0.0002 J)	ND	ND	ND	ND	ND

Notes:
1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-7
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWC-8	DGWC-8	DGWC-8	DGWC-8	DGWC-8	DGWC-8	DGWC-8	DGWC-8
			8/30/2016	12/6/2016	3/29/2017	7/11/2017	10/24/2017	2/27/2018	7/10/2018	11/6/2018
APPENDIX III	Boron	N/R	2.63	2.72	3.04	2.55	2.29	2.1	1.8	1.7
	Calcium	N/R	82.7	76.8	90.5	91.1	78.1	64.2	59.3	57.0
	Chloride	(250)	9.7	9.8	9.9	9.7	9.9	9.5	8.7	10.5
	Fluoride	4	0.39	0.47	0.51	ND (0.20 J)	0.82	0.59	ND (0.14 J)	0.35
	Sulfate	(250)	450	480	660	440	430	340	280	307
	TDS	(500)	693	727	654	679	468	520	472	456
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND (0.0010 J)	ND (0.0012 J)	ND(0.0015 J)	ND (0.0020 J)	ND	ND
	Barium	2	0.0435	0.0431	0.0440	0.0389	0.0369	0.035	0.030	0.027
	Beryllium	0.004	ND (0.0018 J)	0.0034	0.0031	ND (0.0022 J)	0.0042	0.0047	0.0030	ND (0.0028 J)
	Cadmium	0.005	0.0019	0.0025	0.0024	0.0021	0.0029	0.0029	0.0025	0.0027
	Chromium	0.1	ND	ND	ND (0.0004 J)	ND	ND	ND	ND	ND
	Cobalt	N/R	0.0568	0.0873	0.0902	0.0601	0.123	0.13	0.072	0.077
	Lead	0.015	ND	ND	ND (0.0001 J)	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0050 J)	ND (0.0066 J)	ND (0.0059 J)	ND (0.0045 J)	ND (0.0072 J)	ND (0.0075 J)	ND (0.0061 J)	ND (0.0051 J)
	Mercury	0.002	ND (0.00009 J)	ND (0.00010 J)	ND (0.00012 J)	ND (0.00006 J)	ND	ND (0.000042 J)	ND (0.000082 J)	ND (0.00044 J)
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.919 U	0.407 U	0.280 U	0.209 U	0.615 U	1.05 U	0.363 U	0.577 U
	Selenium	0.05	ND (0.0032 J)	ND	ND (0.0048 J)	ND (0.0031 J)	ND (0.0069 J)	ND (0.0096 J)	ND	ND (0.0019 J)
	Thallium	0.002	ND	ND	ND (0.0002 J)	ND (0.0001 J)	ND (0.0003 J)	ND (0.00033 J)	ND (0.00027 J)	ND (0.00027 J)

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.
12. DGWC-8 reported as DGWA-8 in 8/30/2016 and 12/6/2016 lab reports.

TABLE A-8
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWC-9	DGWC-9	DGWC-9	DGWC-9	DGWC-9	DGWC-9	DGWC-9	DGWC-9
			8/30/2016	12/6/2016	3/28/2017	7/11/2017	10/24/2017	2/27/2018	7/11/2018	11/6/2018
APPENDIX III	Boron	N/R	1.72	1.92	2.01	1.78	1.72	1.7	1.4	1.4
	Calcium	N/R	64.9	59.3	71.6	73.7	92.5	73.1	88.5	81.1
	Chloride	(250)	6.0	6.2	6.6	6.9	6.7	8.2	10.5	8.7
	Fluoride	4	0.78	1.1	1.1	1.1	1.7	1.2	1.3	1.1
	Sulfate	(250)	300	320	300	320	430	327	344	438
	TDS	(500)	414	449	404	436	599	482	532	554
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	0.0241	ND	0.0243	0.0194	0.0249	0.040	0.016	0.017
	Barium	2	0.0162	0.0138	0.0170	ND (0.0154 J)	0.0148	0.015	0.017	0.015
	Beryllium	0.004	0.0045	0.0050	0.0052	0.0048	0.0051	0.0057	0.0058	0.0060
	Cadmium	0.005	ND (0.0004 J)	ND (0.0005 J)	ND (0.0005 J)	ND (0.0005 J)	ND (0.0006 J)	ND (0.00058 J)	ND (0.00067 J)	ND (0.00060 J)
	Chromium	0.1	ND	ND	ND (0.0010 J)	ND	ND	ND	ND	ND
	Cobalt	N/R	0.0896	0.122	0.124	0.136	0.151	0.16	0.18	0.20
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0212 J)	ND (0.0242 J)	ND (0.0249 J)	ND (0.0220 J)	ND (0.0281 J)	ND (0.031 J)	ND (0.028 J)	ND (0.028 J)
	Mercury	0.002	ND	ND (0.00005 J)	ND	ND	ND	ND (0.000042 J)	ND	ND (0.00046 J)
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.33	0.828 U	1.06	0.620 U	1.21	1.79	1.81	1.13
	Selenium	0.05	0.0833	ND (0.0065 J)	0.0954	0.0561	0.0653	0.13	0.045	0.12
	Thallium	0.002	ND	ND (0.0006 J)	ND (0.0007 J)	ND (0.0007 J)	ND (0.0006 J)	ND (0.00038 J)	ND	ND

Notes:

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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.
12. DGWC-9 reported as DGWA-9 in 8/30/2016 and 12/6/2016 lab reports.

TABLE A-9
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID								
			DGWC-10	DGWC-10	DGWC-10	DGWC-10	DGWC-10	DGWC-10	DGWC-10	DGWC-10	DGWC-10
			8/31/2016	12/6/2016	3/29/2017	7/12/2017	10/24/2017	11/15/2017*	2/27/2018	7/10/2018	11/6/2018
APPENDIX III	Boron	N/R	3.50	3.30	4.30	3.38	3.45	NS	3.2	2.4	2.1
	Calcium	N/R	81.7	74.2	79.5	86.3	81.5	NS	96.2	95.3	94.8
	Chloride	(250)	11	10	11	11	11	12	10.8	11.0	12.3
	Fluoride	4	1.0	1.3	1.5	1.7	2.1	1.4	2.3	2.0	2.0
	Sulfate	(250)	400	190	360	390	410	390	335	301	356
	TDS	(500)	525	595	525	598	353	582	542	510	512
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	NS	ND	ND	ND
	Arsenic	0.01	0.0058	ND (0.0017 J)	0.0055	ND (0.0042 J)	0.0058	NS	0.011	ND (0.0036 J)	ND (0.0044 J)
	Barium	2	0.0321	0.0290	0.0335	0.0314	0.0317	NS	0.028	0.027	0.025
	Beryllium	0.004	0.0046	0.0048	0.0048	0.0046	0.0048	NS	0.011	0.012	0.012
	Cadmium	0.005	0.0012	0.0013	0.0013	0.0013	0.0014	NS	0.0010	0.0016	0.0012
	Chromium	0.1	ND	ND	ND (0.0008 J)	ND (0.0006 J)	ND (0.0007 J)	NS	ND	ND	ND
	Cobalt	N/R	0.193	0.200	0.184	0.177	0.175	NS	0.20	0.20	0.20
	Lead	0.015	ND	ND	ND	ND	ND	NS	ND	ND	ND
	Lithium	N/R	ND (0.0022 J)	ND	ND (0.0020 J)	ND (0.0019 J)	ND (0.0022 J)	NS	ND (0.0037 J)	ND (0.0047 J)	ND (0.0049 J)
	Mercury	0.002	ND (0.00007 J)	ND (0.00009 J)	ND (0.00008 J)	ND	ND	NS	ND	ND (0.000051 J)	ND (0.00034 J)
	Molybdenum	N/R	ND	ND	ND	ND	ND	NS	ND	ND	ND
	Radium	5	1.08	1.31	1.24	0.831	0.838 U	NS	1.55	1.65	1.46
	Selenium	0.05	0.0366	ND (0.0026 J)	0.0286	0.0257	0.0281	NS	0.067	0.023	0.049
	Thallium	0.002	ND (0.0004 J)	ND (0.0004 J)	ND (0.0006 J)	ND (0.0005 J)	ND (0.0004 J)	NS	ND	ND (0.00032 J)	ND (0.00039 J)

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-10
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWC-11	DGWC-11	DGWC-11	DGWC-11	DGWC-11	DGWC-11	DGWC-11	DGWC-11
			8/31/2016	12/6/2016	3/29/2017	7/12/2017	10/24/2017	2/27/2018	7/10/2018	11/6/2018
APPENDIX III	Boron	N/R	0.914	1.15	1.07	1.14	1.18	1.2	1.1	1.2
	Calcium	N/R	44.2	48.3	50.5	50.8	55.0	51.4	56.2	62.6
	Chloride	(250)	11	11	12	11	12	12.7	13.7	15.2
	Fluoride	4	ND (0.06 J)	ND (0.06 J)	ND (0.04 J)	ND (0.03 J)	ND	ND	ND (0.047 J)	ND
	Sulfate	(250)	200	190	200	210	210	220	240	302
	TDS	(500)	307	358	300	382	342	393	422	412
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	0.0545	0.0564	0.0565	0.0572	0.0596	0.067	0.073	0.074
	Beryllium	0.004	ND	ND	ND	ND	ND	ND (0.000058 J)	ND (0.000076 J)	ND (0.000094 J)
	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 (0.0006 J)	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 (0.0027 J)	ND (0.0021 J)	ND (0.0022 J)	ND (0.0024 J)	ND (0.0022 J)	ND (0.0019 J)	ND (0.0022 J)
	Mercury	0.002	ND (0.00005 J)	ND (0.00008 J)	ND (0.00006 J)	ND	ND	ND	ND (0.000047 J)	ND (0.00028 J)
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.09	0.409 U	0.727	0.850 U	0.980 U	1.14	0.495 U	1.41
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
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9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-11
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWC-12	DGWC-12	DGWC-12	DGWC-12	DGWC-12	DGWC-12	DGWC-12	DGWC-12
			9/1/2016	12/7/2016	3/29/2017	7/12/2017	10/25/2017	2/27/2018	7/11/2018	11/7/2018
APPENDIX III	Boron	N/R	7.64	8.07	8.46	7.55	9.97	8.0	10.2	7.7
	Calcium	N/R	80.6	82.1	88.3	87.0	92.1	85.6	93.6	73.3
	Chloride	(250)	13	20	13	12	13	11.7	11.3	11.8
	Fluoride	4	ND (0.02 J)	ND (0.16 J)	ND (0.10 J)	ND (0.20 J)	0.60	0.34	ND	ND (0.070 J)
	Sulfate	(250)	390	350	150	350	400	356	344	298
	TDS	(500)	568	559	550	594	571	582	593	504
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND (0.0006 J)	ND	ND	ND
	Barium	2	0.0254	0.0241	0.0268	0.0262	0.0268	0.025	0.026	0.028
	Beryllium	0.004	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.00021 J)	ND (0.00020 J)	ND (0.00019 J)
	Cadmium	0.005	ND (0.0004 J)	ND (0.0003 J)	ND (0.0003 J)	ND (0.0004 J)	ND (0.0004 J)	ND (0.00038 J)	ND (0.00033 J)	ND (0.00031 J)
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND (0.0021 J)	ND (0.0026 J)	ND (0.0026 J)	ND (0.0033 J)	ND (0.0021 J)	ND (0.0021 J)	ND (0.0020 J)	ND (0.0057 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND (0.00097 J)	ND	ND
	Mercury	0.002	ND (0.00009 J)	ND	ND (0.00014 J)	ND (0.00008 J)	ND (0.00006 J)	ND (0.000060 J)	ND (0.000036 J)	ND (0.000045 J)
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.11	2.66	0.0726 U	0.538 U	0.216 U	0.830	0.728 U	0.414 U
	Selenium	0.05	ND (0.0017 J)	ND	ND (0.0017 J)	ND (0.0019 J)	ND (0.0024 J)	ND (0.0024 J)	ND	ND (0.0016 J)
	Thallium	0.002	ND	ND	ND (0.00008 J)	ND (0.00009 J)	ND (0.00009 J)	ND	ND	ND

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-12
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

	Substance	MCL/ (SMCL)	Well ID							
			DGWC-13	DGWC-13	DGWC-13	DGWC-13	DGWC-13	DGWC-13	DGWC-13	DGWC-13
			9/6/2016	12/7/2016	3/30/2017	7/12/2017	11/15/2017	2/28/2018	7/10/2018	11/7/2018
APPENDIX III	Boron	N/R	1.0	0.900	0.898	0.996	0.795	0.11	0.72	0.76
	Calcium	N/R	44.0	39.8	46.3	47.8	49.3	13.1	42.6	44.8
	Chloride	(250)	16	14	16	14	16	2.7	14.8	16.7
	Fluoride	4	ND (0.17 J)	0.30	ND (0.12 J)	ND (0.13 J)	0.44	ND (0.18 J)	0.32	ND (0.088 J)
	Sulfate	(250)	170	160	180	170	180	43.5	152	162
	TDS	(500)	296	270	287	312	325	84.0	306	314
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND (0.0014 J)	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	0.0297	0.0266	0.0308	0.0291	0.0309	ND (0.0079 J)	0.035	0.034
	Beryllium	0.004	ND	ND	ND (0.00007 J)	ND	ND	ND	ND (0.000050 J)	ND (0.000059 J)
	Cadmium	0.005	ND	ND (0.0002 J)	ND (0.00008 J)	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND (0.0009 J)	ND	ND	ND (0.0022 J)	ND	ND
	Cobalt	N/R	ND	ND	ND (0.0005 J)	ND (0.0004 J)	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND (0.0002 J)	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0029 J)	ND (0.0030 J)	ND (0.0035 J)	ND (0.0028 J)	ND (0.0028 J)	ND	ND (0.0028 J)	ND (0.0033 J)
	Mercury	0.002	ND	ND (0.00009 J)	ND (0.00007 J)	ND	ND	ND	ND (0.000054 J)	ND
	Molybdenum	N/R	0.0371	0.0273	0.0300	0.0323	0.0275	ND (0.0093 J)	0.024	0.018
	Radium	5	1.32	1.76	1.59	1.36	1.08 U	0.721 U	0.746 U	1.22 U
	Selenium	0.05	ND (0.0011 J)	ND (0.0015 J)	ND (0.0015 J)	ND	ND (0.0019 J)	ND	ND (0.0028 J)	ND (0.0029 J)
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-13
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWC-14	DGWC-14	DGWC-14	DGWC-14	DGWC-14	DGWC-14	DGWC-14	DGWC-14
			8/31/2016	12/6/2016	3/29/2017	7/12/2017	10/25/2017	2/27/2018	7/11/2018	11/7/2018
APPENDIX III	Boron	N/R	ND (0.0419 J)	0.0804	0.103	0.0440	0.0565	0.054	0.057	0.055
	Calcium	N/R	9.95	10.4	14.4	10.5	9.67	10	9.9	9.7
	Chloride	(250)	3.1	3.1	3.8	2.9	3.5	3.4	3.2	3.1
	Fluoride	4	ND (0.06 J)	ND (0.10 J)	ND (0.02 J)	ND	ND	ND	ND	ND
	Sulfate	(250)	44	45	81	44	42	41.0	40.6	41.3
	TDS	(500)	106	138	102	118	88	99.0	119	113
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	0.0576	0.0608	0.0693	0.0585	0.0563	0.059	0.061	0.055
	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	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0031 J)	ND (0.0042 J)	ND (0.0041 J)	ND (0.0036 J)	ND (0.0032 J)	ND (0.0035 J)	ND (0.0034 J)	ND (0.0037 J)
	Mercury	0.002	ND (0.00005 J)	ND (0.00008 J)	ND (0.00006 J)	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.997 U	0.659 U	0.313 U	1.03 U	0.607 U	0.695 U	1.04 U	0.593 U
	Selenium	0.05	ND (0.0016 J)	ND	ND	ND	ND	ND	ND (0.0020 J)	ND (0.0016 J)
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-14
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWC-15	DGWC-15	DGWC-15	DGWC-15	DGWC-15	DGWC-15	DGWC-15	DGWC-15
			9/6/2016	12/7/2016	3/30/2017	7/12/2017	10/25/2017	2/28/2018	7/11/2018	11/7/2018
APPENDIX III	Boron	N/R	1.25	1.56	1.50	1.49	1.47	1.6	1.4	0.80
	Calcium	N/R	33.6	34.7	36.9	38.4	36.2	35.0	37.5	11.4
	Chloride	(250)	19	20	21	21	21	20.1	21.4	22.4
	Fluoride	4	ND (0.11 J)	ND (0.11 J)	ND	ND (0.07 J)	ND (0.26 J)	ND	ND	ND
	Sulfate	(250)	180	180	210	170	180	168	154	168
	TDS	(500)	304	287	312	490	290	313	320	325
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND (0.0006 J)	ND	ND	ND	ND	ND
	Barium	2	0.0497	0.0469	0.0495	0.0517	0.0474	0.045	0.050	0.042
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND (0.00057 J)
	Cadmium	0.005	ND	ND (0.000090 J)	ND (0.00009 J)	ND	ND	ND	ND	ND (0.00031 J)
	Chromium	0.1	ND	ND	ND (0.0005 J)	ND	ND	ND	ND	ND (0.0024 J)
	Cobalt	N/R	ND (0.0042 J)	ND (0.0028 J)	ND (0.0024 J)	ND (0.0020 J)	ND (0.0019 J)	ND (0.0016 J)	ND (0.0018 J)	0.025
	Lead	0.015	ND	ND (0.0002 J)	ND (0.0001 J)	ND (0.0001 J)	ND	ND	ND	ND
	Lithium	N/R	ND (0.0064 J)	ND (0.0066 J)	ND (0.0061 J)	ND (0.0060 J)	ND (0.0061 J)	ND (0.0062 J)	ND (0.0058 J)	ND
	Mercury	0.002	ND	ND	ND (0.00006 J)	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.731 U	1.73	0.276 U	0.584 U	0.454 U	1.25	2.13	0.786 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND (0.0079 J)
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND (0.00016 J)

Notes:

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2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
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TABLE A-15
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWC-17	DGWC-17	DGWC-17	DGWC-17	DGWC-17	DGWC-17	DGWC-17	DGWC-17
			9/7/2016	12/8/2016	3/30/2017	7/12/2017	10/25/2017	2/28/2018	7/11/2018	11/7/2018
APPENDIX III	Boron	N/R	0.683	0.688	0.743	0.620	0.739	0.63	0.79	1.6
	Calcium	N/R	8.61	7.92	9.56	10.4	10.9	10.9	ND (13.0 J)	37.0
	Chloride	(250)	17	19	20	18	19	17.0	19.5	21.4
	Fluoride	4	0.32	0.31	ND (0.10 J)	ND (0.27 J)	0.49	0.54	ND (0.15 J)	ND (0.095 J)
	Sulfate	(250)	230	240	260	230	240	203	234	248
	TDS	(500)	353	408	338	417	343	364	393	408
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND (0.0008 J)	ND	ND (0.0007 J)	ND (0.00073 J)	ND	ND
	Barium	2	0.0694	0.0620	0.0615	0.0532	0.0544	0.053	0.053	0.044
	Beryllium	0.004	ND (0.0006 J)	ND (0.0005 J)	ND (0.0006 J)	ND (0.0005 J)	ND (0.0005 J)	ND (0.00053 J)	ND (0.00058 J)	ND
	Cadmium	0.005	ND (0.0003 J)	ND (0.0003 J)	ND (0.0003 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.00022 J)	ND (0.00029 J)	ND
	Chromium	0.1	ND (0.0026 J)	ND (0.0025 J)	ND (0.0026 J)	ND (0.0022 J)	ND (0.0024 J)	ND (0.0022 J)	ND (0.0024 J)	ND
	Cobalt	N/R	0.0247	0.0290	0.0283	0.0230	0.0259	0.020	0.025	ND (0.0016 J)
	Lead	0.015	ND	ND	ND (0.0001 J)	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND (0.0058 J)
	Mercury	0.002	ND (0.00006 J)	ND	ND (0.00012 J)	ND (0.00005 J)	ND (0.00005 J)	ND	ND	ND (0.000059 J)
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.17	1.65	0.865 U	0.362 U	0.401 U	1.10 U	0.640 U	0.795 U
	Selenium	0.05	ND (0.0070 J)	ND (0.0087 J)	ND (0.0099 J)	ND (0.0072 J)	ND (0.0078 J)	ND (0.0072 J)	ND (0.0070 J)	ND
	Thallium	0.002	ND	ND	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.00015 J)	ND (0.00017 J)	ND

Notes:
1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
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5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-16
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWC-19	DGWC-19	DGWC-19	DGWC-19	DGWC-19	DGWC-19	DGWC-19	DGWC-19
			9/1/2016	12/7/2016	3/29/2017	7/12/2017	10/25/2017	2/28/2018	7/11/2018	11/7/2018
APPENDIX III	Boron	N/R	3.08	3.34	3.96	2.82	3.19	2.9	3.7	2.6
	Calcium	N/R	65.6	68.3	68.0	70.0	77.0	72.0	82.7	81.7
	Chloride	(250)	41	41	42	41	41	36.4	38.2	38.8
	Fluoride	4	0.75	0.37	0.35	0.34	0.90	1.2	0.37	ND (0.20 J)
	Sulfate	(250)	240	250	250	250	270	244	249	266
	TDS	(500)	396	400	390	360	423	440	457	461
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.0022 J)	ND	ND (0.0020 J)	ND (0.0016 J)	ND (0.0022 J)	ND (0.0028 J)	ND (0.00090 J)	ND (0.0012 J)
	Barium	2	0.0214	0.0191	0.0209	0.0212	0.0210	0.021	0.023	0.024
	Beryllium	0.004	ND (0.0019 J)	ND (0.0021 J)	ND (0.0017 J)	ND (0.0018 J)	ND (0.0019 J)	ND (0.0020 J)	ND (0.0020 J)	ND (0.0020 J)
	Cadmium	0.005	ND (0.0004 J)	ND (0.0004 J)	ND (0.0004 J)	ND (0.0004 J)	ND (0.0004 J)	ND (0.00035 J)	ND (0.00039 J)	ND (0.00031 J)
	Chromium	0.1	ND (0.0031 J)	ND	ND (0.0025 J)	ND (0.0023 J)	ND (0.0024 J)	ND (0.0021 J)	ND (0.0022 J)	ND (0.0028 J)
	Cobalt	N/R	0.0553	0.0561	0.0534	0.0489	0.0514	0.051	0.051	0.048
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0034 J)	ND (0.0034 J)	ND (0.0031 J)	ND (0.0032 J)	ND (0.0031 J)	ND (0.0031 J)	ND (0.0034 J)	ND (0.0034 J)
	Mercury	0.002	ND (0.00004 J)	ND (0.00005 J)	ND (0.00009 J)	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.07 U	0.903 U	0.302 U	0.283 U	0.927 U	0.813 U	0.751 U	1.02
	Selenium	0.05	ND (0.0093 J)	ND	ND (0.0071 J)	ND (0.0065 J)	ND (0.0087 J)	0.011	ND (0.0036 J)	ND (0.0068 J)
	Thallium	0.002	ND (0.0005 J)	ND (0.0005 J)	ND (0.0004 J)	ND (0.0005 J)	ND (0.0004 J)	ND (0.00049 J)	ND (0.00050 J)	ND (0.00052 J)

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-17
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWC-20	DGWC-20	DGWC-20	DGWC-20	DGWC-20	DGWC-20	DGWC-20	DGWC-20
			9/2/2016	12/7/2016	3/29/2017	7/12/2017	10/25/2017	2/28/2018	7/11/2018	11/7/2018
APPENDIX III	Boron	N/R	6.77	6.04	8.23	6.81	8.94	6.3	5.7	5.0
	Calcium	N/R	96.3	91.9	95.7	100	97.3	86.3	92.4	85.9
	Chloride	(250)	15	16	17	18	20	18.6	20.4	21.5
	Fluoride	4	0.66	0.66	0.34	0.41	0.68	0.76	1.3	ND (0.099 J)
	Sulfate	(250)	580	650	640	630	610	584	501	554
	TDS	(500)	1100	930	923	956	854	888	826	834
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	0.0159	ND (0.0037 J)	0.0150	0.0121	0.0135	0.018	0.0055	0.0054
	Barium	2	ND (0.0097 J)	ND (0.0087 J)	ND (0.0094 J)	ND (0.0099 J)	ND (0.0096 J)	ND (0.0094 J)	0.010	0.011
	Beryllium	0.004	ND (0.0026 J)	0.0035	ND (0.0026 J)	ND (0.0025 J)	ND (0.0027 J)	ND (0.0025 J)	ND (0.0026 J)	ND (0.0024 J)
	Cadmium	0.005	0.0023	0.0023	0.0021	0.0021	0.0020	0.0018	0.0018	0.0018
	Chromium	0.1	ND (0.0017 J)	ND	ND (0.0016 J)	ND	ND (0.0015 J)	ND	ND	ND (0.0032 J)
	Cobalt	N/R	0.497	0.614	0.443	0.538	0.432	0.46	0.47	0.42
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0021 J)	ND (0.0050 J)	ND (0.0021 J)	ND (0.0019 J)	ND (0.0022 J)	ND (0.0019 J)	ND (0.0022 J)	ND (0.0019 J)
	Mercury	0.002	ND	ND (0.00008 J)	ND (0.00008 J)	ND	ND	ND	ND	ND (0.000038 J)
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.48	1.26 U	0.373 U	0.910 U	0.853 U	0.727 U	1.30	0.746 U
	Selenium	0.05	0.0671	ND (0.0056 J)	0.0521	0.0483	0.0506	0.076	0.022	0.044
	Thallium	0.002	ND	ND (0.0006 J)	ND (0.0006 J)	ND (0.0006 J)	ND (0.0005 J)	ND	ND	ND (0.00053 J)

Notes:
1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
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6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-18
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWC-21	DGWC-21	DGWC-21	DGWC-21	DGWC-21	DGWC-21	DGWC-21	DGWC-21
			9/2/2016	12/8/2016	3/30/2017	7/12/2017	10/25/2017	2/28/2018	7/11/2018	11/7/2018
APPENDIX III	Boron	N/R	4.81	3.57	5.68	5.20	7.92	5.9	8.3	4.9
	Calcium	N/R	70.2	70.1	72.5	80.4	75.6	73.2	82.3	78.5
	Chloride	(250)	25	24	24	23	23	19.9	20.9	20.5
	Fluoride	4	ND (0.07 J)	ND (0.14 J)	ND	ND (0.04 J)	0.34	ND	ND	ND
	Sulfate	(250)	300	280	270	290	290	267	277	286
	TDS	(500)	459	491	436	505	474	480	485	516
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND (0.0013 J)	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	0.0252	0.0262	0.0272	0.0276	0.0262	0.027	0.027	0.024
	Beryllium	0.004	ND (0.0001 J)	ND (0.0001 J)	ND (0.0002 J)	ND (0.0001 J)	ND (0.0002 J)	ND (0.00016 J)	ND (0.00016 J)	ND (0.00018 J)
	Cadmium	0.005	ND (0.0006 J)	ND (0.0006 J)	ND (0.0008 J)	ND (0.0006 J)	ND (0.0005 J)	ND (0.00054 J)	ND (0.00054 J)	ND (0.00048 J)
	Chromium	0.1	ND	ND	ND (0.0005 J)	ND (0.0006 J)	ND	ND	ND	ND
	Cobalt	N/R	ND (0.0085 J)	ND (0.0095 J)	ND (0.0076 J)	ND (0.0092 J)	ND (0.0092 J)	ND (0.0094 J)	ND (0.0097 J)	ND (0.0096 J)
	Lead	0.015	ND (0.0002 J)	ND	ND (0.0004 J)	ND (0.0001 J)	ND	ND (0.00047 J)	ND	ND
	Lithium	N/R	ND (0.0057 J)	ND (0.0054 J)	ND (0.0065 J)	ND (0.0057 J)	ND (0.0060 J)	ND (0.0061 J)	ND (0.0057 J)	ND (0.0059 J)
	Mercury	0.002	ND (0.00006 J)	ND	ND (0.00008 J)	ND (0.00006 J)	ND (0.00005 J)	ND	ND	ND (0.000051 J)
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.908 U	1.03 U	0.884 U	1.22	1.07 U	1.45	1.59	1.16
	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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2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
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7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-19
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWC-22	DGWC-22	DGWC-22	DGWC-22	DGWC-22	DGWC-22	DGWC-22	DGWC-22
			9/2/2016	12/8/2016	3/29/2017	7/13/2017	10/25/2017	2/28/2018	7/12/2018	11/7/2018
APPENDIX III	Boron	N/R	3.99	3.10	4.85	3.85	3.90	5.1	3.6	3.3
	Calcium	N/R	61.6	60.1	64.7	67.2	66.8	62.3	71.0	60.9
	Chloride	(250)	30	26	30	29	29	23.4	26.1	25.8
	Fluoride	4	0.30	ND (0.12 J)	ND (0.11 J)	ND (0.09 J)	ND (0.25 J)	ND	ND (0.13 J)	ND
	Sulfate	(250)	140	260	290	300	290	278	197	320
	TDS	(500)	502	464	462	492	477	476	486	511
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND (0.0010 J)	ND	ND
	Barium	2	0.0397	0.0408	0.0417	0.0376	0.0384	0.035	0.036	0.031
	Beryllium	0.004	ND (0.0002 J)	ND (0.0001 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.00019 J)	ND (0.00018 J)	ND (0.00017 J)
	Cadmium	0.005	ND (0.0003 J)	ND (0.0004 J)	ND (0.0004 J)	ND (0.0005 J)	ND (0.0007 J)	ND (0.00086 J)	ND (0.00091 J)	ND (0.00064 J)
	Chromium	0.1	ND (0.0012 J)	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	0.0102	ND (0.0079 J)	ND (0.0097 J)	0.0106	ND (0.0094 J)	ND (0.0098 J)	0.011	ND (0.0088 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0046 J)	ND (0.0047 J)	ND (0.0043 J)	ND (0.0044 J)	ND (0.0042 J)	ND (0.0043 J)	ND (0.0036 J)	ND (0.0040 J)
	Mercury	0.002	ND (0.00005 J)	ND	ND (0.00010 J)	ND	ND	ND	ND (0.000055 J)	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.54	0.505 U	0.715 U	1.14	1.60	0.918 U	0.981 U	0.832 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND (0.0017 J)	ND
	Thallium	0.002	ND	ND	ND (0.00006 J)	ND (0.00007 J)	ND (0.00007 J)	ND	ND	ND

Notes:
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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
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7. TDS indicates total dissolved solids.
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9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-20
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWC-23	DGWC-23	DGWC-23	DGWC-23	DGWC-23	DGWC-23	DGWC-23	DGWC-23
			3/30/2017	5/12/2017	6/15/2017	7/12/2017	10/26/2017	3/1/2018	7/12/2018	11/8/2018
APPENDIX III	Boron	N/R	4.68	4.03	4.11	3.74	4.07	4.37	4.0	4.7
	Calcium	N/R	68.1	71.1	65.9	70.0	67.2	66.5	72.0	73.5
	Chloride	(250)	17	17	16	16	17	14.8	15.2	14.6
	Fluoride	4	ND (0.12 J)	0.36	ND (0.21 J)	ND (0.22 J)	0.66	ND (0.18 J)	ND (0.25 J)	ND (0.052 J)
	Sulfate	(250)	220	220	200	220	220	209	202	292
	TDS	(500)	380	438	458	461	446	454	432	450
APPENDIX IV	Antimony	0.006	ND	ND	ND (0.0007 J)	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	0.0184	0.0202	0.0188	0.0186	0.0176	0.0164	0.022	0.022
	Beryllium	0.004	ND (0.0004 J)	ND (0.0004 J)	ND (0.0004 J)	ND (0.0004 J)	ND (0.0004 J)	ND (0.00034 J)	ND (0.00035 J)	ND (0.00047 J)
	Cadmium	0.005	ND (0.0002 J)	ND (0.0003 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.0003 J)	ND	ND (0.00028 J)	ND (0.00032 J)
	Chromium	0.1	ND (0.0012 J)	ND (0.0004 J)	ND (0.0005 J)	ND (0.0007 J)	ND (0.0007 J)	ND (0.0033 J)	ND	ND
	Cobalt	N/R	ND	ND	ND (0.0003 J)	ND	ND	ND	ND	ND (0.00091 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0162 J)	ND (0.0036 J)	ND (0.0063 J)	ND (0.0068 J)	ND (0.0049 J)	0.0759	ND (0.0047 J)	ND (0.0053 J)
	Mercury	0.002	ND (0.00020 J)	ND (0.00015 J)	ND (0.00019 J)	ND (0.00012 J)	ND (0.00012 J)	ND (0.00013 J)	ND (0.00016 J)	ND (0.00014 J)
	Molybdenum	N/R	ND (0.0084 J)	ND (0.0085 J)	0.0104	ND (0.0092 J)	ND (0.0077 J)	ND (0.0045 J)	0.012	0.012
	Radium	5	0.297 U	0.693 U	0.435 U	0.703 U	0.984 U	0.743 U	0.918 U	1.47
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND (0.00020 J)

Notes:

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6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
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9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
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TABLE A-21
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWA-26	DGWA-26	DGWA-26	DGWA-26	DGWA-26	DGWA-26	DGWA-26	DGWA-26
			8/30/2016	12/6/2016						
APPENDIX III	Boron	N/R	0.854	0.552						
	Calcium	N/R	83.2	46.2						
	Chloride	(250)	4.3	2.8						
	Fluoride	4	ND (0.20 J)	ND (0.15 J)						
	Sulfate	(250)	330	220						
	TDS	(500)	566	432						
APPENDIX IV	Antimony	0.006	ND	ND						
	Arsenic	0.01	ND	ND						
	Barium	2	0.0377	0.0157						
	Beryllium	0.004	ND (0.0009 J)	ND (0.0002 J)						
	Cadmium	0.005	ND	ND						
	Chromium	0.1	ND	ND						
	Cobalt	N/R	ND	ND						
	Lead	0.015	ND	ND						
	Lithium	N/R	ND (0.0200 J)	ND (0.0212 J)						
	Mercury	0.002	ND (0.00008 J)	ND (0.00005 J)						
	Molybdenum	N/R	ND	ND						
	Radium	5	8.98	4.47						
	Selenium	0.05	ND (0.0092 J)	ND (0.0038 J)						
	Thallium	0.002	ND	ND						

See Note 10

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
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7. TDS indicates total dissolved solids.
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TABLE A-22
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWA-27	DGWA-27	DGWA-27	DGWA-27	DGWA-27	DGWA-27	DGWA-27	DGWA-27
			8/30/2016	12/6/2016						
APPENDIX III	Boron	N/R	1.13	1.36						
	Calcium	N/R	166	163						
	Chloride	(250)	6.8	6.9						
	Fluoride	4	1.0	0.81						
	Sulfate	(250)	860	730						
	TDS	(500)	1270	1110						
APPENDIX IV	Antimony	0.006	ND	ND						
	Arsenic	0.01	0.0070	ND						
	Barium	2	0.0447	0.0370						
	Beryllium	0.004	0.0275	0.0184						
	Cadmium	0.005	0.0054	0.0046						
	Chromium	0.1	ND	ND						
	Cobalt	N/R	0.930	0.598						
	Lead	0.015	ND (0.0005 J)	ND (0.0003 J)						
	Lithium	N/R	ND (0.0496 J)	ND (0.0443 J)						
	Mercury	0.002	ND (0.00005 J)	ND (0.00007 J)						
	Molybdenum	N/R	ND	ND						
	Radium	5	0.815 U	1.24 U						
	Selenium	0.05	0.0447	0.0212						
	Thallium	0.002	ND	ND						

See Note 10

Notes:

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TABLE A-23
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWC-42	DGWC-42	DGWC-42	DGWC-42	DGWC-42	DGWC-42	DGWC-42	DGWC-42
			9/7/2016	12/8/2016	3/31/2017	7/13/2017	10/25/2017	2/28/2018	7/11/2018	11/7/2018
APPENDIX III	Boron	N/R	0.924	0.957	0.989	1.03	0.982	0.92	0.83	0.89
	Calcium	N/R	43.6	45.8	48.3	52.3	50.9	45.1	47.8	45.5
	Chloride	(250)	33	32	33	33	32	29.0	29.3	28.6
	Fluoride	4	ND (0.02 J)	ND (0.06 J)	ND	ND	ND	ND	ND	ND
	Sulfate	(250)	370	350	380	370	370	350	366	439
	TDS	(500)	611	535	661	641	626	616	638	626
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 (0.0011 J)	ND	ND
	Barium	2	0.0194	0.0189	0.0194	0.0210	0.0196	0.017	0.020	0.017
	Beryllium	0.004	ND (0.0021 J)	ND (0.0023 J)	ND (0.0025 J)	ND (0.0025 J)	ND (0.0026 J)	ND (0.0029 J)	ND (0.0029 J)	0.0031
	Cadmium	0.005	ND (0.0007 J)	ND (0.0003 J)	ND (0.0009 J)	ND (0.0008 J)	ND (0.0005 J)	ND (0.00025 J)	0.0024	ND (0.00091 J)
	Chromium	0.1	ND	ND	ND (0.0010 J)	ND (0.0008 J)	ND (0.0005 J)	ND	ND	ND
	Cobalt	N/R	0.0695	0.0652	0.0524	0.0481	0.0435	0.017	0.019	0.020
	Lead	0.015	ND (0.0002 J)	ND (0.0002 J)	ND (0.0004 J)	ND (0.0004 J)	ND (0.0002 J)	ND	ND (0.00052 J)	ND (0.00047 J)
	Lithium	N/R	ND (0.0120 J)	ND (0.0118 J)	ND (0.0119 J)	ND (0.0116 J)	ND (0.0122 J)	ND (0.012 J)	ND (0.010 J)	ND (0.012 J)
	Mercury	0.002	ND	ND	ND (0.00004 J)	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.876 U	0.955	0.102 U	1.08 U	1.46	0.882 U	0.924 U	0.654 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
	Thallium	0.002	ND	ND	ND (0.00009 J)	ND (0.00009 J)	ND (0.00009 J)	ND	ND	ND

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-24
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWC-47	DGWC-47	DGWC-47	DGWC-47	DGWC-47	DGWC-47	DGWC-47	DGWC-47
			9/1/2016	12/8/2016	3/31/2017	7/13/2017	10/26/2017	3/1/2018	7/12/2018	11/7/2018
APPENDIX III	Boron	N/R	0.345	0.352	0.312	0.280	0.269	0.296	0.26	0.30
	Calcium	N/R	69.3	71.1	62.6	52.5	46.7	44.2	41.6	38.6
	Chloride	(250)	12	12	9.1	5.7	6.6	10.7	9.5	8.6
	Fluoride	4	1.8	1.1	0.88	0.84	1.0	1.4	0.96	0.74
	Sulfate	(250)	470	400	350	270	290	245	240	143
	TDS	(500)	704	587	545	441	444	435	372	348
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.0037 J)	ND (0.0032 J)	ND (0.0031 J)	ND (0.0018 J)	ND (0.0016 J)	ND (0.0029 J)	ND (0.0023 J)	ND (0.0022 J)
	Barium	2	0.0162	0.0247	0.0189	0.0165	0.0152	0.0164	0.015	0.020
	Beryllium	0.004	0.0165	0.0116	0.0112	0.0098	0.0119	0.0146	0.013	0.014
	Cadmium	0.005	0.0017	ND (0.0002 J)	0.0020	0.0017	0.0015	0.0025	0.0021	0.0016
	Chromium	0.1	ND	ND	ND (0.0007 J)	ND	ND	ND	ND	ND
	Cobalt	N/R	0.536	0.381	0.354	0.396	0.383	0.401	0.36	0.35
	Lead	0.015	ND (0.0005 J)	ND	ND (0.0009 J)	ND (0.0007 J)	ND (0.0009 J)	ND (0.0011 J)	ND (0.0010 J)	ND (0.00091 J)
	Lithium	N/R	0.0854	0.0667	0.0767	0.0743	0.0710	0.0772	0.073	0.082
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	4.47	2.88	1.14	2.37	2.88	2.21	1.73	1.72
	Selenium	0.05	0.0217	0.0170	0.0133	ND (0.0068 J)	ND (0.0097 J)	0.0124	0.015	ND (0.0045 J)
	Thallium	0.002	ND (0.0002 J)	ND	ND (0.0002 J)	ND (0.0002 J)	ND (0.0003 J)	ND (0.00032 J)	ND (0.00031 J)	ND (0.00032 J)

Notes:
1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
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7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-25
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWC-48	DGWC-48	DGWC-48	DGWC-48	DGWC-48	DGWC-48	DGWC-48	DGWC-48
			9/1/2016	12/8/2016	3/30/2017	7/13/2017	10/26/2017	3/2/2018	7/12/2018	11/7/2018
APPENDIX III	Boron	N/R	0.955	0.919	0.925	0.972	0.746	0.878	0.82	0.74
	Calcium	N/R	95.1	105	98.6	102	94.0	86.6	89.1	88.0
	Chloride	(250)	18	17	16	15	14	12.8	11.7	11.4
	Fluoride	4	1.5	1.6	0.86	1.1	1.7	1.1	0.65	0.63
	Sulfate	(250)	540	540	550	500	510	456	409	432
	TDS	(500)	845	777	775	789	753	704	705	678
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND (0.0015 J)	ND (0.0012 J)	ND (0.0008 J)	ND (0.0017 J)	ND (0.0015 J)	ND
	Barium	2	0.0157	0.0155	0.0131	0.0140	0.0117	0.0131	0.013	0.014
	Beryllium	0.004	0.0080	0.0086	0.0106	0.0106	0.0078	0.0096	0.0086	0.0078
	Cadmium	0.005	0.0013	0.0042	0.0089	0.0033	0.0032	0.0049	0.0032	0.0031
	Chromium	0.1	ND	ND	ND	ND (0.0007 J)	ND	ND	ND	ND
	Cobalt	N/R	0.539	0.575	0.573	0.531	0.482	0.490	0.46	0.48
	Lead	0.015	ND (0.0008 J)	ND (0.0019 J)	ND (0.0035 J)	ND (0.0020 J)	ND (0.0022 J)	ND (0.0022 J)	ND (0.0014 J)	ND (0.0023 J)
	Lithium	N/R	0.125	0.122	0.144	0.143	0.115	0.129	0.12	0.12
	Mercury	0.002	ND	ND	ND (0.00006 J)	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	2.37	2.87	1.71	1.78	3.74	2.26	1.81	1.94
	Selenium	0.05	ND (0.0084 J)	ND (0.0084 J)	ND (0.0079 J)	ND (0.0062 J)	ND (0.0058 J)	ND (0.0084 J)	0.013	ND (0.0038 J)
	Thallium	0.002	ND	ND	ND (0.00009 J)	ND (0.00008 J)	ND (0.00009 J)	ND	ND	ND

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
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7. TDS indicates total dissolved solids.
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9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.
11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

TABLE A-26
ANALYTICAL DATA SUMMARY
Ash Pond 2 and Ash Ponds 3/4 - Background Events
Georgia Power Company - Plant McDonough
Atlanta, GA

Substance		MCL/ (SMCL)	Well ID							
			DGWA-70	DGWA-70	DGWA-70	DGWA-70	DGWA-70	DGWA-70	DGWA-70	DGWA-70
			3/28/2017							
APPENDIX III	Boron	N/R	ND (0.0067 J)							
	Calcium	N/R	5.14							
	Chloride	(250)	3.8							
	Fluoride	4	1.2							
	Sulfate	(250)	2.7							
	TDS	(500)	39							
APPENDIX IV	Antimony	0.006	ND							
	Arsenic	0.01	ND							
	Barium	2	0.0166							
	Beryllium	0.004	ND							
	Cadmium	0.005	ND							
	Chromium	0.1	ND (0.0008 J)							
	Cobalt	N/R	ND (0.0034 J)							
	Lead	0.015	ND (0.00009 J)							
	Lithium	N/R	ND (0.0054 J)							
	Mercury	0.002	ND							
	Molybdenum	N/R	ND							
	Radium	5	0.866 U							
	Selenium	0.05	ND							
	Thallium	0.002	ND							

See Note 10

Notes:
1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
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11. NS indicates not sampled due to resampling for selected constituents on this date . * indicates a resample event.

LABORATORY ANALYTICAL DATA

August – September 2016

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:

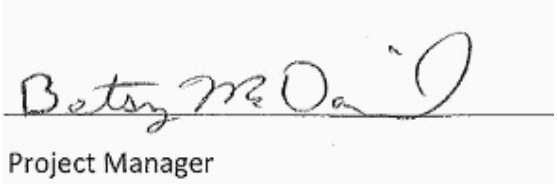
Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: **Mr. Joju Abraham**

Report Number: **AZH0942**
September 08, 2016
Project: CCR Event
Project #:Plant McDonough

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

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 08, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWA-9	AZH0942-01	Ground Water	08/30/16 11:20	08/31/16 08:50
DGWA-8	AZH0942-02	Ground Water	08/30/16 14:20	08/31/16 08:50
DGWA-27	AZH0942-03	Ground Water	08/30/16 14:20	08/31/16 08:50
DGWA-26	AZH0942-04	Ground Water	08/30/16 15:55	08/31/16 08:50

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 08, 2016

Report No.: AZH0942
Client ID: DGWA-9
Date/Time Sampled: 8/30/2016 11:20:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZH0942-01
Date/Time Received: 8/31/2016 8:50:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	414	25	10	mg/L	SM 2540 C		1	08/31/16 15:15	08/31/16 15:15	6080844	JPT
Inorganic Anions											
Chloride	6.0	0.25	0.01	mg/L	EPA 300.0	B-01	1	08/31/16 10:53	08/31/16 14:39	6080842	RLC
Fluoride	0.78	0.30	0.02	mg/L	EPA 300.0		1	08/31/16 10:53	08/31/16 14:39	6080842	RLC
Sulfate	300	20	1.0	mg/L	EPA 300.0		20	08/31/16 10:53	09/01/16 22:03	6080842	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:03	6080862	CSW
Arsenic	0.0241	0.0050	0.0016	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:03	6080862	CSW
Barium	0.0162	0.0100	0.0004	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:03	6080862	CSW
Beryllium	0.0045	0.0030	0.00008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:03	6080862	CSW
Boron	1.72	0.100	0.0064	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:03	6080862	CSW
Cadmium	0.0004	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 15:03	6080862	CSW
Calcium	64.9	5.00	0.311	mg/L	EPA 6020B		10	09/01/16 09:25	09/03/16 13:15	6080862	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:03	6080862	CSW
Cobalt	0.0896	0.0100	0.0005	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:03	6080862	CSW
Lead	ND	0.0050	0.0006	mg/L	EPA 6020B		5	09/01/16 09:25	09/01/16 15:03	6080862	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:03	6080862	CSW
Selenium	0.0833	0.0100	0.0010	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:03	6080862	CSW
Thallium	ND	0.0015	0.0010	mg/L	EPA 6020B	R-01	5	09/01/16 09:25	09/01/16 15:03	6080862	CSW
Lithium	0.0212	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 15:03	6080862	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/01/16 09:35	09/01/16 14:04	6080864	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 08, 2016

Report No.: AZH0942
Client ID: DGWA-8
Date/Time Sampled: 8/30/2016 2:20:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZH0942-02
Date/Time Received: 8/31/2016 8:50:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	693	25	10	mg/L	SM 2540 C		1	09/01/16 12:00	09/01/16 12:00	6090007	JPT
Inorganic Anions											
Chloride	9.7	0.25	0.01	mg/L	EPA 300.0	B-01	1	08/31/16 10:53	08/31/16 15:41	6080842	RLC
Fluoride	0.39	0.30	0.02	mg/L	EPA 300.0		1	08/31/16 10:53	08/31/16 15:41	6080842	RLC
Sulfate	450	20	1.0	mg/L	EPA 300.0		20	08/31/16 10:53	09/01/16 23:05	6080842	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:22	6080862	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:22	6080862	CSW
Barium	0.0435	0.0100	0.0004	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:22	6080862	CSW
Beryllium	0.0018	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 15:22	6080862	CSW
Boron	2.63	0.100	0.0064	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:22	6080862	CSW
Cadmium	0.0019	0.0010	0.00007	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:22	6080862	CSW
Calcium	82.7	5.00	0.311	mg/L	EPA 6020B		10	09/01/16 09:25	09/03/16 13:20	6080862	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:22	6080862	CSW
Cobalt	0.0568	0.0100	0.0005	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:22	6080862	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:22	6080862	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:22	6080862	CSW
Selenium	0.0032	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 15:22	6080862	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:22	6080862	CSW
Lithium	0.0050	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 15:22	6080862	CSW
Mercury	0.00009	0.00050	0.000041	mg/L	EPA 7470A	J	1	09/01/16 09:35	09/01/16 14:06	6080864	MTC

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 08, 2016

Report No.: AZH0942
Client ID: DGWA-27
Date/Time Sampled: 8/30/2016 2:20:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZH0942-03
Date/Time Received: 8/31/2016 8:50:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1270	25	10	mg/L	SM 2540 C		1	09/01/16 12:00	09/01/16 12:00	6090007	JPT
Inorganic Anions											
Chloride	6.8	0.25	0.01	mg/L	EPA 300.0	B-01	1	08/31/16 10:53	08/31/16 16:02	6080842	RLC
Fluoride	1.0	0.30	0.02	mg/L	EPA 300.0		1	08/31/16 10:53	08/31/16 16:02	6080842	RLC
Sulfate	860	50	2.6	mg/L	EPA 300.0		50	08/31/16 10:53	09/01/16 23:26	6080842	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:27	6080862	CSW
Arsenic	0.0070	0.0050	0.0016	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:27	6080862	CSW
Barium	0.0447	0.0100	0.0004	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:27	6080862	CSW
Beryllium	0.0275	0.0030	0.00008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:27	6080862	CSW
Boron	1.13	0.100	0.0064	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:27	6080862	CSW
Cadmium	0.0054	0.0010	0.00007	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:27	6080862	CSW
Calcium	166	25.0	1.55	mg/L	EPA 6020B		50	09/01/16 09:25	09/03/16 13:26	6080862	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:27	6080862	CSW
Cobalt	0.930	0.0100	0.0005	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:27	6080862	CSW
Lead	0.0005	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 15:27	6080862	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:27	6080862	CSW
Selenium	0.0447	0.0100	0.0010	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:27	6080862	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:27	6080862	CSW
Lithium	0.0496	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 15:27	6080862	CSW
Mercury	0.00005	0.00050	0.000041	mg/L	EPA 7470A	J	1	09/01/16 09:35	09/01/16 14:09	6080864	MTC

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 08, 2016

Report No.: AZH0942
Client ID: DGWA-26
Date/Time Sampled: 8/30/2016 3:55:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZH0942-04
Date/Time Received: 8/31/2016 8:50:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	566	25	10	mg/L	SM 2540 C		1	08/31/16 15:15	08/31/16 15:15	6080844	JPT
Inorganic Anions											
Chloride	4.3	0.25	0.01	mg/L	EPA 300.0	B-01	1	08/31/16 10:53	08/31/16 16:22	6080842	RLC
Fluoride	0.20	0.30	0.02	mg/L	EPA 300.0	J	1	08/31/16 10:53	08/31/16 16:22	6080842	RLC
Sulfate	330	20	1.0	mg/L	EPA 300.0		20	08/31/16 10:53	09/01/16 23:46	6080842	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:33	6080862	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:33	6080862	CSW
Barium	0.0377	0.0100	0.0004	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:33	6080862	CSW
Beryllium	0.0009	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 15:33	6080862	CSW
Boron	0.854	0.100	0.0064	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:33	6080862	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:33	6080862	CSW
Calcium	83.2	5.00	0.311	mg/L	EPA 6020B		10	09/01/16 09:25	09/03/16 13:32	6080862	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:33	6080862	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:33	6080862	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:33	6080862	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:33	6080862	CSW
Selenium	0.0092	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 15:33	6080862	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 15:33	6080862	CSW
Lithium	0.0200	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 15:33	6080862	CSW
Mercury	0.00008	0.00050	0.000041	mg/L	EPA 7470A	J	1	09/01/16 09:35	09/01/16 14:11	6080864	MTC

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General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6080844 - SM 2540 C											
Blank (6080844-BLK1)						Prepared & Analyzed: 08/31/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6080844-BS1)						Prepared & Analyzed: 08/31/16					
Total Dissolved Solids	387	25	10	mg/L	400.00		97	84-108			
Duplicate (6080844-DUP1)		**Source: AZH0946-03**				Prepared & Analyzed: 08/31/16					
Total Dissolved Solids	131	25	10	mg/L		136			4	10	
Duplicate (6080844-DUP2)		**Source: AZH0961-02**				Prepared & Analyzed: 08/31/16					
Total Dissolved Solids	360	25	10	mg/L		365			1	10	
Batch 6090007 - SM 2540 C											
Blank (6090007-BLK1)						Prepared & Analyzed: 09/01/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6090007-BS1)						Prepared & Analyzed: 09/01/16					
Total Dissolved Solids	396	25	10	mg/L	400.00		99	84-108			
Duplicate (6090007-DUP1)		**Source: AZH0981-01**				Prepared & Analyzed: 09/01/16					
Total Dissolved Solids	127	25	10	mg/L		141			10	10	
Duplicate (6090007-DUP2)		**Source: AZH0981-05**				Prepared & Analyzed: 09/01/16					
Total Dissolved Solids	264	25	10	mg/L		254			4	10	

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Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6080842 - EPA 300.0											
Blank (6080842-BLK1)						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							
LCS (6080842-BS1)						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			
Matrix Spike (6080842-MS1)		**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
Matrix Spike (6080842-MS2)		**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			
Matrix Spike Dup (6080842-MSD1)		**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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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6080862 - EPA 3005A											
Blank (6080862-BLK1)						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							
LCS (6080862-BS1)						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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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6080862 - EPA 3005A											
Matrix Spike (6080862-MS1)		**Source: AZH0941-02**				Prepared & Analyzed: 09/01/16					
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			
Matrix Spike Dup (6080862-MSD1)		**Source: AZH0941-02**				Prepared & Analyzed: 09/01/16					
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	

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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6080862 - EPA 3005A											
Post Spike (6080862-PS1)		**Source: AZH0941-02**				Prepared & Analyzed: 09/01/16					
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											
Blank (6080864-BLK1)						Prepared & Analyzed: 09/01/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6080864-BS1)						Prepared & Analyzed: 09/01/16					
Mercury	0.00258	0.00050	0.000041	mg/L	2.5000E-3		103	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
Batch 6080864 - EPA 7470A											
Matrix Spike (6080864-MS1)			**Source: AZH0947-03**			Prepared & Analyzed: 09/01/16					
Mercury	0.00252	0.00050	0.000041	mg/L	2.5000E-3	ND	101	75-125			
Matrix Spike Dup (6080864-MSD1)			**Source: AZH0947-03**			Prepared & Analyzed: 09/01/16					
Mercury	0.00249	0.00050	0.000041	mg/L	2.5000E-3	ND	100	75-125	1	20	
Post Spike (6080864-PS1)			**Source: AZH0947-03**			Prepared & Analyzed: 09/01/16					
Mercury	1.67			ug/L	1.6667	0.0131	99	80-120			

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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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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-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.

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Joju Abraham

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 16.63199 Phase II CCR

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER
CONTAINER TYPE:								P	P	P							
PRESERVATION:								3	7	3							
8/30/16	1120	GW		X	DGWA-9	3		1	1	1							1
8/30/16	1420	GW		X	DGWA-8	3		1	1	1							2
8/30/16	1420	GW		X	DGWA-27	3		1	1	1							3
8/30/16	1555	GW		X	DGWA-26	3		1	1	1							4

ANALYSIS REQUESTED

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Ben Hodges Field Lead

DATE/TIME: 8/30/16 1700

RELINQUISHED BY: [signature] E Cin

DATE/TIME: 850

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY/LAB: [signature]

DATE/TIME: 8/31/16 0850

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

Custody Seal: Intact Broken Not Present N/A

# of Coolers

Cooler ID:

pH checked: Yes No NA

Ice: Yes No NA

Temp Blank: 1 °C Min: 1 °C Max:

FOR LAB USE ONLY

LAB #: ATH0942

Entered into LIMS: 1/4

Tracking #:

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: 9/8/2016 8:24:05AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 08/31/16 08:50

Work Order: AZH0942
Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 4 **#Containers:** 12

Minimum Temp(C): 1.0 **Maximum Temp(C):** 1.0 **Custody Seal(s) Used:** N/A

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	NO
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, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

September 27, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McDonough AP
Pace Project No.: 30194832

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

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

CERTIFICATIONS

Project: Plant McDonough AP
Pace Project No.: 30194832

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

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

SAMPLE SUMMARY

Project: Plant McDonough AP
Pace Project No.: 30194832

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30194832001	**DGWA-9**	Water	08/30/16 11:20	09/01/16 10:00
30194832002	**DGWA-8**	Water	08/30/16 14:20	09/01/16 10:00
30194832003	**DGWA-27**	Water	08/30/16 14:20	09/01/16 10:00
30194832004	**DGWA-26**	Water	08/30/16 15:55	09/01/16 10:00

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

SAMPLE ANALYTE COUNT

Project: Plant McDonough AP
Pace Project No.: 30194832

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30194832001	**DGWA-9**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194832002	**DGWA-8**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194832003	**DGWA-27**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194832004	**DGWA-26**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30194832

Sample: DGWA-9 **Lab ID: 30194832001** Collected: 08/30/16 11:20 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	**0.412 ± 0.252 (0.400) C:103% T:NA**	pCi/L	09/10/16 11:06	13982-63-3	
Radium-228	EPA 9320	**0.918 ± 0.483 (0.851) C:75% T:65%**	pCi/L	09/14/16 02:52	15262-20-1	
Total Radium	Total Radium Calculation	**1.33 ± 0.735 (1.25)**	pCi/L	09/20/16 10:15	7440-14-4	

Sample: DGWA-8 **Lab ID: 30194832002** Collected: 08/30/16 14:20 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	**0.0840 ± 0.183 (0.430) C:78% T:NA**	pCi/L	09/10/16 11:07	13982-63-3	
Radium-228	EPA 9320	**0.835 ± 0.562 (1.07) C:77% T:50%**	pCi/L	09/16/16 10:56	15262-20-1	
Total Radium	Total Radium Calculation	**0.919 ± 0.745 (1.50)**	pCi/L	09/20/16 10:15	7440-14-4	

Sample: DGWA-27 **Lab ID: 30194832003** Collected: 08/30/16 14:20 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	**0.287 ± 0.234 (0.414) C:87% T:NA**	pCi/L	09/10/16 11:07	13982-63-3	
Radium-228	EPA 9320	**0.528 ± 0.418 (0.802) C:69% T:63%**	pCi/L	09/14/16 02:38	15262-20-1	
Total Radium	Total Radium Calculation	**0.815 ± 0.652 (1.22)**	pCi/L	09/20/16 10:15	7440-14-4	

Sample: DGWA-26 **Lab ID: 30194832004** Collected: 08/30/16 15:55 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	**1.19 ± 0.399 (0.344) C:94% T:NA**	pCi/L	09/10/16 11:07	13982-63-3	
Radium-228	EPA 9320	**7.79 ± 1.64 (0.975) C:76% T:57%**	pCi/L	09/16/16 10:55	15262-20-1	
Total Radium	Total Radium Calculation	**8.98 ± 2.04 (1.32)**	pCi/L	09/20/16 10:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30194832

QC Batch: 232325 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30194832001, 30194832002, 30194832003, 30194832004

METHOD BLANK: 1138696 Matrix: Water
Associated Lab Samples: 30194832001, 30194832002, 30194832003, 30194832004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.257 ± 0.225 (0.422) C:92% T:NA	pCi/L	09/10/16 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.

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30194832

QC Batch: 232397 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30194832001, 30194832002, 30194832003, 30194832004

METHOD BLANK: 1138978 Matrix: Water
Associated Lab Samples: 30194832001, 30194832002, 30194832003, 30194832004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.619 ± 0.406 (0.768) C:79% T:72%	pCi/L	09/16/16 10:55	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: Plant McDonough AP
Pace Project No.: 30194832

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.

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Joju Abraham
CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 1663199 Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:		P	P	P		
					PRESERVATION:		3	7	3		
8/30/16	1120	GW		X	DGWA-9	3	1	1	1		001
8/30/16	1420	GW		X	DGWA-8	3	1	1	1		002
8/30/16	1420	GW		X	DGWA-27	3	1	1	1		003
8/30/16	1555	GW		X	DGWA-26	3	1	1	1		004

WO#:30194832

30194832

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 8/30/16 1700
RELINQUISHED BY: Ruben E Ellis
DATE/TIME: 850

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

RECEIVED BY/LAB:
DATE/TIME: 8/31/16 0850
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: 1 °C Min: 1 °C Max:
Custody Seal: Intact Broken Not Present N/A
# of Coolers
Cooler ID:

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

Received
Date/Time 9-1-16 1000

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Georgia Power Project # 30194832

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. no Signature on coc as per coc
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: WT	✓			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			✓	12.
All containers needing preservation have been checked. All containers needing preservation are found to be in compliance with EPA recommendation. exceptions: VOA, coliform, TOC, O&G, Phenolics	✓			13. below 2 pH Initial when completed: BLM Date/time of preservation Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	14.
Trip Blank Present: Trip Blank Custody Seals Present			✓	15.
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: BLM Date: 9-1-16

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

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JLW
Date:	9/14/2016
Worklist:	31282
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1138978
MB concentration:	0.619
M/B Counting Uncertainty:	0.390
MB MDC:	0.768
MB Numerical Performance Indicator:	3.11
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS31282	LCSD31282
Count Date:	9/16/2016	
Spike I.D.:	16-025	
Spike Concentration (pCi/mL):	25.659	
Volume Used (mL):	0.30	
Aliquot Volume (L, g, F):	0.806	
Target Conc. (pCi/L, g, F):	9.546	
Uncertainty (Calculated):	0.687	
Result (pCi/L, g, F):	9.811	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.983	
Numerical Performance Indicator:	0.43	
Percent Recovery:	102.78%	
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:	
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.:	30194831002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30194831002DUP	
Sample Result (pCi/L, g, F):	1.058	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.535	
Sample Duplicate Result (pCi/L, g, F):	0.953	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.486	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.285	30194831002
Duplicate RPD:	10.46%	30194831002DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

LMP 9/26/16

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	WRR
Date:	9/9/2016
Worklist:	31262
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1138696
MB concentration:	0.257
M/B Counting Uncertainty:	0.222
MB MDC:	0.422
MB Numerical Performance Indicator:	2.27
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS31262	LCSD31262
Count Date:	9/10/2016	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.678	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.500	
Target Conc. (pCi/L, g, F):	8.928	
Uncertainty (Calculated):	0.420	
Result (pCi/L, g, F):	7.038	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.942	
Numerical Performance Indicator:	-3.59	
Percent Recovery:	78.83%	
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:	
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.:	30194831002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30194831002DUP	
Sample Result (pCi/L, g, F):	0.261	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.230	
Sample Duplicate Result (pCi/L, g, F):	0.024	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.254	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	1.357	30194831002
Duplicate RPD:	166.19%	30194831002DUP
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:

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

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:

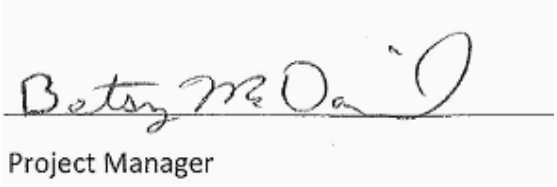
Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: **Mr. Joju Abraham**

Report Number: **AZI0006**
September 09, 2016
Project: CCR Event
Project #:Plant McDonough

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

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 09, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWC-5	AZI0006-01	Ground Water	08/31/16 13:21	09/01/16 08:50
DGWC-10	AZI0006-02	Ground Water	08/31/16 10:26	09/01/16 08:50
DGWC-11	AZI0006-03	Ground Water	08/31/16 12:05	09/01/16 08:50
DGWC-14	AZI0006-04	Ground Water	08/31/16 14:40	09/01/16 08:50
FD-1	AZI0006-05	Ground Water	08/31/16 00:00	09/01/16 08:50
FB-1	AZI0006-06	DI Water	08/31/16 14:40	09/01/16 08:50

PACE ANALYTICAL SERVICES, INC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 09, 2016

Report No.: AZI0006
Client ID: DGWC-5
Date/Time Sampled: 8/31/2016 1:21:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0006-01
Date/Time Received: 9/1/2016 8:50:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	524	25	10	mg/L	SM 2540 C		1	09/06/16 18:00	09/06/16 18:00	6090101	JPT
Inorganic Anions											
Chloride	8.6	0.25	0.01	mg/L	EPA 300.0		1	09/02/16 09:30	09/03/16 11:28	6090052	RLC
Fluoride	1.0	0.30	0.02	mg/L	EPA 300.0		1	09/02/16 09:30	09/03/16 11:28	6090052	RLC
Sulfate	400	20	1.0	mg/L	EPA 300.0		20	09/02/16 09:30	09/05/16 01:02	6090052	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 13:46	6090039	CSW
Arsenic	0.0035	0.0050	0.0016	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/03/16 13:46	6090039	CSW
Barium	0.0266	0.0100	0.0004	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:32	6090039	CSW
Beryllium	0.0054	0.0030	0.00008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 13:46	6090039	CSW
Boron	7.50	1.00	0.0642	mg/L	EPA 6020B		10	09/02/16 10:10	09/03/16 16:39	6090039	CSW
Cadmium	0.0002	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/03/16 13:46	6090039	CSW
Calcium	82.6	5.00	0.311	mg/L	EPA 6020B		10	09/02/16 10:10	09/03/16 16:39	6090039	CSW
Chromium	ND	0.0500	0.0047	mg/L	EPA 6020B	R-01	5	09/02/16 10:10	09/07/16 15:16	6090039	CSW
Cobalt	0.0550	0.0100	0.0005	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 13:46	6090039	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 19:32	6090039	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:32	6090039	CSW
Selenium	0.0182	0.0100	0.0010	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 13:46	6090039	CSW
Thallium	ND	0.0020	0.0010	mg/L	EPA 6020B	R-01	5	09/02/16 10:10	09/07/16 15:16	6090039	CSW
Lithium	0.0026	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 19:32	6090039	CSW
Mercury	0.00015	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	09/02/16 08:45	09/02/16 13:32	6090041	MTC

PACE ANALYTICAL SERVICES, INC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 09, 2016

Report No.: AZI0006
Client ID: DGWC-10
Date/Time Sampled: 8/31/2016 10:26:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0006-02
Date/Time Received: 9/1/2016 8:50:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	525	25	10	mg/L	SM 2540 C		1	09/06/16 18:00	09/06/16 18:00	6090101	JPT
Inorganic Anions											
Chloride	11	0.25	0.01	mg/L	EPA 300.0		1	09/02/16 09:30	09/03/16 11:49	6090052	RLC
Fluoride	1.0	0.30	0.02	mg/L	EPA 300.0		1	09/02/16 09:30	09/03/16 11:49	6090052	RLC
Sulfate	400	20	1.0	mg/L	EPA 300.0		20	09/02/16 09:30	09/05/16 01:23	6090052	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 13:56	6090039	CSW
Arsenic	0.0058	0.0050	0.0016	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:38	6090039	CSW
Barium	0.0321	0.0100	0.0004	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:38	6090039	CSW
Beryllium	0.0046	0.0030	0.00008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 13:56	6090039	CSW
Boron	3.50	1.00	0.0642	mg/L	EPA 6020B		10	09/02/16 10:10	09/03/16 16:45	6090039	CSW
Cadmium	0.0012	0.0010	0.00007	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 13:56	6090039	CSW
Calcium	81.7	5.00	0.311	mg/L	EPA 6020B		10	09/02/16 10:10	09/03/16 16:45	6090039	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:38	6090039	CSW
Cobalt	0.193	0.0100	0.0005	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:38	6090039	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:38	6090039	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:38	6090039	CSW
Selenium	0.0366	0.0100	0.0010	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:38	6090039	CSW
Thallium	0.0004	0.0010	0.0002	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 19:38	6090039	CSW
Lithium	0.0022	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 19:38	6090039	CSW
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	09/02/16 08:45	09/02/16 13:35	6090041	MTC

PACE ANALYTICAL SERVICES, INC.

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 09, 2016

Report No.: AZI0006
Client ID: DGWC-11
Date/Time Sampled: 8/31/2016 12:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0006-03
Date/Time Received: 9/1/2016 8:50:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	307	25	10	mg/L	SM 2540 C		1	09/06/16 18:00	09/06/16 18:00	6090101	JPT
Inorganic Anions											
Chloride	11	0.25	0.01	mg/L	EPA 300.0		1	09/02/16 09:30	09/03/16 12:10	6090052	RLC
Fluoride	0.06	0.30	0.02	mg/L	EPA 300.0	J	1	09/02/16 09:30	09/03/16 12:10	6090052	RLC
Sulfate	200	20	1.0	mg/L	EPA 300.0		20	09/02/16 09:30	09/05/16 01:45	6090052	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 14:00	6090039	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:44	6090039	CSW
Barium	0.0545	0.0100	0.0004	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:44	6090039	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 14:00	6090039	CSW
Boron	0.914	0.100	0.0064	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:44	6090039	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 14:00	6090039	CSW
Calcium	44.2	25.0	1.55	mg/L	EPA 6020B		50	09/02/16 10:10	09/03/16 16:51	6090039	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:44	6090039	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:44	6090039	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:44	6090039	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:44	6090039	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:44	6090039	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:44	6090039	CSW
Lithium	0.0022	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 19:44	6090039	CSW
Mercury	0.00005	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	09/02/16 08:45	09/02/16 13:37	6090041	MTC

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 09, 2016

Report No.: AZI0006
Client ID: DGWC-14
Date/Time Sampled: 8/31/2016 2:40:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0006-04
Date/Time Received: 9/1/2016 8:50:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	106	25	10	mg/L	SM 2540 C		1	09/06/16 18:00	09/06/16 18:00	6090101	JPT
Inorganic Anions											
Chloride	3.1	0.25	0.01	mg/L	EPA 300.0		1	09/02/16 09:30	09/03/16 12:30	6090052	RLC
Fluoride	0.06	0.30	0.02	mg/L	EPA 300.0	J	1	09/02/16 09:30	09/03/16 12:30	6090052	RLC
Sulfate	44	1.0	0.05	mg/L	EPA 300.0		1	09/02/16 09:30	09/03/16 12:30	6090052	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 14:05	6090039	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:01	6090039	CSW
Barium	0.0576	0.0100	0.0004	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:01	6090039	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 14:05	6090039	CSW
Boron	0.0419	0.100	0.0064	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 20:01	6090039	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 14:05	6090039	CSW
Calcium	9.95	2.50	0.155	mg/L	EPA 6020B		5	09/02/16 10:10	09/03/16 16:56	6090039	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:01	6090039	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:01	6090039	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:01	6090039	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:01	6090039	CSW
Selenium	0.0016	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 20:01	6090039	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:01	6090039	CSW
Lithium	0.0031	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 20:01	6090039	CSW
Mercury	0.00005	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	09/02/16 08:45	09/02/16 13:58	6090042	MTC

PACE ANALYTICAL SERVICES, INC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 09, 2016

Report No.: AZI0006
Client ID: FD-1
Date/Time Sampled: 8/31/2016 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0006-05
Date/Time Received: 9/1/2016 8:50:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	103	25	10	mg/L	SM 2540 C		1	09/06/16 18:00	09/06/16 18:00	6090101	JPT
Inorganic Anions											
Chloride	3.2	0.25	0.01	mg/L	EPA 300.0		1	09/02/16 09:30	09/03/16 12:51	6090052	RLC
Fluoride	0.07	0.30	0.02	mg/L	EPA 300.0	J	1	09/02/16 09:30	09/03/16 12:51	6090052	RLC
Sulfate	44	1.0	0.05	mg/L	EPA 300.0		1	09/02/16 09:30	09/03/16 12:51	6090052	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 14:09	6090039	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:06	6090039	CSW
Barium	0.0593	0.0100	0.0004	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:06	6090039	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 14:09	6090039	CSW
Boron	0.0433	0.100	0.0064	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 20:06	6090039	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 14:09	6090039	CSW
Calcium	10.0	2.50	0.155	mg/L	EPA 6020B		5	09/02/16 10:10	09/03/16 17:02	6090039	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:06	6090039	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:06	6090039	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:06	6090039	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:06	6090039	CSW
Selenium	0.0015	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 20:06	6090039	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:06	6090039	CSW
Lithium	0.0032	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 20:06	6090039	CSW
Mercury	0.00004	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	09/02/16 08:45	09/02/16 14:01	6090042	MTC

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 09, 2016

Report No.: AZI0006
Client ID: FB-1
Date/Time Sampled: 8/31/2016 2:40:00PM
Matrix: DI Water

Project: CCR Event
Lab Number ID: AZI0006-06
Date/Time Received: 9/1/2016 8:50:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	09/06/16 18:00	09/06/16 18:00	6090101	JPT
Inorganic Anions											
Chloride	0.06	0.25	0.01	mg/L	EPA 300.0	J	1	09/02/16 09:30	09/03/16 13:12	6090052	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/02/16 09:30	09/03/16 13:12	6090052	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	09/02/16 09:30	09/03/16 13:12	6090052	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 14:14	6090039	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:12	6090039	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:12	6090039	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 14:14	6090039	CSW
Boron	ND	0.100	0.0064	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:12	6090039	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 14:14	6090039	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:12	6090039	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:12	6090039	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:12	6090039	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:12	6090039	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:12	6090039	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:12	6090039	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:12	6090039	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 20:12	6090039	CSW
Mercury	0.00004	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	09/02/16 08:45	09/02/16 14:03	6090042	MTC

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 09, 2016

Report No.: AZI0006

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090101 - SM 2540 C											
Blank (6090101-BLK1)						Prepared & Analyzed: 09/06/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6090101-BS1)						Prepared & Analyzed: 09/06/16					
Total Dissolved Solids	393	25	10	mg/L	400.00		98	84-108			
Duplicate (6090101-DUP1)		**Source: AZI0015-02**				Prepared & Analyzed: 09/06/16					
Total Dissolved Solids	3870	25	10	mg/L		3860			0.2	10	
Duplicate (6090101-DUP2)		**Source: AZI0018-04**				Prepared & Analyzed: 09/06/16					
Total Dissolved Solids	80	25	10	mg/L		122			42	10	QR-03

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Attention: Mr. Joju Abraham

September 09, 2016

Report No.: AZI0006

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090052 - EPA 300.0											
Blank (6090052-BLK1)						Prepared: 09/02/16 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							
LCS (6090052-BS1)						Prepared: 09/02/16 Analyzed: 09/03/16					
Chloride	10.0	0.25	0.01	mg/L	10.010		100	90-110			
Fluoride	10.1	0.30	0.02	mg/L	10.010		101	90-110			
Sulfate	10.2	1.0	0.05	mg/L	10.010		101	90-110			
Matrix Spike (6090052-MS1)		**Source: AZI0015-03**				Prepared: 09/02/16 Analyzed: 09/03/16					
Chloride	507	0.25	0.01	mg/L	10.010	587	NR	90-110			QM-05
Fluoride	11.2	0.30	0.02	mg/L	10.010	0.93	102	90-110			
Sulfate	315	1.0	0.05	mg/L	10.010	37.1	NR	90-110			QM-05
Matrix Spike (6090052-MS2)		**Source: AZI0018-01**				Prepared: 09/02/16 Analyzed: 09/03/16					
Chloride	22.8	0.25	0.01	mg/L	10.010	13.0	98	90-110			
Fluoride	11.5	0.30	0.02	mg/L	10.010	ND	114	90-110			QM-05
Sulfate	129	1.0	0.05	mg/L	10.010	133	NR	90-110			QM-05
Matrix Spike Dup (6090052-MSD1)		**Source: AZI0015-03**				Prepared: 09/02/16 Analyzed: 09/03/16					
Chloride	517	0.25	0.01	mg/L	10.010	587	NR	90-110	2	15	QM-05
Fluoride	11.2	0.30	0.02	mg/L	10.010	0.93	103	90-110	0.3	15	
Sulfate	315	1.0	0.05	mg/L	10.010	37.1	NR	90-110	0.002	15	QM-05

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September 09, 2016

Report No.: AZI0006

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090039 - EPA 3005A											
Blank (6090039-BLK1)						Prepared: 09/02/16 Analyzed: 09/03/16					
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	0.0005	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 (6090039-BS1)						Prepared & Analyzed: 09/02/16					
Antimony	0.107	0.0030	0.0008	mg/L	0.10000		107	80-120			
Arsenic	0.0988	0.0050	0.0016	mg/L	0.10000		99	80-120			
Barium	0.102	0.0100	0.0004	mg/L	0.10000		102	80-120			
Beryllium	0.0950	0.0030	0.00008	mg/L	0.10000		95	80-120			
Boron	0.984	0.100	0.0064	mg/L	1.0000		98	80-120			
Cadmium	0.0997	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	0.102	0.0100	0.0009	mg/L	0.10000		102	80-120			
Cobalt	0.0962	0.0100	0.0005	mg/L	0.10000		96	80-120			
Copper	0.0964	0.0050	0.0005	mg/L	0.10000		96	80-120			
Lead	0.103	0.0050	0.0001	mg/L	0.10000		103	80-120			
Molybdenum	0.100	0.0100	0.0017	mg/L	0.10000		100	80-120			
Nickel	0.0973	0.0050	0.0006	mg/L	0.10000		97	80-120			
Selenium	0.0984	0.0100	0.0010	mg/L	0.10000		98	80-120			
Silver	0.0996	0.0050	0.0005	mg/L	0.10000		100	80-120			
Thallium	0.104	0.0010	0.0002	mg/L	0.10000		104	80-120			
Vanadium	0.0999	0.0100	0.0071	mg/L	0.10000		100	80-120			
Zinc	0.101	0.0100	0.0021	mg/L	0.10000		101	80-120			
Lithium	0.0964	0.0500	0.0021	mg/L	0.10000		96	80-120			

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September 09, 2016

Report No.: AZI0006

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090039 - EPA 3005A											
Matrix Spike (6090039-MS1)		**Source: AZI0015-01**			Prepared & Analyzed: 09/02/16						
Antimony	0.0992	0.0030	0.0008	mg/L	0.10000	ND	99	75-125			
Arsenic	0.313	0.0050	0.0016	mg/L	0.10000	0.212	101	75-125			
Barium	0.146	0.0100	0.0004	mg/L	0.10000	0.0498	96	75-125			
Beryllium	0.0763	0.0030	0.00008	mg/L	0.10000	ND	76	75-125			
Boron	1.22	0.100	0.0064	mg/L	1.0000	0.632	59	75-125			QM-02
Cadmium	0.0869	0.0010	0.00007	mg/L	0.10000	ND	87	75-125			
Calcium	81.8	5.00	0.311	mg/L	1.0000	82.8	NR	75-125			QM-02
Chromium	0.105	0.0100	0.0009	mg/L	0.10000	0.0010	104	75-125			
Cobalt	0.0941	0.0100	0.0005	mg/L	0.10000	ND	94	75-125			
Copper	0.0827	0.0050	0.0005	mg/L	0.10000	ND	83	75-125			
Lead	0.0884	0.0050	0.0001	mg/L	0.10000	ND	88	75-125			
Molybdenum	0.101	0.0100	0.0017	mg/L	0.10000	ND	101	75-125			
Nickel	0.0867	0.0050	0.0006	mg/L	0.10000	ND	87	75-125			
Selenium	0.0380	0.0100	0.0010	mg/L	0.10000	0.0015	36	75-125			QM-05
Silver	0.0820	0.0050	0.0005	mg/L	0.10000	ND	82	75-125			
Thallium	0.0908	0.0010	0.0002	mg/L	0.10000	ND	91	75-125			
Vanadium	0.113	0.0100	0.0071	mg/L	0.10000	ND	113	75-125			
Zinc	0.0878	0.0100	0.0021	mg/L	0.10000	ND	88	75-125			
Lithium	0.116	0.0500	0.0021	mg/L	0.10000	0.0389	77	75-125			
Matrix Spike Dup (6090039-MSD1)		**Source: AZI0015-01**			Prepared & Analyzed: 09/02/16						
Antimony	0.103	0.0030	0.0008	mg/L	0.10000	ND	103	75-125	4	20	
Arsenic	0.314	0.0050	0.0016	mg/L	0.10000	0.212	102	75-125	0.2	20	
Barium	0.154	0.0100	0.0004	mg/L	0.10000	0.0498	104	75-125	5	20	
Beryllium	0.0784	0.0030	0.00008	mg/L	0.10000	ND	78	75-125	3	20	
Boron	1.29	0.100	0.0064	mg/L	1.0000	0.632	66	75-125	6	20	QM-02
Cadmium	0.0882	0.0010	0.00007	mg/L	0.10000	ND	88	75-125	1	20	
Calcium	83.2	5.00	0.311	mg/L	1.0000	82.8	44	75-125	2	20	QM-02
Chromium	0.104	0.0100	0.0009	mg/L	0.10000	0.0010	103	75-125	0.3	20	
Cobalt	0.0918	0.0100	0.0005	mg/L	0.10000	ND	92	75-125	2	20	
Copper	0.0829	0.0050	0.0005	mg/L	0.10000	ND	83	75-125	0.3	20	
Lead	0.0885	0.0050	0.0001	mg/L	0.10000	ND	88	75-125	0.1	20	
Molybdenum	0.106	0.0100	0.0017	mg/L	0.10000	ND	106	75-125	4	20	
Nickel	0.0873	0.0050	0.0006	mg/L	0.10000	ND	87	75-125	0.7	20	
Selenium	0.0394	0.0100	0.0010	mg/L	0.10000	0.0015	38	75-125	4	20	QM-05
Silver	0.0858	0.0050	0.0005	mg/L	0.10000	ND	86	75-125	4	20	
Thallium	0.0923	0.0010	0.0002	mg/L	0.10000	ND	92	75-125	2	20	
Vanadium	0.113	0.0100	0.0071	mg/L	0.10000	ND	113	75-125	0.2	20	
Zinc	0.0872	0.0100	0.0021	mg/L	0.10000	ND	87	75-125	0.7	20	
Lithium	0.122	0.0500	0.0021	mg/L	0.10000	0.0389	83	75-125	5	20	

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Attention: Mr. Joju Abraham

September 09, 2016

Report No.: AZI0006

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090039 - EPA 3005A											
Post Spike (6090039-PS1)			**Source: AZI0015-01**			Prepared & Analyzed: 09/02/16					
Antimony	94.7			ug/L	100.00	0.0900	95	80-120			
Arsenic	300			ug/L	100.00	212	88	80-120			
Barium	148			ug/L	100.00	49.8	98	80-120			
Beryllium	79.2			ug/L	100.00	0.0500	79	80-120			QM-05
Boron	1270			ug/L	1000.0	632	63	80-120			QM-02
Cadmium	85.5			ug/L	100.00	0.0100	85	80-120			
Calcium	78800			ug/L	1000.0	82800	NR	80-120			QM-02
Chromium	96.6			ug/L	100.00	1.04	96	80-120			
Cobalt	90.7			ug/L	100.00	0.402	90	80-120			
Copper	80.9			ug/L	100.00	0.155	81	80-120			
Lead	88.7			ug/L	100.00	0.0713	89	80-120			
Molybdenum	102			ug/L	100.00	0.877	101	80-120			
Nickel	84.7			ug/L	100.00	0.391	84	80-120			
Selenium	92.6			ug/L	100.00	1.51	91	80-120			
Silver	82.9			ug/L	100.00	-0.0178	83	80-120			
Thallium	92.1			ug/L	100.00	-0.0163	92	80-120			
Vanadium	108			ug/L	100.00	4.05	104	80-120			
Zinc	86.1			ug/L	100.00	1.52	85	80-120			
Lithium	120			ug/L	100.00	38.9	81	80-120			
Batch 6090041 - EPA 7470A											
Blank (6090041-BLK1)						Prepared & Analyzed: 09/02/16					
Mercury	0.00004	0.00050	0.000041	mg/L							J
LCS (6090041-BS1)						Prepared & Analyzed: 09/02/16					
Mercury	0.00248	0.00050	0.000041	mg/L	2.5000E-3		99	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
Batch 6090041 - EPA 7470A											
Matrix Spike (6090041-MS1)			**Source: AZH0981-01**			Prepared & Analyzed: 09/02/16					
Mercury	0.00254	0.00050	0.000041	mg/L	2.5000E-3	ND	102	75-125			
Matrix Spike Dup (6090041-MSD1)			**Source: AZH0981-01**			Prepared & Analyzed: 09/02/16					
Mercury	0.00251	0.00050	0.000041	mg/L	2.5000E-3	ND	101	75-125	1	20	
Post Spike (6090041-PS1)			**Source: AZH0981-01**			Prepared & Analyzed: 09/02/16					
Mercury	1.68			ug/L	1.6667	0.0265	99	80-120			
Batch 6090042 - EPA 7470A											
Blank (6090042-BLK1)						Prepared & Analyzed: 09/02/16					
Mercury	0.00004	0.00050	0.000041	mg/L							J
LCS (6090042-BS1)						Prepared & Analyzed: 09/02/16					
Mercury	0.00245	0.00050	0.000041	mg/L	2.5000E-3		98	80-120			
Matrix Spike (6090042-MS1)			**Source: AZI0015-02**			Prepared & Analyzed: 09/02/16					
Mercury	0.00218	0.00050	0.000041	mg/L	2.5000E-3	ND	87	75-125			
Matrix Spike Dup (6090042-MSD1)			**Source: AZI0015-02**			Prepared & Analyzed: 09/02/16					
Mercury	0.00215	0.00050	0.000041	mg/L	2.5000E-3	ND	86	75-125	1	20	
Post Spike (6090042-PS1)			**Source: AZI0015-02**			Prepared & Analyzed: 09/02/16					
Mercury	1.58			ug/L	1.6667	0.0259	93	80-120			

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September 09, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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.

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).

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.

CHAIN OF CUSTODY RECORD

Pace Analytical

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 B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 1663199

Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER
CONTAINER TYPE:								P	P	P							
PRESERVATION:								3	7	3							
08/31/16	1321	GW		x	DGWC-5	3		1	1	1							1
08/31/16	1028	GW		x	DGWC-10	3		1	1	1							2
08/31/16	1205	GW		x	DGWC-11	4		1	1	2							3
08/31/16	1440	GW		x	DGWC-14	3		1	1	1							4
08/31/16	xx	GW		x	FD-1	3		1	1	1							5
08/31/16	1440	W		x	FB-1	3		1	1	1							6

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Ben Hodges Field Lead

DATE/TIME: 8/31/16 1700

RELINQUISHED BY: [signature]

DATE/TIME: 9/1/16 8:50

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY/LAB: [signature]

DATE/TIME: 9/1/16 0850

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

Custody Seal: Intact Broken Not Present N/A

# of Coolers

Cooler ID:

pH checked: Yes No NA

Ice: Yes No NA

Temperature °C Min: 2 °C Max

FOR LAB USE ONLY

LAB #: AZI0006

Entered into LIMS: LH

Tracking #:

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: 9/9/2016 9:30:46AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 09/01/16 08:50

Work Order: AZI0006
Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 6 **#Containers:** 19

Minimum Temp(C): 2.0 **Maximum Temp(C):** 2.0 **Custody Seal(s) Used:** N/A

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	NO
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, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

October 03, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McDonough AP
Pace Project No.: 30195003

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

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

CERTIFICATIONS

Project: Plant McDonough AP
Pace Project No.: 30195003

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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Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: Plant McDonough AP
Pace Project No.: 30195003

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30195003001	**DGWC-5**	Water	08/31/16 13:21	09/02/16 10:20
30195003002	**DGWC-10**	Water	08/31/16 10:26	09/02/16 10:20
30195003003	**DGWC-11**	Water	08/31/16 12:05	09/02/16 10:20
30195003004	**DGWC-14**	Water	08/31/16 14:40	09/02/16 10:20
30195003005	**FD-1**	Water	08/31/16 00:01	09/02/16 10:20
30195003006	**FB-1**	Water	08/31/16 14:40	09/02/16 10:20

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SAMPLE ANALYTE COUNT

Project: Plant McDonough AP
Pace Project No.: 30195003

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30195003001	**DGWC-5**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30195003002	**DGWC-10**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30195003003	**DGWC-11**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30195003004	**DGWC-14**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30195003005	**FD-1**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30195003006	**FB-1**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1

Pace Analytical Services, Inc.
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Greensburg, PA 15601
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195003

Sample: DGWC-5 **Lab ID: 30195003001** Collected: 08/31/16 13:21 Received: 09/02/16 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	**0.504 ± 0.177 (0.175) C:83% T:NA**	pCi/L	09/14/16 12:50	13982-63-3	
Radium-228	EPA 9320	**1.99 ± 0.608 (0.701) C:73% T:76%**	pCi/L	09/22/16 21:45	15262-20-1	
Total Radium	Total Radium Calculation	**2.49 ± 0.785 (0.876)**	pCi/L	09/26/16 14:07	7440-14-4	

Sample: DGWC-10 **Lab ID: 30195003002** Collected: 08/31/16 10:26 Received: 09/02/16 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	**0.0836 ± 0.0946 (0.186) C:75% T:NA**	pCi/L	09/14/16 12:50	13982-63-3	
Radium-228	EPA 9320	**1.00 ± 0.441 (0.697) C:75% T:79%**	pCi/L	09/22/16 21:45	15262-20-1	
Total Radium	Total Radium Calculation	**1.08 ± 0.536 (0.883)**	pCi/L	09/26/16 14:07	7440-14-4	

Sample: DGWC-11 **Lab ID: 30195003003** Collected: 08/31/16 12:05 Received: 09/02/16 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	**0.0794 ± 0.108 (0.225) C:68% T:NA**	pCi/L	09/14/16 12:50	13982-63-3	
Radium-228	EPA 9320	**1.01 ± 0.446 (0.718) C:77% T:79%**	pCi/L	09/22/16 21:45	15262-20-1	
Total Radium	Total Radium Calculation	**1.09 ± 0.554 (0.943)**	pCi/L	09/26/16 14:07	7440-14-4	

Sample: DGWC-14 **Lab ID: 30195003004** Collected: 08/31/16 14:40 Received: 09/02/16 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	**0.204 ± 0.185 (0.366) C:96% T:NA**	pCi/L	09/14/16 11:05	13982-63-3	
Radium-228	EPA 9320	**0.793 ± 0.423 (0.733) C:79% T:75%**	pCi/L	09/22/16 22:13	15262-20-1	
Total Radium	Total Radium Calculation	**0.997 ± 0.608 (1.10)**	pCi/L	09/23/16 13:04	7440-14-4	

Sample: FD-1 **Lab ID: 30195003005** Collected: 08/31/16 00:01 Received: 09/02/16 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	**0.132 ± 0.142 (0.283) C:87% T:NA**	pCi/L	09/14/16 11:05	13982-63-3	
Radium-228	EPA 9320	**0.974 ± 0.477 (0.818) C:79% T:72%**	pCi/L	09/22/16 21:46	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195003

Sample: FD-1 **Lab ID: 30195003005** Collected: 08/31/16 00:01 Received: 09/02/16 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	**1.11 ± 0.619 (1.10)**	pCi/L	09/23/16 13:04	7440-14-4	

Sample: FB-1 **Lab ID: 30195003006** Collected: 08/31/16 14:40 Received: 09/02/16 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	**0.143 ± 0.143 (0.281) C:92% T:NA**	pCi/L	09/14/16 11:05	13982-63-3	
Radium-228	EPA 9320	**0.791 ± 0.470 (0.871) C:74% T:82%**	pCi/L	09/22/16 22:14	15262-20-1	
Total Radium	Total Radium Calculation	**0.934 ± 0.613 (1.15)**	pCi/L	09/23/16 13:04	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195003

QC Batch: 232409 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30195003004, 30195003005, 30195003006

METHOD BLANK: 1138994 Matrix: Water
Associated Lab Samples: 30195003004, 30195003005, 30195003006

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

Pace Analytical Services, Inc.
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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195003

QC Batch: 232405 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30195003001, 30195003002, 30195003003

METHOD BLANK: 1138990 Matrix: Water
Associated Lab Samples: 30195003001, 30195003002, 30195003003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0580 ± 0.0928 (0.200) C:77% T:NA	pCi/L	09/14/16 09:38	

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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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195003

QC Batch: 232402 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30195003001, 30195003002, 30195003003

METHOD BLANK: 1138986 Matrix: Water
Associated Lab Samples: 30195003001, 30195003002, 30195003003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.673 ± 0.390 (0.724) C:85% T:84%	pCi/L	09/22/16 21:43	

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

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195003

QC Batch: 232408 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30195003004, 30195003005, 30195003006

METHOD BLANK: 1138993 Matrix: Water
Associated Lab Samples: 30195003004, 30195003005, 30195003006

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	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: Plant McDonough AP
Pace Project No.: 30195003

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.

WO#:30195003

30195003

CHAIN OF CUSTODY RECORD

Pace Analytical™

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 B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham
CC: Maria Padilla, Heath McCorkle
REQUESTED COMPLETION DATE:
PO #:
laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 1663199
Phase II CCR

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)								LAB ID NUMBER
CONTAINER TYPE:								P	P	P								
PRESERVATION:								3	7	3								
08/31/16	1321	GW		x	DGWC-5	3		1	1	1								001
08/31/16	1026	GW		x	DGWC-10	3		1	1	1								002
08/31/16	1205	GW		x	DGWC-11	4		1	1	2								003
08/31/16	1440	GW		x	DGWC-14	3		1	1	1								004
08/31/16	xx	GW		x	FD-1	3		1	1	1								005
08/31/16	1440	W		x	FB-1	3		1	1	1								006
																		~~007~~ 9-2-16

ANALYSIS REQUESTED

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 8/31/16 1700

RELINQUISHED BY: [signature]
DATE/TIME: 9-1-16 18:50

RECEIVED BY: [signature]
DATE/TIME: 9-2-16 1020

RELINQUISHED BY: [signature] 9-2-16
DATE/TIME:

RECEIVED BY LAB: [signature]
DATE/TIME: 9/1/16 0850

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

pH checked: Yes No NA
Ice: Yes No NA
Temperature: 1 °C Min: 2 °C Max:

Custody Seal: Intact Broken Not Present N/A
# of Coolers
Cooler ID:

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

Sample Condition Upon Receipt Pittsburgh

30195003

Face Analytical

Client Name: Georgia Power Project # _____

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

Tracking #: 6812 5098 8161

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. no Signature
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: GW, W, Wt	✓			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:	✓			10.
-Pace Containers Used:		✓		
Containers Intact:	✓			11.
Filtered volume received for Dissolved tests			✓	12.
All containers needing preservation have been checked.	✓			13. all below 2 PH
All containers needing preservation are found to be in compliance with EPA recommendation.	✓			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed ML 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: ML Date: 9-2-16

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

Pace Analytical™ www.pacelabs.com

Test: Ra-226
Analyst: WRR
Date: 9/9/2016
Worklist: 31289
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1138990
MB concentration:	0.058
M/B Counting Uncertainty:	0.092
MB MDC:	0.200
MB Numerical Performance Indicator:	1.23
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS31289	LCSD31289
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):	0.503	
Target Conc. (pCi/L, g, F):	8.882	
Uncertainty (Calculated):	0.418	
Result (pCi/L, g, F):	7.333	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.556	
Numerical Performance Indicator:	-4.37	
Percent Recovery:	82.56%	
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:	
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.:	30195003003	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30195003003DUP	
Sample Result (pCi/L, g, F):	0.079	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.107	
Sample Duplicate Result (pCi/L, g, F):	0.174	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.171	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.916	30195003003
Duplicate RPD:	74.55%	30195003003DUP
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:

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

9/30/16

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	9/12/2016
Worklist:	31286
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1138986
MB concentration:	0.673
M/B Counting Uncertainty:	0.371
MB MDC:	0.724
MB Numerical Performance Indicator:	3.55
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS31286	LCSD31286
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):	0.801	
Target Conc. (pCi/L, g, F):	6.393	
Uncertainty (Calculated):	0.460	
Result (pCi/L, g, F):	8.562	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.792	
Numerical Performance Indicator:	4.64	
Percent Recovery:	133.93%	
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:	
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.:	30194996003	Enter Duplicate
Duplicate Sample I.D.	30194996003DUP	sample IDs if
Sample Result (pCi/L, g, F):	1.218	other than
Sample Result Counting Uncertainty (pCi/L, g, F):	0.440	LCS/LCSD in
Sample Duplicate Result (pCi/L, g, F):	2.067	the space below.
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.494	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-2.517	30194996003
Duplicate RPD:	51.73%	30194996003DUP
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:	
(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:

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

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:

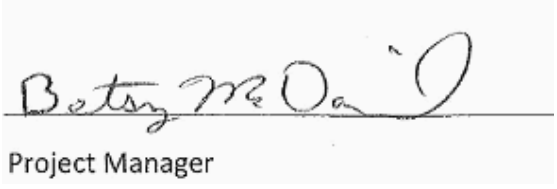
Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: **Mr. Joju Abraham**

Report Number: **AZI0051**
September 13, 2016
Project: CCR Event
Project #:Plant McDonough

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

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWC-12	AZI0051-01	Ground Water	09/01/16 13:05	09/02/16 09:05
DGWC-48	AZI0051-02	Ground Water	09/01/16 14:45	09/02/16 09:05
DGWC-19	AZI0051-03	Ground Water	09/01/16 16:05	09/02/16 09:05
DGWC-47	AZI0051-04	Ground Water	09/01/16 14:15	09/02/16 09:05
FB-2	AZI0051-05	DI Water	09/01/16 13:15	09/02/16 09:05
FD-2	AZI0051-06	Ground Water	09/01/16 00:00	09/02/16 09:05

PACE ANALYTICAL SERVICES, INC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0051
Client ID: DGWC-12
Date/Time Sampled: 9/1/2016 1:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0051-01
Date/Time Received: 9/2/2016 9:05:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	568	25	10	mg/L	SM 2540 C		1	09/07/16 19:40	09/07/16 19:40	6090134	JPT
Inorganic Anions											
Chloride	13	0.25	0.01	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 14:57	6090177	RLC
Fluoride	0.02	0.30	0.02	mg/L	EPA 300.0	J	1	09/08/16 09:25	09/08/16 14:57	6090177	RLC
Sulfate	390	50	2.6	mg/L	EPA 300.0		50	09/08/16 09:25	09/11/16 14:21	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:12	6090062	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:12	6090062	CSW
Barium	0.0254	0.0100	0.0004	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:12	6090062	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/06/16 10:15	09/07/16 20:12	6090062	CSW
Boron	7.64	1.00	0.0642	mg/L	EPA 6020B		10	09/06/16 10:15	09/08/16 18:36	6090062	CSW
Cadmium	0.0004	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/06/16 10:15	09/07/16 20:12	6090062	CSW
Calcium	80.6	5.00	0.311	mg/L	EPA 6020B		10	09/06/16 10:15	09/08/16 18:36	6090062	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:12	6090062	CSW
Cobalt	0.0021	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/06/16 10:15	09/07/16 20:12	6090062	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:12	6090062	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:12	6090062	CSW
Selenium	0.0017	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/06/16 10:15	09/07/16 20:12	6090062	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:12	6090062	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:12	6090062	CSW
Mercury	0.00009	0.00050	0.000041	mg/L	EPA 7470A	J	1	09/07/16 08:50	09/07/16 16:04	6090123	MTC

PACE ANALYTICAL SERVICES, INC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0051
Client ID: DGWC-48
Date/Time Sampled: 9/1/2016 2:45:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0051-02
Date/Time Received: 9/2/2016 9:05:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	845	25	10	mg/L	SM 2540 C		1	09/07/16 19:40	09/07/16 19:40	6090134	JPT
Inorganic Anions											
Chloride	18	0.25	0.01	mg/L	EPA 300.0		1	09/08/16 09:25	09/11/16 15:03	6090177	RLC
Fluoride	1.5	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 09:25	09/11/16 15:03	6090177	RLC
Sulfate	540	20	1.0	mg/L	EPA 300.0		20	09/08/16 09:25	09/12/16 12:09	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:17	6090062	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:17	6090062	CSW
Barium	0.0157	0.0100	0.0004	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:17	6090062	CSW
Beryllium	0.0080	0.0030	0.00008	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:17	6090062	CSW
Boron	0.955	0.100	0.0064	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:17	6090062	CSW
Cadmium	0.0013	0.0010	0.00007	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:17	6090062	CSW
Calcium	95.1	5.00	0.311	mg/L	EPA 6020B		10	09/06/16 10:15	09/08/16 18:41	6090062	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:17	6090062	CSW
Cobalt	0.539	0.0100	0.0005	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:17	6090062	CSW
Lead	0.0008	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/06/16 10:15	09/07/16 20:17	6090062	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:17	6090062	CSW
Selenium	0.0084	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/06/16 10:15	09/07/16 20:17	6090062	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:17	6090062	CSW
Lithium	0.125	0.0500	0.0021	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:17	6090062	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 16:11	6090123	MTC

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0051
Client ID: DGWC-19
Date/Time Sampled: 9/1/2016 4:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0051-03
Date/Time Received: 9/2/2016 9:05:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	396	25	10	mg/L	SM 2540 C		1	09/07/16 19:40	09/07/16 19:40	6090134	JPT
Inorganic Anions											
Chloride	41	0.25	0.01	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 12:08	6090177	RLC
Fluoride	0.75	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 12:08	6090177	RLC
Sulfate	240	5.0	0.26	mg/L	EPA 300.0		5	09/08/16 09:25	09/11/16 15:23	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:23	6090062	CSW
Arsenic	0.0022	0.0050	0.0016	mg/L	EPA 6020B	J	1	09/06/16 10:15	09/07/16 20:23	6090062	CSW
Barium	0.0214	0.0100	0.0004	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:23	6090062	CSW
Beryllium	0.0019	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/06/16 10:15	09/07/16 20:23	6090062	CSW
Boron	3.08	1.00	0.0642	mg/L	EPA 6020B		10	09/06/16 10:15	09/08/16 18:47	6090062	CSW
Cadmium	0.0004	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/06/16 10:15	09/07/16 20:23	6090062	CSW
Calcium	65.6	5.00	0.311	mg/L	EPA 6020B		10	09/06/16 10:15	09/08/16 18:47	6090062	CSW
Chromium	0.0031	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/06/16 10:15	09/07/16 20:23	6090062	CSW
Cobalt	0.0553	0.0100	0.0005	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:23	6090062	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:23	6090062	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:23	6090062	CSW
Selenium	0.0093	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/06/16 10:15	09/07/16 20:23	6090062	CSW
Thallium	0.0005	0.0010	0.0002	mg/L	EPA 6020B	J	1	09/06/16 10:15	09/07/16 20:23	6090062	CSW
Lithium	0.0034	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/06/16 10:15	09/07/16 20:23	6090062	CSW
Mercury	0.00004	0.00050	0.000041	mg/L	EPA 7470A	J	1	09/07/16 08:50	09/07/16 16:14	6090123	MTC

PACE ANALYTICAL SERVICES, INC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0051
Client ID: DGWC-47
Date/Time Sampled: 9/1/2016 2:15:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0051-04
Date/Time Received: 9/2/2016 9:05:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	704	25	10	mg/L	SM 2540 C		1	09/07/16 19:40	09/07/16 19:40	6090134	JPT
Inorganic Anions											
Chloride	12	0.25	0.01	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 12:29	6090177	RLC
Fluoride	1.8	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 12:29	6090177	RLC
Sulfate	470	10	0.51	mg/L	EPA 300.0		10	09/08/16 09:25	09/11/16 15:44	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:29	6090062	CSW
Arsenic	0.0037	0.0050	0.0016	mg/L	EPA 6020B	J	1	09/06/16 10:15	09/07/16 20:29	6090062	CSW
Barium	0.0162	0.0100	0.0004	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:29	6090062	CSW
Beryllium	0.0165	0.0030	0.00008	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:29	6090062	CSW
Boron	0.345	0.100	0.0064	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:29	6090062	CSW
Cadmium	0.0017	0.0010	0.00007	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:29	6090062	CSW
Calcium	69.3	5.00	0.311	mg/L	EPA 6020B		10	09/06/16 10:15	09/08/16 18:53	6090062	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:29	6090062	CSW
Cobalt	0.536	0.0100	0.0005	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:29	6090062	CSW
Lead	0.0005	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/06/16 10:15	09/07/16 20:29	6090062	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:29	6090062	CSW
Selenium	0.0217	0.0100	0.0010	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:29	6090062	CSW
Thallium	0.0002	0.0010	0.0002	mg/L	EPA 6020B	J	1	09/06/16 10:15	09/07/16 20:29	6090062	CSW
Lithium	0.0854	0.0500	0.0021	mg/L	EPA 6020B		1	09/06/16 10:15	09/07/16 20:29	6090062	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 16:16	6090123	MTC

PACE ANALYTICAL SERVICES, INC.

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0051
Client ID: FB-2
Date/Time Sampled: 9/1/2016 1:15:00PM
Matrix: DI Water

Project: CCR Event
Lab Number ID: AZI0051-05
Date/Time Received: 9/2/2016 9:05:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	09/07/16 19:40	09/07/16 19:40	6090134	JPT
Inorganic Anions											
Chloride	0.04	0.25	0.01	mg/L	EPA 300.0	J	1	09/08/16 09:25	09/08/16 12:50	6090177	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 12:50	6090177	RLC
Sulfate	0.15	1.0	0.05	mg/L	EPA 300.0	J	1	09/08/16 09:25	09/08/16 12:50	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:35	6090084	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:35	6090084	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:35	6090084	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:35	6090084	CSW
Boron	ND	0.100	0.0064	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:35	6090084	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:35	6090084	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:35	6090084	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:35	6090084	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:35	6090084	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:35	6090084	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:35	6090084	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:35	6090084	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:35	6090084	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:35	6090084	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 16:18	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.: AZI0051
Client ID: FD-2
Date/Time Sampled: 9/1/2016 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0051-06
Date/Time Received: 9/2/2016 9:05:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	826	25	10	mg/L	SM 2540 C		1	09/07/16 19:40	09/07/16 19:40	6090134	JPT
Inorganic Anions											
Chloride	18	0.25	0.01	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 13:11	6090177	RLC
Fluoride	1.5	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 13:11	6090177	RLC
Sulfate	550	20	1.0	mg/L	EPA 300.0		20	09/08/16 09:25	09/12/16 12:29	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:41	6090084	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:41	6090084	CSW
Barium	0.0166	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:41	6090084	CSW
Beryllium	0.0081	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/09/16 14:21	6090084	CSW
Boron	0.909	0.100	0.0064	mg/L	EPA 6020B		1	09/07/16 08:35	09/09/16 14:21	6090084	CSW
Cadmium	0.0014	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:41	6090084	CSW
Calcium	99.4	5.00	0.311	mg/L	EPA 6020B		10	09/07/16 08:35	09/09/16 14:15	6090084	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:41	6090084	CSW
Cobalt	0.538	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:41	6090084	CSW
Lead	0.0009	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 22:41	6090084	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:41	6090084	CSW
Selenium	0.0074	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 22:41	6090084	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 22:41	6090084	CSW
Lithium	0.117	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/09/16 14:21	6090084	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 16:21	6090123	MTC

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General Chemistry - Quality Control

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

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Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090177 - EPA 300.0											
Blank (6090177-BLK1)						Prepared & Analyzed: 09/08/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
LCS (6090177-BS1)						Prepared & Analyzed: 09/08/16					
Chloride	10.3	0.25	0.01	mg/L	10.010		102	90-110			
Fluoride	10.8	0.30	0.02	mg/L	10.010		108	90-110			
Sulfate	10.4	1.0	0.05	mg/L	10.010		103	90-110			
Matrix Spike (6090177-MS1)		**Source: AZI0077-05**				Prepared & Analyzed: 09/08/16					
Chloride	62.4	0.25	0.01	mg/L	10.010	58.3	41	90-110			QM-05
Fluoride	11.5	0.30	0.02	mg/L	10.010	0.67	108	90-110			
Sulfate	185	1.0	0.05	mg/L	10.010	193	NR	90-110			QM-05
Matrix Spike (6090177-MS2)		**Source: AZI0077-10**				Prepared & Analyzed: 09/08/16					
Chloride	41.2	0.25	0.01	mg/L	10.010	34.4	68	90-110			QM-05
Fluoride	11.5	0.30	0.02	mg/L	10.010	0.42	111	90-110			QM-05
Sulfate	175	1.0	0.05	mg/L	10.010	182	NR	90-110			QM-05
Matrix Spike Dup (6090177-MSD1)		**Source: AZI0077-05**				Prepared & Analyzed: 09/08/16					
Chloride	62.6	0.25	0.01	mg/L	10.010	58.3	43	90-110	0.4	15	QM-05
Fluoride	11.7	0.30	0.02	mg/L	10.010	0.67	111	90-110	2	15	QM-05
Sulfate	185	1.0	0.05	mg/L	10.010	193	NR	90-110	0.09	15	QM-05

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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090062 - EPA 3005A											
Blank (6090062-BLK1)						Prepared: 09/06/16 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							
LCS (6090062-BS1)						Prepared: 09/06/16 Analyzed: 09/07/16					
Antimony	0.111	0.0030	0.0008	mg/L	0.10000		111	80-120			
Arsenic	0.101	0.0050	0.0016	mg/L	0.10000		101	80-120			
Barium	0.100	0.0100	0.0004	mg/L	0.10000		100	80-120			
Beryllium	0.104	0.0030	0.00008	mg/L	0.10000		104	80-120			
Boron	1.04	0.100	0.0064	mg/L	1.0000		104	80-120			
Cadmium	0.105	0.0010	0.00007	mg/L	0.10000		105	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	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			
Copper	0.101	0.0050	0.0005	mg/L	0.10000		101	80-120			
Lead	0.100	0.0050	0.0001	mg/L	0.10000		100	80-120			
Molybdenum	0.105	0.0100	0.0017	mg/L	0.10000		105	80-120			
Nickel	0.102	0.0050	0.0006	mg/L	0.10000		102	80-120			
Selenium	0.107	0.0100	0.0010	mg/L	0.10000		107	80-120			
Silver	0.101	0.0050	0.0005	mg/L	0.10000		101	80-120			
Thallium	0.101	0.0010	0.0002	mg/L	0.10000		101	80-120			
Vanadium	0.103	0.0100	0.0071	mg/L	0.10000		103	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
Batch 6090062 - EPA 3005A											
Matrix Spike (6090062-MS1)		**Source: AZI0050-04**				Prepared: 09/06/16 Analyzed: 09/07/16					
Antimony	0.106	0.0030	0.0008	mg/L	0.10000	ND	106	75-125			
Arsenic	0.111	0.0050	0.0016	mg/L	0.10000	0.0095	102	75-125			
Barium	0.157	0.0100	0.0004	mg/L	0.10000	0.0666	91	75-125			
Beryllium	0.0934	0.0030	0.00008	mg/L	0.10000	ND	93	75-125			
Boron	1.14	0.100	0.0064	mg/L	1.0000	0.349	79	75-125			
Cadmium	0.102	0.0010	0.00007	mg/L	0.10000	ND	102	75-125			
Calcium	9.88	0.500	0.0311	mg/L	1.0000	8.90	97	75-125			
Chromium	0.101	0.0100	0.0009	mg/L	0.10000	ND	101	75-125			
Cobalt	0.0950	0.0100	0.0005	mg/L	0.10000	ND	95	75-125			
Copper	0.0995	0.0050	0.0005	mg/L	0.10000	ND	99	75-125			
Lead	0.0961	0.0050	0.0001	mg/L	0.10000	ND	96	75-125			
Molybdenum	0.102	0.0100	0.0017	mg/L	0.10000	ND	102	75-125			
Nickel	0.104	0.0050	0.0006	mg/L	0.10000	0.0042	99	75-125			
Selenium	0.100	0.0100	0.0010	mg/L	0.10000	ND	100	75-125			
Silver	0.0927	0.0050	0.0005	mg/L	0.10000	ND	93	75-125			
Thallium	0.0952	0.0010	0.0002	mg/L	0.10000	ND	95	75-125			
Vanadium	0.104	0.0100	0.0071	mg/L	0.10000	ND	104	75-125			
Zinc	0.108	0.0100	0.0021	mg/L	0.10000	0.0026	105	75-125			
Lithium	0.102	0.0500	0.0021	mg/L	0.10000	0.0044	98	75-125			
Matrix Spike Dup (6090062-MSD1)		**Source: AZI0050-04**				Prepared: 09/06/16 Analyzed: 09/07/16					
Antimony	0.107	0.0030	0.0008	mg/L	0.10000	ND	107	75-125	0.8	20	
Arsenic	0.111	0.0050	0.0016	mg/L	0.10000	0.0095	102	75-125	0.003	20	
Barium	0.143	0.0100	0.0004	mg/L	0.10000	0.0666	77	75-125	9	20	
Beryllium	0.0897	0.0030	0.00008	mg/L	0.10000	ND	90	75-125	4	20	
Boron	1.05	0.100	0.0064	mg/L	1.0000	0.349	70	75-125	8	20	QM-02
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125	1	20	
Calcium	7.88	0.500	0.0311	mg/L	1.0000	8.90	NR	75-125	22	20	QM-02, QR-03
Chromium	0.102	0.0100	0.0009	mg/L	0.10000	ND	102	75-125	0.6	20	
Cobalt	0.0984	0.0100	0.0005	mg/L	0.10000	ND	98	75-125	3	20	
Copper	0.0997	0.0050	0.0005	mg/L	0.10000	ND	100	75-125	0.3	20	
Lead	0.0959	0.0050	0.0001	mg/L	0.10000	ND	96	75-125	0.2	20	
Molybdenum	0.0991	0.0100	0.0017	mg/L	0.10000	ND	99	75-125	3	20	
Nickel	0.103	0.0050	0.0006	mg/L	0.10000	0.0042	99	75-125	0.6	20	
Selenium	0.104	0.0100	0.0010	mg/L	0.10000	ND	104	75-125	4	20	
Silver	0.0963	0.0050	0.0005	mg/L	0.10000	ND	96	75-125	4	20	
Thallium	0.0952	0.0010	0.0002	mg/L	0.10000	ND	95	75-125	0.06	20	
Vanadium	0.103	0.0100	0.0071	mg/L	0.10000	ND	103	75-125	0.6	20	
Zinc	0.106	0.0100	0.0021	mg/L	0.10000	0.0026	103	75-125	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
Batch 6090062 - EPA 3005A											
Matrix Spike Dup (6090062-MSD1)		**Source: AZI0050-04**			Prepared: 09/06/16 Analyzed: 09/07/16						
Lithium	0.0974	0.0500	0.0021	mg/L	0.10000	0.0044	93	75-125	5	20	
Post Spike (6090062-PS1)		**Source: AZI0050-04**			Prepared: 09/06/16 Analyzed: 09/07/16						
Antimony	99.5			ug/L	100.00	0.100	99	80-120			
Arsenic	112			ug/L	100.00	9.50	102	80-120			
Barium	159			ug/L	100.00	66.6	92	80-120			
Beryllium	91.8			ug/L	100.00	0.0195	92	80-120			
Boron	1120			ug/L	1000.0	349	77	80-120			QM-02
Cadmium	101			ug/L	100.00	-0.0066	101	80-120			
Calcium	9570			ug/L	1000.0	8900	67	80-120			QM-02
Chromium	104			ug/L	100.00	0.586	104	80-120			
Cobalt	100			ug/L	100.00	0.0381	100	80-120			
Copper	101			ug/L	100.00	0.224	101	80-120			
Lead	93.7			ug/L	100.00	0.0558	94	80-120			
Molybdenum	101			ug/L	100.00	0.0984	101	80-120			
Nickel	104			ug/L	100.00	4.21	100	80-120			
Selenium	104			ug/L	100.00	0.394	103	80-120			
Silver	94.0			ug/L	100.00	-0.000050	94	80-120			
Thallium	93.2			ug/L	100.00	0.0002	93	80-120			
Vanadium	107			ug/L	100.00	2.25	104	80-120			
Zinc	104			ug/L	100.00	2.61	102	80-120			
Lithium	97.5			ug/L	100.00	4.38	93	80-120			
Batch 6090084 - EPA 3005A											
Blank (6090084-BLK1)					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							

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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090084 - EPA 3005A											
Blank (6090084-BLK1)						Prepared & Analyzed: 09/07/16					
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 (6090084-BS1)						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			
Matrix Spike (6090084-MS1)		**Source: AZI0057-01**				Prepared & Analyzed: 09/07/16					
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			

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Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0051

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090084 - EPA 3005A											
Matrix Spike (6090084-MS1)		**Source: AZI0057-01**			Prepared & Analyzed: 09/07/16						
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			
Matrix Spike Dup (6090084-MSD1)		**Source: AZI0057-01**			Prepared & Analyzed: 09/07/16						
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	

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.: AZI0051

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090084 - EPA 3005A											
Post Spike (6090084-PS1)		**Source: AZI0057-01**				Prepared & Analyzed: 09/07/16					
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											
Blank (6090123-BLK1)						Prepared & Analyzed: 09/07/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6090123-BS1)						Prepared & Analyzed: 09/07/16					
Mercury	0.00241	0.00050	0.000041	mg/L	2.5000E-3		97	80-120			

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0051

Metals, Total - Quality Control

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

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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.

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Joju Abraham
CC: Maria Padilla, Heath McCorkle
REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP
PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
					CONTAINER TYPE:		P	P	P	
					PRESERVATION:		3	7	3	
9/1/16	1305	GW		X	DGWC-12	3	1	1	1	1
9/1/16	1445	GW		X	DGWC-48	3	1	1	1	2
9/1/16	1605	GW		X	DGWC-19	3	1	1	1	3
9/1/16	1415	GW		X	DGWC-47	3	1	1	1	4
9/1/16	1315	W		X	FB-2	3	1	1	1	5
9/1/16	—	GW		X	FP-2	3	1	1	1	6

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

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

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 9/1/16 1700
RELINQUISHED BY: Ben Hodges
DATE/TIME: 9/1/16 1735

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

RECEIVED BY LAB: M Laburnam
DATE/TIME: 09/02/16 0905
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
pH Checked: Yes No NA
Ice: Yes No NA
Temperature: 1°C Min: 1°C Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AZI0051
Entered Into LIMS: MR
Tracking #: 810100822859

Plant McDonough COC Phase II CCR.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: 9/13/2016 5:10:52PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 09/02/16 09:05

Work Order: AZI0051
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 6 **#Containers:** 18

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:

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 McDonough AP
Pace Project No.: 30195126

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

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

CERTIFICATIONS

Project: Plant McDonough AP
Pace Project No.: 30195126

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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Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: Plant McDonough AP
Pace Project No.: 30195126

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30195126001	**DGWC-12**	Water	09/01/16 13:05	09/06/16 08:50
30195126002	**DGWC-48**	Water	09/01/16 14:45	09/06/16 08:50
30195126003	**DGWC-19**	Water	09/01/16 16:05	09/06/16 08:50
30195126004	**DGWC-47**	Water	09/01/16 14:15	09/06/16 08:50
30195126005	**FB-2**	Water	09/01/16 13:15	09/06/16 08:50
30195126006	**FD-2**	Water	09/01/16 00:01	09/06/16 08:50

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(724)850-5600

SAMPLE ANALYTE COUNT

Project: Plant McDonough AP
Pace Project No.: 30195126

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30195126001	**DGWC-12**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195126002	**DGWC-48**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195126003	**DGWC-19**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195126004	**DGWC-47**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195126005	**FB-2**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195126006	**FD-2**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

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Greensburg, PA 15601
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195126

Sample: DGWC-12 **Lab ID: 30195126001** Collected: 09/01/16 13:05 Received: 09/06/16 08:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.113 ± 0.106 (0.197) C:92% T:NA**	pCi/L	09/28/16 09:31	13982-63-3	
Radium-228	EPA 9320	**0.999 ± 0.481 (0.828) C:73% T:82%**	pCi/L	09/23/16 12:35	15262-20-1	
Total Radium	Total Radium Calculation	**1.11 ± 0.587 (1.03)**	pCi/L	10/03/16 15:46	7440-14-4	

Sample: DGWC-48 **Lab ID: 30195126002** Collected: 09/01/16 14:45 Received: 09/06/16 08:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.282 ± 0.146 (0.194) C:88% T:NA**	pCi/L	09/28/16 09:31	13982-63-3	
Radium-228	EPA 9320	**2.09 ± 0.704 (1.01) C:71% T:76%**	pCi/L	09/23/16 12:35	15262-20-1	
Total Radium	Total Radium Calculation	**2.37 ± 0.850 (1.04)**	pCi/L	10/03/16 15:46	7440-14-4	

Sample: DGWC-19 **Lab ID: 30195126003** Collected: 09/01/16 16:05 Received: 09/06/16 08:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0154 ± 0.0722 (0.187) C:92% T:NA**	pCi/L	09/28/16 09:31	13982-63-3	
Radium-228	EPA 9320	**1.05 ± 0.533 (0.933) C:71% T:74%**	pCi/L	09/23/16 12:35	15262-20-1	
Total Radium	Total Radium Calculation	**1.07 ± 0.605 (1.12)**	pCi/L	10/03/16 15:46	7440-14-4	

Sample: DGWC-47 **Lab ID: 30195126004** Collected: 09/01/16 14:15 Received: 09/06/16 08:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**2.03 ± 0.458 (0.265) C:83% T:NA**	pCi/L	09/28/16 09:31	13982-63-3	
Radium-228	EPA 9320	**2.44 ± 0.733 (0.897) C:69% T:78%**	pCi/L	09/23/16 12:35	15262-20-1	
Total Radium	Total Radium Calculation	**4.47 ± 1.19 (1.16)**	pCi/L	10/03/16 15:46	7440-14-4	

Sample: FB-2 **Lab ID: 30195126005** Collected: 09/01/16 13:15 Received: 09/06/16 08:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0564 ± 0.0553 (0.218) C:86% T:NA**	pCi/L	09/28/16 09:32	13982-63-3	
Radium-228	EPA 9320	**0.893 ± 0.538 (1.00) C:66% T:75%**	pCi/L	09/23/16 12:36	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195126

Sample: FB-2 **Lab ID: 30195126005** Collected: 09/01/16 13:15 Received: 09/06/16 08:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.893 ± 0.593 (1.22)**	pCi/L	10/04/16 15:09	7440-14-4	

Sample: FD-2 **Lab ID: 30195126006** Collected: 09/01/16 00:01 Received: 09/06/16 08:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.295 ± 0.151 (0.192) C:85% T:NA**	pCi/L	09/28/16 09:32	13982-63-3	
Radium-228	EPA 9320	**1.49 ± 0.617 (0.983) C:68% T:72%**	pCi/L	09/23/16 12:36	15262-20-1	
Total Radium	Total Radium Calculation	**1.79 ± 0.768 (1.18)**	pCi/L	10/04/16 15:09	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195126

QC Batch: 232984 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30195126001, 30195126002, 30195126003, 30195126004, 30195126005, 30195126006

METHOD BLANK: 1141814 Matrix: Water
Associated Lab Samples: 30195126001, 30195126002, 30195126003, 30195126004, 30195126005, 30195126006

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

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195126

QC Batch: 232978 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30195126001, 30195126002, 30195126003, 30195126004, 30195126005, 30195126006

METHOD BLANK: 1141797 Matrix: Water
Associated Lab Samples: 30195126001, 30195126002, 30195126003, 30195126004, 30195126005, 30195126006

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

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

QUALIFIERS

Project: Plant McDonough AP
Pace Project No.: 30195126

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.

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Joju Abraham

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:		P	P	P		
					PRESERVATION:		3	7	3		
9/1/16	1305	GW		X	DGWC-12	3	1	1	1		001
9/1/16	1445	GW		X	DGWC-48	3	1	1	1		002
9/1/16	1605	GW		X	DGWC-19	3	1	1	1		003
9/1/16	1415	GW		X	DGWC-47	3	1	1	1		004
9/1/16	1315	W		X	FB-2	3	1	1	1		005
9/1/16	—	GW		X	FD-2	3	1	1	1		006

WO#:30195126

30195126

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead — DATE/TIME: 9/1/16 1700

RELINQUISHED BY: Ben Hodges — DATE/TIME: 9/1/16 1735

RECEIVED BY: Courtney Rose Pace — DATE/TIME: 9-2-16/0850

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: — DATE/TIME:

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

pH checked: (Yes) No NA — Ice: Yes (No) NA — Temperature: Min: Max:

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

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

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace, GA Project # 30195126

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: AMR 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: -Includes date/time/ID/Analysis Matrix: WT	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:	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. pHL2
All containers needing preservation are found to be in compliance with EPA recommendation.	X			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed AMR 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: AMR Date: 9-6-16

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:	9/23/2016
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

	LCSD (Y or N)?	N
	LCS31360	LCSD31360
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	

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:	

Duplicate Sample Assessment

Sample I.D.:	30195127001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
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	30195127001
Duplicate RPD:	5.40%	30195127001DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:

10/4/16

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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	LCSD (Y or N)?	N
	LCS31365	LCSD31365
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	

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:	

Duplicate Sample Assessment		
Sample I.D.:	30195127001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
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	30195127001
Duplicate RPD:	7.06%	30195127001DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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.

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: AZI0088
September 14, 2016
Project: CCR Event
Project #:Plant McDonough

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

PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 14, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWC-20	AZI0088-01	Ground Water	09/02/16 09:00	09/02/16 15:05
DGWC-21	AZI0088-02	Ground Water	09/02/16 10:15	09/02/16 15:05
DGWC-22	AZI0088-03	Ground Water	09/02/16 11:25	09/02/16 15:05
DGWC-40	AZI0088-04	Ground Water	09/02/16 12:45	09/02/16 15:05

PACE ANALYTICAL SERVICES, INC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 14, 2016

Report No.: AZI0088
Client ID: DGWC-20
Date/Time Sampled: 9/2/2016 9:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0088-01
Date/Time Received: 9/2/2016 3:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1100	25	10	mg/L	SM 2540 C		1	09/07/16 21:25	09/07/16 21:25	6090136	JPT
Inorganic Anions											
Chloride	15	0.25	0.01	mg/L	EPA 300.0	B-01	1	09/05/16 10:11	09/06/16 02:54	6090088	RLC
Fluoride	0.66	0.30	0.02	mg/L	EPA 300.0		1	09/05/16 10:11	09/06/16 02:54	6090088	RLC
Sulfate	580	50	2.6	mg/L	EPA 300.0		50	09/05/16 10:11	09/07/16 04:19	6090088	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:58	6090169	CSW
Arsenic	0.0159	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:58	6090169	CSW
Barium	0.0097	0.0100	0.0004	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 18:58	6090169	CSW
Beryllium	0.0026	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 18:58	6090169	CSW
Boron	6.77	1.00	0.0642	mg/L	EPA 6020B		10	09/08/16 10:40	09/12/16 16:23	6090169	CSW
Cadmium	0.0023	0.0010	0.00007	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:58	6090169	CSW
Calcium	96.3	5.00	0.311	mg/L	EPA 6020B		10	09/08/16 10:40	09/12/16 16:23	6090169	CSW
Chromium	0.0017	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 18:58	6090169	CSW
Cobalt	0.497	0.0100	0.0005	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:58	6090169	CSW
Lead	ND	0.0050	0.0006	mg/L	EPA 6020B	R-01	5	09/08/16 10:40	09/13/16 12:28	6090169	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:58	6090169	CSW
Selenium	0.0671	0.0100	0.0010	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:58	6090169	CSW
Thallium	ND	0.0020	0.0010	mg/L	EPA 6020B	R-01	5	09/08/16 10:40	09/13/16 12:28	6090169	CSW
Lithium	0.0021	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 18:58	6090169	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 17:35	6090109	MTC

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 14, 2016

Report No.: AZI0088
Client ID: DGWC-21
Date/Time Sampled: 9/2/2016 10:15:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0088-02
Date/Time Received: 9/2/2016 3:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	459	25	10	mg/L	SM 2540 C		1	09/07/16 21:25	09/07/16 21:25	6090136	JPT
Inorganic Anions											
Chloride	25	0.25	0.01	mg/L	EPA 300.0	B-01	1	09/05/16 10:11	09/06/16 03:15	6090088	RLC
Fluoride	0.07	0.30	0.02	mg/L	EPA 300.0	J	1	09/05/16 10:11	09/06/16 03:15	6090088	RLC
Sulfate	300	50	2.6	mg/L	EPA 300.0		50	09/05/16 10:11	09/07/16 06:02	6090088	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:15	6090169	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:15	6090169	CSW
Barium	0.0252	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:15	6090169	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:15	6090169	CSW
Boron	4.81	1.00	0.0642	mg/L	EPA 6020B		10	09/08/16 10:40	09/12/16 16:29	6090169	CSW
Cadmium	0.0006	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:15	6090169	CSW
Calcium	70.2	5.00	0.311	mg/L	EPA 6020B		10	09/08/16 10:40	09/12/16 16:29	6090169	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:15	6090169	CSW
Cobalt	0.0085	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:15	6090169	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:15	6090169	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:15	6090169	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:15	6090169	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:15	6090169	CSW
Lithium	0.0057	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:15	6090169	CSW
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	J	1	09/06/16 11:30	09/06/16 17:37	6090109	MTC

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 14, 2016

Report No.: AZI0088
Client ID: DGWC-22
Date/Time Sampled: 9/2/2016 11:25:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0088-03
Date/Time Received: 9/2/2016 3:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	502	25	10	mg/L	SM 2540 C		1	09/07/16 21:25	09/07/16 21:25	6090136	JPT
Inorganic Anions											
Chloride	30	0.25	0.01	mg/L	EPA 300.0	B-01	1	09/05/16 10:11	09/06/16 03:36	6090088	RLC
Fluoride	0.30	0.30	0.02	mg/L	EPA 300.0		1	09/05/16 10:11	09/06/16 03:36	6090088	RLC
Sulfate	140	10	0.51	mg/L	EPA 300.0		10	09/05/16 10:11	09/07/16 06:24	6090088	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:21	6090169	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:21	6090169	CSW
Barium	0.0397	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:21	6090169	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:21	6090169	CSW
Boron	3.99	1.00	0.0642	mg/L	EPA 6020B		10	09/08/16 10:40	09/12/16 16:35	6090169	CSW
Cadmium	0.0003	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:21	6090169	CSW
Calcium	61.6	5.00	0.311	mg/L	EPA 6020B		10	09/08/16 10:40	09/12/16 16:35	6090169	CSW
Chromium	0.0012	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:21	6090169	CSW
Cobalt	0.0102	0.0100	0.0005	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:21	6090169	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:21	6090169	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:21	6090169	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:21	6090169	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:21	6090169	CSW
Lithium	0.0046	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:21	6090169	CSW
Mercury	0.00005	0.00050	0.000041	mg/L	EPA 7470A	J	1	09/06/16 11:30	09/06/16 17:39	6090109	MTC

PACE ANALYTICAL SERVICES, INC.

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

September 14, 2016

Report No.: AZI0088
Client ID: DGWC-40
Date/Time Sampled: 9/2/2016 12:45:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0088-04
Date/Time Received: 9/2/2016 3:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	583	25	10	mg/L	SM 2540 C		1	09/07/16 21:25	09/07/16 21:25	6090136	JPT
Inorganic Anions											
Chloride	20	0.25	0.01	mg/L	EPA 300.0	B-01	1	09/05/16 10:11	09/06/16 03:57	6090088	RLC
Fluoride	0.50	0.30	0.02	mg/L	EPA 300.0		1	09/05/16 10:11	09/06/16 03:57	6090088	RLC
Sulfate	230	5.0	0.26	mg/L	EPA 300.0		5	09/05/16 10:11	09/07/16 06:45	6090088	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:27	6090169	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:27	6090169	CSW
Barium	0.0171	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:27	6090169	CSW
Beryllium	0.0028	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:27	6090169	CSW
Boron	0.895	0.100	0.0064	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:27	6090169	CSW
Cadmium	0.0008	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:27	6090169	CSW
Calcium	39.6	2.50	0.155	mg/L	EPA 6020B		5	09/08/16 10:40	09/12/16 16:40	6090169	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:27	6090169	CSW
Cobalt	0.0382	0.0100	0.0005	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:27	6090169	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:27	6090169	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:27	6090169	CSW
Selenium	0.0019	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:27	6090169	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:27	6090169	CSW
Lithium	0.0022	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:27	6090169	CSW
Mercury	0.000044	0.00050	0.000041	mg/L	EPA 7470A	J	1	09/06/16 11:30	09/06/16 17:42	6090109	MTC

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Report No.: AZI0088

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090136 - SM 2540 C											
Blank (6090136-BLK1)						Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6090136-BS1)						Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	407	25	10	mg/L	400.00		102	84-108			
Duplicate (6090136-DUP1)		**Source: AZI0077-07**				Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	694	25	10	mg/L		702			1	10	
Duplicate (6090136-DUP2)		**Source: AZI0094-01**				Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	228	25	10	mg/L		243			6	10	

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Report No.: AZI0088

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090088 - EPA 300.0											
Blank (6090088-BLK1)						Prepared & Analyzed: 09/05/16					
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							
LCS (6090088-BS1)						Prepared & Analyzed: 09/05/16					
Chloride	10.1	0.25	0.01	mg/L	10.010		101	90-110			
Fluoride	10.0	0.30	0.02	mg/L	10.010		100	90-110			
Sulfate	10.2	1.0	0.05	mg/L	10.010		102	90-110			
Matrix Spike (6090088-MS1)		**Source: AZI0050-01**				Prepared & Analyzed: 09/05/16					
Chloride	466	0.25	0.01	mg/L	10.010	478	NR	90-110			QM-02
Fluoride	11.8	0.30	0.02	mg/L	10.010	0.34	114	90-110			QM-05
Sulfate	275	1.0	0.05	mg/L	10.010	291	NR	90-110			QM-02
Matrix Spike (6090088-MS2)		**Source: AZI0059-03**				Prepared: 09/05/16 Analyzed: 09/06/16					
Chloride	13.9	0.25	0.01	mg/L	10.010	3.33	105	90-110			
Fluoride	10.9	0.30	0.02	mg/L	10.010	0.20	107	90-110			
Sulfate	12.7	1.0	0.05	mg/L	10.010	2.66	101	90-110			
Matrix Spike Dup (6090088-MSD1)		**Source: AZI0050-01**				Prepared & Analyzed: 09/05/16					
Chloride	486	0.25	0.01	mg/L	10.010	478	84	90-110	4	15	QM-02
Fluoride	11.7	0.30	0.02	mg/L	10.010	0.34	114	90-110	0.4	15	QM-05
Sulfate	275	1.0	0.05	mg/L	10.010	291	NR	90-110	0.1	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
Batch 6090109 - EPA 7470A											
Blank (6090109-BLK1)						Prepared & Analyzed: 09/06/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6090109-BS1)						Prepared & Analyzed: 09/06/16					
Mercury	0.00236	0.00050	0.000041	mg/L	2.5000E-3		94	80-120			
Matrix Spike (6090109-MS1)			**Source: AZI0077-04**			Prepared & Analyzed: 09/06/16					
Mercury	0.00236	0.00050	0.000041	mg/L	2.5000E-3	ND	95	75-125			
Matrix Spike Dup (6090109-MSD1)			**Source: AZI0077-04**			Prepared & Analyzed: 09/06/16					
Mercury	0.00237	0.00050	0.000041	mg/L	2.5000E-3	ND	95	75-125	0.1	20	
Post Spike (6090109-PS1)			**Source: AZI0077-04**			Prepared & Analyzed: 09/06/16					
Mercury	1.68			ug/L	1.6667	0.00330	100	80-120			
Batch 6090169 - EPA 3005A											
Blank (6090169-BLK1)						Prepared: 09/08/16 Analyzed: 09/09/16					
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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September 14, 2016

Report No.: AZI0088

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090169 - EPA 3005A											
LCS (6090169-BS1)						Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	0.106	0.0030	0.0008	mg/L	0.10000		106	80-120			
Arsenic	0.0993	0.0050	0.0016	mg/L	0.10000		99	80-120			
Barium	0.0945	0.0100	0.0004	mg/L	0.10000		94	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	0.103	0.0010	0.00007	mg/L	0.10000		103	80-120			
Calcium	0.979	0.500	0.0311	mg/L	1.0000		98	80-120			
Chromium	0.103	0.0100	0.0009	mg/L	0.10000		103	80-120			
Cobalt	0.0986	0.0100	0.0005	mg/L	0.10000		99	80-120			
Copper	0.0990	0.0050	0.0005	mg/L	0.10000		99	80-120			
Lead	0.102	0.0050	0.0001	mg/L	0.10000		102	80-120			
Molybdenum	0.0997	0.0100	0.0017	mg/L	0.10000		100	80-120			
Nickel	0.0987	0.0050	0.0006	mg/L	0.10000		99	80-120			
Selenium	0.0990	0.0100	0.0010	mg/L	0.10000		99	80-120			
Silver	0.100	0.0050	0.0005	mg/L	0.10000		100	80-120			
Thallium	0.100	0.0010	0.0002	mg/L	0.10000		100	80-120			
Vanadium	0.0993	0.0100	0.0071	mg/L	0.10000		99	80-120			
Zinc	0.100	0.0100	0.0021	mg/L	0.10000		100	80-120			
Lithium	0.0988	0.0500	0.0021	mg/L	0.10000		99	80-120			
Matrix Spike (6090169-MS1)		**Source: AZI0077-17**				Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	0.106	0.0030	0.0008	mg/L	0.10000	ND	106	75-125			
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000	ND	102	75-125			
Barium	0.169	0.0100	0.0004	mg/L	0.10000	0.0759	93	75-125			
Beryllium	0.0930	0.0030	0.00008	mg/L	0.10000	ND	93	75-125			
Boron	1.94	1.00	0.0642	mg/L	1.0000	0.888	105	75-125			
Cadmium	0.0991	0.0010	0.00007	mg/L	0.10000	0.0004	99	75-125			
Calcium	96.8	5.00	0.311	mg/L	1.0000	95.9	82	75-125			
Chromium	0.105	0.0100	0.0009	mg/L	0.10000	ND	105	75-125			
Cobalt	0.0997	0.0100	0.0005	mg/L	0.10000	ND	100	75-125			
Copper	0.0960	0.0050	0.0005	mg/L	0.10000	ND	96	75-125			
Lead	0.0960	0.0050	0.0001	mg/L	0.10000	ND	96	75-125			
Molybdenum	0.125	0.0100	0.0017	mg/L	0.10000	0.0266	98	75-125			
Nickel	0.102	0.0050	0.0006	mg/L	0.10000	0.0011	101	75-125			
Selenium	0.0978	0.0100	0.0010	mg/L	0.10000	ND	98	75-125			
Silver	0.0977	0.0050	0.0005	mg/L	0.10000	ND	98	75-125			
Thallium	0.0966	0.0010	0.0002	mg/L	0.10000	ND	97	75-125			
Vanadium	0.103	0.0100	0.0071	mg/L	0.10000	ND	103	75-125			
Zinc	0.100	0.0100	0.0021	mg/L	0.10000	0.0027	98	75-125			
Lithium	0.0941	0.0500	0.0021	mg/L	0.10000	0.0024	92	75-125			

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Attention: Mr. Joju Abraham

September 14, 2016

Report No.: AZI0088

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090169 - EPA 3005A											
Matrix Spike Dup (6090169-MSD1)		**Source: AZI0077-17**			Prepared: 09/08/16 Analyzed: 09/09/16						
Antimony	0.103	0.0030	0.0008	mg/L	0.10000	ND	103	75-125	3	20	
Arsenic	0.101	0.0050	0.0016	mg/L	0.10000	ND	101	75-125	0.8	20	
Barium	0.168	0.0100	0.0004	mg/L	0.10000	0.0759	92	75-125	0.7	20	
Beryllium	0.0960	0.0030	0.00008	mg/L	0.10000	ND	96	75-125	3	20	
Boron	1.96	1.00	0.0642	mg/L	1.0000	0.888	107	75-125	0.8	20	
Cadmium	0.0992	0.0010	0.00007	mg/L	0.10000	0.0004	99	75-125	0.09	20	
Calcium	98.6	5.00	0.311	mg/L	1.0000	95.9	263	75-125	2	20	QM-02
Chromium	0.107	0.0100	0.0009	mg/L	0.10000	ND	107	75-125	2	20	
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125	0.5	20	
Copper	0.0975	0.0050	0.0005	mg/L	0.10000	ND	97	75-125	2	20	
Lead	0.0973	0.0050	0.0001	mg/L	0.10000	ND	97	75-125	1	20	
Molybdenum	0.126	0.0100	0.0017	mg/L	0.10000	0.0266	100	75-125	1	20	
Nickel	0.100	0.0050	0.0006	mg/L	0.10000	0.0011	99	75-125	2	20	
Selenium	0.0955	0.0100	0.0010	mg/L	0.10000	ND	95	75-125	2	20	
Silver	0.0938	0.0050	0.0005	mg/L	0.10000	ND	94	75-125	4	20	
Thallium	0.0982	0.0010	0.0002	mg/L	0.10000	ND	98	75-125	2	20	
Vanadium	0.106	0.0100	0.0071	mg/L	0.10000	ND	106	75-125	3	20	
Zinc	0.104	0.0100	0.0021	mg/L	0.10000	0.0027	102	75-125	4	20	
Lithium	0.0983	0.0500	0.0021	mg/L	0.10000	0.0024	96	75-125	4	20	
Post Spike (6090169-PS1)		**Source: AZI0077-17**			Prepared: 09/08/16 Analyzed: 09/09/16						
Antimony	101			ug/L	100.00	0.299	101	80-120			
Arsenic	102			ug/L	100.00	0.235	101	80-120			
Barium	175			ug/L	100.00	75.9	99	80-120			
Beryllium	97.5			ug/L	100.00	0.0116	97	80-120			
Boron	1910			ug/L	1000.0	888	102	80-120			
Cadmium	101			ug/L	100.00	0.400	101	80-120			
Calcium	98600			ug/L	1000.0	95900	262	80-120			QM-02
Chromium	101			ug/L	100.00	0.306	101	80-120			
Cobalt	95.3			ug/L	100.00	0.465	95	80-120			
Copper	93.2			ug/L	100.00	0.123	93	80-120			
Lead	94.2			ug/L	100.00	0.0087	94	80-120			
Molybdenum	128			ug/L	100.00	26.6	101	80-120			
Nickel	94.4			ug/L	100.00	1.09	93	80-120			
Selenium	95.4			ug/L	100.00	-0.575	96	80-120			
Silver	97.8			ug/L	100.00	0.0070	98	80-120			
Thallium	95.3			ug/L	100.00	0.0424	95	80-120			
Vanadium	98.9			ug/L	100.00	0.409	99	80-120			
Zinc	101			ug/L	100.00	2.66	98	80-120			
Lithium	101			ug/L	100.00	2.37	98	80-120			

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September 14, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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-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.

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

CLIENT NAME: Georgia Power

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

REPORT TO: Joju Abraham
CC: Maria Padilla, Heath McCorkle
REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 1663199 Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
					CONTAINER TYPE:		P	P	P	
					PRESERVATION:		3	7	3	
9/2/16	0900	GW		X	DGWC-20	3	1	1	1	1
9/2/16	1015	GW		X	DGWC-21	3	1	1	1	2
9/2/16	1125	GW		X	DGWC-22	3	1	1	1	3
9/2/16	1245	GW		X	DGWC-40	3	1	1	1	4

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

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

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Ben Hodges Fieldlead
DATE/TIME: 9/2/16 1500
RELINQUISHED BY:
DATE/TIME: 9/2/16 1505

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

RECEIVED BY/LAB: [signature]
DATE/TIME: 09/07/16 1505
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

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

FOR LAB USE ONLY
LAB #: AZI088
Entered Into LIMS: MR
Tracking #:

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: 9/14/2016 2:34:42PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 09/02/16 15:05

Work Order: AZI0088
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 4 **#Containers:** 12

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:

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 McDonough AP
Pace Project No.: 30195121

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

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

CERTIFICATIONS

Project: Plant McDonough AP
Pace Project No.: 30195121

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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Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: Plant McDonough AP
Pace Project No.: 30195121

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30195121001	**DGWC-20**	Water	09/02/16 09:00	09/06/16 08:50
30195121002	**DGWC-21**	Water	09/02/16 10:15	09/06/16 08:50
30195121003	**DGWC-22**	Water	09/02/16 11:25	09/06/16 08:50
30195121004	**DGWC-40**	Water	09/02/16 12:45	09/06/16 08:50

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SAMPLE ANALYTE COUNT

Project: Plant McDonough AP
Pace Project No.: 30195121

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30195121001	**DGWC-20**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195121002	**DGWC-21**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195121003	**DGWC-22**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195121004	**DGWC-40**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195121

Sample: DGWC-20 **Lab ID: 30195121001** Collected: 09/02/16 09:00 Received: 09/06/16 08:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.149 ± 0.126 (0.239) C:89% T:NA**	pCi/L	09/16/16 08:19	13982-63-3	
Radium-228	EPA 9320	**1.33 ± 0.411 (0.493) C:76% T:85%**	pCi/L	09/23/16 01:46	15262-20-1	
Total Radium	Total Radium Calculation	**1.48 ± 0.537 (0.732)**	pCi/L	10/03/16 15:46	7440-14-4	

Sample: DGWC-21 **Lab ID: 30195121002** Collected: 09/02/16 10:15 Received: 09/06/16 08:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.177 ± 0.142 (0.268) C:89% T:NA**	pCi/L	09/16/16 08:19	13982-63-3	
Radium-228	EPA 9320	**0.731 ± 0.402 (0.717) C:74% T:78%**	pCi/L	09/23/16 01:58	15262-20-1	
Total Radium	Total Radium Calculation	**0.908 ± 0.544 (0.985)**	pCi/L	10/03/16 15:46	7440-14-4	

Sample: DGWC-22 **Lab ID: 30195121003** Collected: 09/02/16 11:25 Received: 09/06/16 08:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.227 ± 0.134 (0.214) C:86% T:NA**	pCi/L	09/16/16 08:20	13982-63-3	
Radium-228	EPA 9320	**1.31 ± 0.483 (0.732) C:77% T:78%**	pCi/L	09/23/16 01:58	15262-20-1	
Total Radium	Total Radium Calculation	**1.54 ± 0.617 (0.946)**	pCi/L	10/03/16 15:46	7440-14-4	

Sample: DGWC-40 **Lab ID: 30195121004** Collected: 09/02/16 12:45 Received: 09/06/16 08:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0392 ± 0.0966 (0.221) C:84% T:NA**	pCi/L	09/16/16 08:20	13982-63-3	
Radium-228	EPA 9320	**1.40 ± 0.449 (0.573) C:76% T:79%**	pCi/L	09/23/16 01:46	15262-20-1	
Total Radium	Total Radium Calculation	**1.44 ± 0.546 (0.794)**	pCi/L	10/03/16 15:46	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195121

QC Batch: 232977 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30195121001, 30195121002, 30195121003, 30195121004

METHOD BLANK: 1141794 Matrix: Water
Associated Lab Samples: 30195121001, 30195121002, 30195121003, 30195121004

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

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195121

QC Batch: 232983 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30195121001, 30195121002, 30195121003, 30195121004

METHOD BLANK: 1141811 Matrix: Water
Associated Lab Samples: 30195121001, 30195121002, 30195121003, 30195121004

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

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

QUALIFIERS

Project: Plant McDonough AP
Pace Project No.: 30195121

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.

SAMPLE QUALIFIERS

Sample: 30195121001

[1] The sampler's signature was not listed on the COC and the relinquished by was not signed and dated.

CHAIN OF CUSTODY RECORD

Pace Analytical®

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

CLIENT NAME: Georgia Power

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

REPORT TO: Joju Abraham

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 1663199 Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4, & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:		P	P	P		
					PRESERVATION:		3	7	3		
9/2/16	0900	GW		X	DGWC-20	3	1	1	1		001
9/2/16	1015	GW		X	DGWC-21	3	1	1	1		002
9/2/16	1125	GW		X	DGWC-22	3	1	1	1		003
9/2/16	1245	GW		X	DGWC-40	3	1	1	1		004

WO#:30195121

30195121

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead

DATE/TIME: 9/2/16 1500

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY: Williams Pace

DATE/TIME: 9-6-16/0850

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY LAB:

DATE/TIME:

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

pH checked: Yes No NA

Ice: Yes (No) NA

Temperature: Min: Max:

Custody Seal: Intact Broken Not Present

# of Coolers

Cooler ID:

FOR LAB USE ONLY

LAB #:

Entered into LIMS:

Tracking #:

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace, GA Project # 30195121

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: AMR 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. No Signature
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: WT	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:	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. pH<2
All containers needing preservation are found to be in compliance with EPA recommendation.	X			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed AMR 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: AMR Date: 9-6-16

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

Pace Analytical
www.pacelabs.com

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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

	LCSD (Y or N)?	N
	LCS31359	LCSD31359
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	

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:	

Duplicate Sample Assessment

Sample I.D.:	30195125002
Duplicate Sample I.D.	30195125002DUP
Sample Result (pCi/L, g, F):	0.276
Sample Result Counting Uncertainty (pCi/L, g, F):	0.203
Sample Duplicate Result (pCi/L, g, F):	0.106
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.241
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***

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

30195125002
30195125002DUP

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

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

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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	LCSD (Y or N)?	N
	LCS31364	LCSD31364
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	

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:	

Duplicate Sample Assessment	
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

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

30195125002
30195125002DUP

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:	

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

Comments:

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: AZI0168
September 16, 2016
Project: CCR Event
Project #:Plant McDonough

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

PACE ANALYTICAL SERVICES, INC.

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Georgia Power
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Attention: Mr. Joju Abraham

September 16, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FB-3	AZI0168-01	Water	09/06/16 13:50	09/07/16 09:05
DGWC-13	AZI0168-02	Ground Water	09/06/16 10:30	09/07/16 09:05
DGWC-15	AZI0168-03	Ground Water	09/06/16 14:30	09/07/16 09:05

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September 16, 2016

Report No.: AZI0168
Client ID: FB-3
Date/Time Sampled: 9/6/2016 1:50:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZI0168-01
Date/Time Received: 9/7/2016 9:05:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	09/09/16 16:50	09/09/16 16:50	6090220	JPT
Inorganic Anions											
Chloride	0.12	0.25	0.01	mg/L	EPA 300.0	J	1	09/08/16 19:50	09/10/16 19:36	6090212	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 19:50	09/10/16 19:36	6090212	RLC
Sulfate	0.20	1.0	0.05	mg/L	EPA 300.0	J	1	09/08/16 19:50	09/10/16 19:36	6090212	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:38	6090169	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:38	6090169	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:38	6090169	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:38	6090169	CSW
Boron	0.0129	0.100	0.0064	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:38	6090169	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:38	6090169	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:38	6090169	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:38	6090169	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:38	6090169	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:38	6090169	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:38	6090169	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:38	6090169	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:38	6090169	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:38	6090169	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/09/16 09:20	09/09/16 14:05	6090210	MTC

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Report No.: AZI0168
Client ID: DGWC-13
Date/Time Sampled: 9/6/2016 10:30:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0168-02
Date/Time Received: 9/7/2016 9:05:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	296	25	10	mg/L	SM 2540 C		1	09/09/16 16:50	09/09/16 16:50	6090220	JPT
Inorganic Anions											
Chloride	16	0.25	0.01	mg/L	EPA 300.0		1	09/08/16 19:50	09/10/16 19:57	6090212	RLC
Fluoride	0.17	0.30	0.02	mg/L	EPA 300.0	J	1	09/08/16 19:50	09/10/16 19:57	6090212	RLC
Sulfate	170	10	0.51	mg/L	EPA 300.0		10	09/08/16 19:50	09/13/16 13:17	6090212	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:44	6090169	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:44	6090169	CSW
Barium	0.0297	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:44	6090169	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:44	6090169	CSW
Boron	1.00	0.100	0.0064	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:44	6090169	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:44	6090169	CSW
Calcium	44.0	2.50	0.155	mg/L	EPA 6020B		5	09/08/16 10:40	09/12/16 17:04	6090169	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:44	6090169	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:44	6090169	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:44	6090169	CSW
Molybdenum	0.0371	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:44	6090169	CSW
Selenium	0.0011	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:44	6090169	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:44	6090169	CSW
Lithium	0.0029	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:44	6090169	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/09/16 09:20	09/09/16 14:08	6090210	MTC

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Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0168
Client ID: DGWC-15
Date/Time Sampled: 9/6/2016 2:30:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0168-03
Date/Time Received: 9/7/2016 9:05:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	304	25	10	mg/L	SM 2540 C		1	09/09/16 16:50	09/09/16 16:50	6090220	JPT
Inorganic Anions											
Chloride	19	0.25	0.01	mg/L	EPA 300.0		1	09/08/16 19:50	09/10/16 20:59	6090212	RLC
Fluoride	0.11	0.30	0.02	mg/L	EPA 300.0	J	1	09/08/16 19:50	09/10/16 20:59	6090212	RLC
Sulfate	180	10	0.51	mg/L	EPA 300.0		10	09/08/16 19:50	09/13/16 13:38	6090212	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:50	6090169	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:50	6090169	CSW
Barium	0.0497	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:50	6090169	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:50	6090169	CSW
Boron	1.25	0.100	0.0064	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:50	6090169	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:50	6090169	CSW
Calcium	33.6	2.50	0.155	mg/L	EPA 6020B		5	09/08/16 10:40	09/12/16 17:09	6090169	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:50	6090169	CSW
Cobalt	0.0042	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:50	6090169	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:50	6090169	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:50	6090169	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:50	6090169	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 19:50	6090169	CSW
Lithium	0.0064	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 19:50	6090169	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/09/16 09:20	09/09/16 14:10	6090210	MTC

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September 16, 2016

Report No.: AZI0168

General Chemistry - Quality Control

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

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Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090212 - EPA 300.0											
Blank (6090212-BLK1)						Prepared: 09/08/16 Analyzed: 09/10/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
LCS (6090212-BS1)						Prepared: 09/08/16 Analyzed: 09/10/16					
Chloride	10.2	0.25	0.01	mg/L	10.010		102	90-110			
Fluoride	10.5	0.30	0.02	mg/L	10.010		105	90-110			
Sulfate	10.2	1.0	0.05	mg/L	10.010		102	90-110			
Matrix Spike (6090212-MS1)		**Source: AZI0168-02**				Prepared: 09/08/16 Analyzed: 09/10/16					
Chloride	25.2	0.25	0.01	mg/L	10.010	15.8	94	90-110			
Fluoride	11.9	0.30	0.02	mg/L	10.010	0.17	117	90-110			QM-05
Sulfate	147	1.0	0.05	mg/L	10.010	153	NR	90-110			QM-05
Matrix Spike (6090212-MS2)		**Source: AZI0192-04**				Prepared: 09/08/16 Analyzed: 09/11/16					
Chloride	26.4	0.25	0.01	mg/L	10.010	17.3	91	90-110			
Fluoride	12.0	0.30	0.02	mg/L	10.010	0.32	117	90-110			QM-05
Sulfate	177	1.0	0.05	mg/L	10.010	185	NR	90-110			QM-05
Matrix Spike Dup (6090212-MSD1)		**Source: AZI0168-02**				Prepared: 09/08/16 Analyzed: 09/10/16					
Chloride	25.1	0.25	0.01	mg/L	10.010	15.8	94	90-110	0.08	15	
Fluoride	11.8	0.30	0.02	mg/L	10.010	0.17	117	90-110	0.5	15	QM-05
Sulfate	147	1.0	0.05	mg/L	10.010	153	NR	90-110	0.09	15	QM-05

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Report No.: AZI0168

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090169 - EPA 3005A											
Blank (6090169-BLK1)						Prepared: 09/08/16 Analyzed: 09/09/16					
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							
LCS (6090169-BS1)						Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	0.106	0.0030	0.0008	mg/L	0.10000		106	80-120			
Arsenic	0.0993	0.0050	0.0016	mg/L	0.10000		99	80-120			
Barium	0.0945	0.0100	0.0004	mg/L	0.10000		94	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	0.103	0.0010	0.00007	mg/L	0.10000		103	80-120			
Calcium	0.979	0.500	0.0311	mg/L	1.0000		98	80-120			
Chromium	0.103	0.0100	0.0009	mg/L	0.10000		103	80-120			
Cobalt	0.0986	0.0100	0.0005	mg/L	0.10000		99	80-120			
Copper	0.0990	0.0050	0.0005	mg/L	0.10000		99	80-120			
Lead	0.102	0.0050	0.0001	mg/L	0.10000		102	80-120			
Molybdenum	0.0997	0.0100	0.0017	mg/L	0.10000		100	80-120			
Nickel	0.0987	0.0050	0.0006	mg/L	0.10000		99	80-120			
Selenium	0.0990	0.0100	0.0010	mg/L	0.10000		99	80-120			
Silver	0.100	0.0050	0.0005	mg/L	0.10000		100	80-120			
Thallium	0.100	0.0010	0.0002	mg/L	0.10000		100	80-120			
Vanadium	0.0993	0.0100	0.0071	mg/L	0.10000		99	80-120			
Zinc	0.100	0.0100	0.0021	mg/L	0.10000		100	80-120			
Lithium	0.0988	0.0500	0.0021	mg/L	0.10000		99	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
Batch 6090169 - EPA 3005A											
Matrix Spike (6090169-MS1)		**Source: AZI0077-17**				Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	0.106	0.0030	0.0008	mg/L	0.10000	ND	106	75-125			
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000	ND	102	75-125			
Barium	0.169	0.0100	0.0004	mg/L	0.10000	0.0759	93	75-125			
Beryllium	0.0930	0.0030	0.00008	mg/L	0.10000	ND	93	75-125			
Boron	1.94	1.00	0.0642	mg/L	1.0000	0.888	105	75-125			
Cadmium	0.0991	0.0010	0.00007	mg/L	0.10000	0.0004	99	75-125			
Calcium	96.8	5.00	0.311	mg/L	1.0000	95.9	82	75-125			
Chromium	0.105	0.0100	0.0009	mg/L	0.10000	ND	105	75-125			
Cobalt	0.0997	0.0100	0.0005	mg/L	0.10000	ND	100	75-125			
Copper	0.0960	0.0050	0.0005	mg/L	0.10000	ND	96	75-125			
Lead	0.0960	0.0050	0.0001	mg/L	0.10000	ND	96	75-125			
Molybdenum	0.125	0.0100	0.0017	mg/L	0.10000	0.0266	98	75-125			
Nickel	0.102	0.0050	0.0006	mg/L	0.10000	0.0011	101	75-125			
Selenium	0.0978	0.0100	0.0010	mg/L	0.10000	ND	98	75-125			
Silver	0.0977	0.0050	0.0005	mg/L	0.10000	ND	98	75-125			
Thallium	0.0966	0.0010	0.0002	mg/L	0.10000	ND	97	75-125			
Vanadium	0.103	0.0100	0.0071	mg/L	0.10000	ND	103	75-125			
Zinc	0.100	0.0100	0.0021	mg/L	0.10000	0.0027	98	75-125			
Lithium	0.0941	0.0500	0.0021	mg/L	0.10000	0.0024	92	75-125			
Matrix Spike Dup (6090169-MSD1)		**Source: AZI0077-17**				Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	0.103	0.0030	0.0008	mg/L	0.10000	ND	103	75-125	3	20	
Arsenic	0.101	0.0050	0.0016	mg/L	0.10000	ND	101	75-125	0.8	20	
Barium	0.168	0.0100	0.0004	mg/L	0.10000	0.0759	92	75-125	0.7	20	
Beryllium	0.0960	0.0030	0.00008	mg/L	0.10000	ND	96	75-125	3	20	
Boron	1.96	1.00	0.0642	mg/L	1.0000	0.888	107	75-125	0.8	20	
Cadmium	0.0992	0.0010	0.00007	mg/L	0.10000	0.0004	99	75-125	0.09	20	
Calcium	98.6	5.00	0.311	mg/L	1.0000	95.9	263	75-125	2	20	QM-02
Chromium	0.107	0.0100	0.0009	mg/L	0.10000	ND	107	75-125	2	20	
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125	0.5	20	
Copper	0.0975	0.0050	0.0005	mg/L	0.10000	ND	97	75-125	2	20	
Lead	0.0973	0.0050	0.0001	mg/L	0.10000	ND	97	75-125	1	20	
Molybdenum	0.126	0.0100	0.0017	mg/L	0.10000	0.0266	100	75-125	1	20	
Nickel	0.100	0.0050	0.0006	mg/L	0.10000	0.0011	99	75-125	2	20	
Selenium	0.0955	0.0100	0.0010	mg/L	0.10000	ND	95	75-125	2	20	
Silver	0.0938	0.0050	0.0005	mg/L	0.10000	ND	94	75-125	4	20	
Thallium	0.0982	0.0010	0.0002	mg/L	0.10000	ND	98	75-125	2	20	
Vanadium	0.106	0.0100	0.0071	mg/L	0.10000	ND	106	75-125	3	20	
Zinc	0.104	0.0100	0.0021	mg/L	0.10000	0.0027	102	75-125	4	20	
Lithium	0.0983	0.0500	0.0021	mg/L	0.10000	0.0024	96	75-125	4	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.: AZI0168

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090169 - EPA 3005A											
Post Spike (6090169-PS1)		**Source: AZI0077-17**				Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	101			ug/L	100.00	0.299	101	80-120			
Arsenic	102			ug/L	100.00	0.235	101	80-120			
Barium	175			ug/L	100.00	75.9	99	80-120			
Beryllium	97.5			ug/L	100.00	0.0116	97	80-120			
Boron	1910			ug/L	1000.0	888	102	80-120			
Cadmium	101			ug/L	100.00	0.400	101	80-120			
Calcium	98600			ug/L	1000.0	95900	262	80-120			QM-02
Chromium	101			ug/L	100.00	0.306	101	80-120			
Cobalt	95.3			ug/L	100.00	0.465	95	80-120			
Copper	93.2			ug/L	100.00	0.123	93	80-120			
Lead	94.2			ug/L	100.00	0.0087	94	80-120			
Molybdenum	128			ug/L	100.00	26.6	101	80-120			
Nickel	94.4			ug/L	100.00	1.09	93	80-120			
Selenium	95.4			ug/L	100.00	-0.575	96	80-120			
Silver	97.8			ug/L	100.00	0.0070	98	80-120			
Thallium	95.3			ug/L	100.00	0.0424	95	80-120			
Vanadium	98.9			ug/L	100.00	0.409	99	80-120			
Zinc	101			ug/L	100.00	2.66	98	80-120			
Lithium	101			ug/L	100.00	2.37	98	80-120			
Batch 6090210 - EPA 7470A											
Blank (6090210-BLK1)						Prepared & Analyzed: 09/09/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6090210-BS1)						Prepared & Analyzed: 09/09/16					
Mercury	0.00234	0.00050	0.000041	mg/L	2.5000E-3		94	80-120			

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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

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0168

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090210 - EPA 7470A											
Matrix Spike (6090210-MS1)			**Source: AZI0207-01**			Prepared & Analyzed: 09/09/16					
Mercury	0.00233	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125			
Matrix Spike Dup (6090210-MSD1)			**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	
Post Spike (6090210-PS1)			**Source: AZI0207-01**			Prepared & Analyzed: 09/09/16					
Mercury	1.69			ug/L	1.6667	-0.00477	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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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.

PACE ANALYTICAL SERVICES, INC.

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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

Attention: Mr. Joju Abraham

September 16, 2016

Report Notes

The samples DGWC-37, DGWC-38, DGWC-39 and FD-3 were not present. CFH

CHAIN OF CUSTODY RECORD

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

PAGE: 1 OF 1

CLIENT NAME: Georgia Power

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

REPORT TO: Joju Abraham

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 16631199 Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:		P	P	P		
					PRESERVATION:		3	7	3		
9.6.16	0950	GW		X	DGWC-37	3	1	1	1		
9.6.16	1140	GW		X	DGWC-38	3	1	1	1		Not Present 12H 9/7/16
9.6.16	1350	GW		X	DGWC-39	3	1	1	1		
9.6.16	1350	W		X	FB-3	3	1	1	1	1	
9.6.16	-	GW		X	FD-3	3	1	1	1		Not Present 12H 9/7/16
9.6.16	1030	GW		X	DGWC-13	4	1	1	2	2	1 EXTRA RADIUM
9.6.16	1430	GW		X	DGWC-15	3	1	1	1	3	

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Jon Hodges Field Lead
DATE/TIME: 9/6/16 1600
RELINQUISHED BY:
DATE/TIME: 9/6/16 1600

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

RECEIVED BY/LAB:
DATE/TIME: 9/7/16 0905
pH checked: Yes No NA
Temp: Top: Yes No NA
Temperature: Min: 2° Max:
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AZI0168
Entered into LIMS: 12H
Tracking #: 809496614640

Plant McDonough COC Phase II CCR.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: 9/16/2016 5:30:42PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 09/07/16 09:05

Work Order: AZI0168
Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 3 **#Containers:** 10

Minimum Temp(C): 2.0 **Maximum Temp(C):** 2.0 **Custody Seal(s) Used:** No

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	NO
Custody seal Intact	NO
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:

The samples DGWC-37, DGWC-38, DGWC-39 and FD-3 were not present. CFH

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

October 05, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McDonough AP
Pace Project No.: 30195376

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on September 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

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

CERTIFICATIONS

Project: Plant McDonough AP
Pace Project No.: 30195376

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

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

SAMPLE SUMMARY

Project: Plant McDonough AP
Pace Project No.: 30195376

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30195376001	**FB-3**	Water	09/06/16 13:50	09/08/16 10:20
30195376002	**DGWC-13**	Water	09/06/16 10:30	09/08/16 10:20
30195376003	**DGWC-15**	Water	09/06/16 14:30	09/08/16 10:20

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

SAMPLE ANALYTE COUNT

Project: Plant McDonough AP
Pace Project No.: 30195376

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30195376001	**FB-3**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195376002	**DGWC-13**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195376003	**DGWC-15**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195376

Sample: FB-3 **Lab ID: 30195376001** Collected: 09/06/16 13:50 Received: 09/08/16 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	**0.0786 ± 0.184 (0.432) C:93% T:NA**	pCi/L	09/30/16 08:08	13982-63-3	
Radium-228	EPA 9320	**0.739 ± 0.378 (0.649) C:78% T:83%**	pCi/L	09/28/16 12:21	15262-20-1	
Total Radium	Total Radium Calculation	**0.818 ± 0.562 (1.08)**	pCi/L	10/05/16 11:20	7440-14-4	

Sample: DGWC-13 **Lab ID: 30195376002** Collected: 09/06/16 10:30 Received: 09/08/16 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	**0.428 ± 0.224 (0.300) C:92% T:NA**	pCi/L	09/30/16 08:08	13982-63-3	
Radium-228	EPA 9320	**0.892 ± 0.405 (0.640) C:75% T:79%**	pCi/L	09/28/16 12:21	15262-20-1	
Total Radium	Total Radium Calculation	**1.32 ± 0.629 (0.940)**	pCi/L	10/05/16 11:20	7440-14-4	

Sample: DGWC-15 **Lab ID: 30195376003** Collected: 09/06/16 14:30 Received: 09/08/16 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	**0.161 ± 0.156 (0.296) C:94% T:NA**	pCi/L	09/30/16 08:08	13982-63-3	
Radium-228	EPA 9320	**0.570 ± 0.336 (0.606) C:77% T:85%**	pCi/L	09/28/16 12:21	15262-20-1	
Total Radium	Total Radium Calculation	**0.731 ± 0.492 (0.902)**	pCi/L	10/05/16 11:20	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195376

QC Batch: 233308 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30195376001, 30195376002, 30195376003

METHOD BLANK: 1143415 Matrix: Water
Associated Lab Samples: 30195376001, 30195376002, 30195376003

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.

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195376

QC Batch: 233313 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30195376001, 30195376002, 30195376003

METHOD BLANK: 1143427 Matrix: Water
Associated Lab Samples: 30195376001, 30195376002, 30195376003

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.

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

QUALIFIERS

Project: Plant McDonough AP
Pace Project No.: 30195376

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.

CHAIN OF CUSTODY RECORD

Pace 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

CLIENT NAME: Georgia Power

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

REPORT TO: Joju Abraham
CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 1663199 Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:		P	P	P		
					PRESERVATION:		3	7	3		
9.6.16	0950	GW		X	DGWC-37	3	1	1	1		
9.6.16	1140	GW		X	DGWC-38	3	1	1	1		Not Present (DH 9/7/16
9.6.16	1350	GW		X	DGWC-39	3	1	1	1		
9.6.16	1350	W		X	FB-3	3	1	1	1	1	001
9.6.16	-	GW		X	FD-3	3	1	1	1		Not Present (DH 9/7/16
9.6.16	1030	GW		X	DGWC-13	4	1	1	2	2	1 EXTRA RADIUM 002
9.6.16	1430	GW		X	DGWC-15	3	1	1	1	3	003

WO#:30195376

30195376

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 9/6/16 1600
RELINQUISHED BY:
DATE/TIME: 9/6/16 1600

RECEIVED BY:
DATE/TIME: 9-8-16 10:20
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB:
DATE/TIME:
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

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

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

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

30195376

Client Name: Pace, Georgia Project # _____

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

Tracking #: 6812 5098 9525

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 9-8-16

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. ~~No Signature~~
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: WT	✓			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:	✓			10.
-Pace Containers Used:		✓		
Containers Intact:	✓			11.
Filtered volume received for Dissolved tests			✓	12.
All containers needing preservation have been checked.	✓			13. pH < 2
All containers needing preservation are found to be in compliance with EPA recommendation.	✓			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed KH / 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: KH / Date: 9-8-16

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

Pace Analytical™ www.pacelabs.com

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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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	LCSD (Y or N)?	N
	LCS31430	LCSD31430
Count Date:	9/30/2016	
Spike I.D.:	16-026	
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	

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:	

Duplicate Sample Assessment		
Sample I.D.:	30195376002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
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	30195376002
Duplicate RPD:	114.41%	30195376002DUP
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:

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

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JLW
Date:	9/21/2016
Worklist:	31428
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1143415
MB concentration:	0.088
M/B 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
	LCS31428	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):	7.193	
LCS/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	

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:	

Duplicate Sample Assessment		
Sample I.D.:	30195540001	Enter Duplicate
Duplicate Sample I.D.	30195540001DUP	sample IDs if
Sample Result (pCi/L, g, F):	0.597	other than
Sample Result Counting Uncertainty (pCi/L, g, F):	0.376	LCS/LCSD in
Sample Duplicate Result (pCi/L, g, F):	1.139	the space below.
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	30195540001
Duplicate RPD:	62.40%	30195540001DUP
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:	
(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:

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

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: AZI0192
September 16, 2016
Project: CCR Event
Project #:Plant McDonough

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

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

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EB-1	AZI0192-01	DI Water	09/07/16 08:30	09/07/16 15:45
EB-2	AZI0192-02	DI Water	09/07/16 08:40	09/07/16 15:45
EB-3	AZI0192-03	DI Water	09/07/16 08:50	09/07/16 15:45
DGWC-17	AZI0192-04	Ground Water	09/07/16 11:20	09/07/16 15:45
DGWC-42	AZI0192-05	Ground Water	09/07/16 13:21	09/07/16 15:45

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

Report No.: AZI0192
Client ID: EB-1
Date/Time Sampled: 9/7/2016 8:30:00AM
Matrix: DI Water

Project: CCR Event
Lab Number ID: AZI0192-01
Date/Time Received: 9/7/2016 3:45:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	09/09/16 16:50	09/09/16 16:50	6090220	JPT
Inorganic Anions											
Chloride	0.04	0.25	0.01	mg/L	EPA 300.0	J	1	09/08/16 19:50	09/10/16 23:44	6090212	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 19:50	09/10/16 23:44	6090212	RLC
Sulfate	0.07	1.0	0.05	mg/L	EPA 300.0	J	1	09/08/16 19:50	09/10/16 23:44	6090212	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:24	6090169	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:24	6090169	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:24	6090169	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:24	6090169	CSW
Boron	ND	0.100	0.0064	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:24	6090169	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:24	6090169	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:24	6090169	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:24	6090169	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:24	6090169	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:24	6090169	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:24	6090169	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:24	6090169	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:24	6090169	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:24	6090169	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/09/16 09:20	09/09/16 14:24	6090210	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 16, 2016

Report No.: AZI0192
Client ID: EB-2
Date/Time Sampled: 9/7/2016 8:40:00AM
Matrix: DI Water

Project: CCR Event
Lab Number ID: AZI0192-02
Date/Time Received: 9/7/2016 3:45:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	09/09/16 16:50	09/09/16 16:50	6090220	JPT
Inorganic Anions											
Chloride	0.04	0.25	0.01	mg/L	EPA 300.0	J	1	09/08/16 19:50	09/11/16 00:05	6090212	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 19:50	09/11/16 00:05	6090212	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	09/08/16 19:50	09/11/16 00:05	6090212	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:30	6090169	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:30	6090169	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:30	6090169	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:30	6090169	CSW
Boron	ND	0.100	0.0064	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:30	6090169	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:30	6090169	CSW
Calcium	0.0814	0.500	0.0311	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 20:30	6090169	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:30	6090169	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:30	6090169	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:30	6090169	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:30	6090169	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:30	6090169	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:30	6090169	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:30	6090169	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/09/16 09:20	09/09/16 14:27	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.: AZI0192
Client ID: EB-3
Date/Time Sampled: 9/7/2016 8:50:00AM
Matrix: DI Water

Project: CCR Event
Lab Number ID: AZI0192-03
Date/Time Received: 9/7/2016 3:45:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	09/09/16 16:50	09/09/16 16:50	6090220	JPT
Inorganic Anions											
Chloride	0.03	0.25	0.01	mg/L	EPA 300.0	J	1	09/08/16 19:50	09/11/16 00:26	6090212	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 19:50	09/11/16 00:26	6090212	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	09/08/16 19:50	09/11/16 00:26	6090212	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:36	6090169	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:36	6090169	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:36	6090169	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:36	6090169	CSW
Boron	ND	0.100	0.0064	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:36	6090169	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:36	6090169	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:36	6090169	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:36	6090169	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:36	6090169	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:36	6090169	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:36	6090169	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:36	6090169	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:36	6090169	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:36	6090169	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/09/16 09:20	09/09/16 14:29	6090210	MTC

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

Report No.: AZI0192
Client ID: DGWC-17
Date/Time Sampled: 9/7/2016 11:20:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0192-04
Date/Time Received: 9/7/2016 3:45:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	353	25	10	mg/L	SM 2540 C		1	09/09/16 16:50	09/09/16 16:50	6090220	JPT
Inorganic Anions											
Chloride	17	0.25	0.01	mg/L	EPA 300.0		1	09/08/16 19:50	09/11/16 00:46	6090212	RLC
Fluoride	0.32	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 19:50	09/11/16 00:46	6090212	RLC
Sulfate	230	10	0.51	mg/L	EPA 300.0		10	09/08/16 19:50	09/13/16 14:42	6090212	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:42	6090169	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:42	6090169	CSW
Barium	0.0694	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:42	6090169	CSW
Beryllium	0.0006	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 20:42	6090169	CSW
Boron	0.683	0.100	0.0064	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:42	6090169	CSW
Cadmium	0.0003	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 20:42	6090169	CSW
Calcium	8.61	0.500	0.0311	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:42	6090169	CSW
Chromium	0.0026	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 20:42	6090169	CSW
Cobalt	0.0247	0.0100	0.0005	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:42	6090169	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:42	6090169	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:42	6090169	CSW
Selenium	0.0070	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 20:42	6090169	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:42	6090169	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:42	6090169	CSW
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	J	1	09/09/16 09:20	09/09/16 14:31	6090210	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 16, 2016

Report No.: AZI0192
Client ID: DGWC-42
Date/Time Sampled: 9/7/2016 1:21:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0192-05
Date/Time Received: 9/7/2016 3:45:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	611	25	10	mg/L	SM 2540 C		1	09/09/16 16:50	09/09/16 16:50	6090220	JPT
Inorganic Anions											
Chloride	33	0.25	0.01	mg/L	EPA 300.0		1	09/08/16 19:50	09/11/16 01:27	6090212	RLC
Fluoride	0.02	0.30	0.02	mg/L	EPA 300.0	J	1	09/08/16 19:50	09/11/16 01:27	6090212	RLC
Sulfate	370	10	0.51	mg/L	EPA 300.0		10	09/08/16 19:50	09/13/16 15:03	6090212	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:47	6090169	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:47	6090169	CSW
Barium	0.0194	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:47	6090169	CSW
Beryllium	0.0021	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 20:47	6090169	CSW
Boron	0.924	0.100	0.0064	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:47	6090169	CSW
Cadmium	0.0007	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 20:47	6090169	CSW
Calcium	43.6	2.50	0.155	mg/L	EPA 6020B		5	09/08/16 10:40	09/09/16 20:53	6090169	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:47	6090169	CSW
Cobalt	0.0695	0.0100	0.0005	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:47	6090169	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 20:47	6090169	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:47	6090169	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:47	6090169	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 20:47	6090169	CSW
Lithium	0.0120	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 20:47	6090169	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/09/16 09:20	09/09/16 14:34	6090210	MTC

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General Chemistry - Quality Control

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

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Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090212 - EPA 300.0											
Blank (6090212-BLK1)						Prepared: 09/08/16 Analyzed: 09/10/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
LCS (6090212-BS1)						Prepared: 09/08/16 Analyzed: 09/10/16					
Chloride	10.2	0.25	0.01	mg/L	10.010		102	90-110			
Fluoride	10.5	0.30	0.02	mg/L	10.010		105	90-110			
Sulfate	10.2	1.0	0.05	mg/L	10.010		102	90-110			
Matrix Spike (6090212-MS1)		**Source: AZI0168-02**				Prepared: 09/08/16 Analyzed: 09/10/16					
Chloride	25.2	0.25	0.01	mg/L	10.010	15.8	94	90-110			
Fluoride	11.9	0.30	0.02	mg/L	10.010	0.17	117	90-110			QM-05
Sulfate	147	1.0	0.05	mg/L	10.010	153	NR	90-110			QM-05
Matrix Spike (6090212-MS2)		**Source: AZI0192-04**				Prepared: 09/08/16 Analyzed: 09/11/16					
Chloride	26.4	0.25	0.01	mg/L	10.010	17.3	91	90-110			
Fluoride	12.0	0.30	0.02	mg/L	10.010	0.32	117	90-110			QM-05
Sulfate	177	1.0	0.05	mg/L	10.010	185	NR	90-110			QM-05
Matrix Spike Dup (6090212-MSD1)		**Source: AZI0168-02**				Prepared: 09/08/16 Analyzed: 09/10/16					
Chloride	25.1	0.25	0.01	mg/L	10.010	15.8	94	90-110	0.08	15	
Fluoride	11.8	0.30	0.02	mg/L	10.010	0.17	117	90-110	0.5	15	QM-05
Sulfate	147	1.0	0.05	mg/L	10.010	153	NR	90-110	0.09	15	QM-05

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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090169 - EPA 3005A											
Blank (6090169-BLK1)						Prepared: 09/08/16 Analyzed: 09/09/16					
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							
LCS (6090169-BS1)						Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	0.106	0.0030	0.0008	mg/L	0.10000		106	80-120			
Arsenic	0.0993	0.0050	0.0016	mg/L	0.10000		99	80-120			
Barium	0.0945	0.0100	0.0004	mg/L	0.10000		94	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	0.103	0.0010	0.00007	mg/L	0.10000		103	80-120			
Calcium	0.979	0.500	0.0311	mg/L	1.0000		98	80-120			
Chromium	0.103	0.0100	0.0009	mg/L	0.10000		103	80-120			
Cobalt	0.0986	0.0100	0.0005	mg/L	0.10000		99	80-120			
Copper	0.0990	0.0050	0.0005	mg/L	0.10000		99	80-120			
Lead	0.102	0.0050	0.0001	mg/L	0.10000		102	80-120			
Molybdenum	0.0997	0.0100	0.0017	mg/L	0.10000		100	80-120			
Nickel	0.0987	0.0050	0.0006	mg/L	0.10000		99	80-120			
Selenium	0.0990	0.0100	0.0010	mg/L	0.10000		99	80-120			
Silver	0.100	0.0050	0.0005	mg/L	0.10000		100	80-120			
Thallium	0.100	0.0010	0.0002	mg/L	0.10000		100	80-120			
Vanadium	0.0993	0.0100	0.0071	mg/L	0.10000		99	80-120			
Zinc	0.100	0.0100	0.0021	mg/L	0.10000		100	80-120			
Lithium	0.0988	0.0500	0.0021	mg/L	0.10000		99	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
Batch 6090169 - EPA 3005A											
Matrix Spike (6090169-MS1)		**Source: AZI0077-17**				Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	0.106	0.0030	0.0008	mg/L	0.10000	ND	106	75-125			
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000	ND	102	75-125			
Barium	0.169	0.0100	0.0004	mg/L	0.10000	0.0759	93	75-125			
Beryllium	0.0930	0.0030	0.00008	mg/L	0.10000	ND	93	75-125			
Boron	1.94	1.00	0.0642	mg/L	1.0000	0.888	105	75-125			
Cadmium	0.0991	0.0010	0.00007	mg/L	0.10000	0.0004	99	75-125			
Calcium	96.8	5.00	0.311	mg/L	1.0000	95.9	82	75-125			
Chromium	0.105	0.0100	0.0009	mg/L	0.10000	ND	105	75-125			
Cobalt	0.0997	0.0100	0.0005	mg/L	0.10000	ND	100	75-125			
Copper	0.0960	0.0050	0.0005	mg/L	0.10000	ND	96	75-125			
Lead	0.0960	0.0050	0.0001	mg/L	0.10000	ND	96	75-125			
Molybdenum	0.125	0.0100	0.0017	mg/L	0.10000	0.0266	98	75-125			
Nickel	0.102	0.0050	0.0006	mg/L	0.10000	0.0011	101	75-125			
Selenium	0.0978	0.0100	0.0010	mg/L	0.10000	ND	98	75-125			
Silver	0.0977	0.0050	0.0005	mg/L	0.10000	ND	98	75-125			
Thallium	0.0966	0.0010	0.0002	mg/L	0.10000	ND	97	75-125			
Vanadium	0.103	0.0100	0.0071	mg/L	0.10000	ND	103	75-125			
Zinc	0.100	0.0100	0.0021	mg/L	0.10000	0.0027	98	75-125			
Lithium	0.0941	0.0500	0.0021	mg/L	0.10000	0.0024	92	75-125			
Matrix Spike Dup (6090169-MSD1)		**Source: AZI0077-17**				Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	0.103	0.0030	0.0008	mg/L	0.10000	ND	103	75-125	3	20	
Arsenic	0.101	0.0050	0.0016	mg/L	0.10000	ND	101	75-125	0.8	20	
Barium	0.168	0.0100	0.0004	mg/L	0.10000	0.0759	92	75-125	0.7	20	
Beryllium	0.0960	0.0030	0.00008	mg/L	0.10000	ND	96	75-125	3	20	
Boron	1.96	1.00	0.0642	mg/L	1.0000	0.888	107	75-125	0.8	20	
Cadmium	0.0992	0.0010	0.00007	mg/L	0.10000	0.0004	99	75-125	0.09	20	
Calcium	98.6	5.00	0.311	mg/L	1.0000	95.9	263	75-125	2	20	QM-02
Chromium	0.107	0.0100	0.0009	mg/L	0.10000	ND	107	75-125	2	20	
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125	0.5	20	
Copper	0.0975	0.0050	0.0005	mg/L	0.10000	ND	97	75-125	2	20	
Lead	0.0973	0.0050	0.0001	mg/L	0.10000	ND	97	75-125	1	20	
Molybdenum	0.126	0.0100	0.0017	mg/L	0.10000	0.0266	100	75-125	1	20	
Nickel	0.100	0.0050	0.0006	mg/L	0.10000	0.0011	99	75-125	2	20	
Selenium	0.0955	0.0100	0.0010	mg/L	0.10000	ND	95	75-125	2	20	
Silver	0.0938	0.0050	0.0005	mg/L	0.10000	ND	94	75-125	4	20	
Thallium	0.0982	0.0010	0.0002	mg/L	0.10000	ND	98	75-125	2	20	
Vanadium	0.106	0.0100	0.0071	mg/L	0.10000	ND	106	75-125	3	20	
Zinc	0.104	0.0100	0.0021	mg/L	0.10000	0.0027	102	75-125	4	20	
Lithium	0.0983	0.0500	0.0021	mg/L	0.10000	0.0024	96	75-125	4	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
Batch 6090169 - EPA 3005A											
Post Spike (6090169-PS1)		**Source: AZI0077-17**				Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	101			ug/L	100.00	0.299	101	80-120			
Arsenic	102			ug/L	100.00	0.235	101	80-120			
Barium	175			ug/L	100.00	75.9	99	80-120			
Beryllium	97.5			ug/L	100.00	0.0116	97	80-120			
Boron	1910			ug/L	1000.0	888	102	80-120			
Cadmium	101			ug/L	100.00	0.400	101	80-120			
Calcium	98600			ug/L	1000.0	95900	262	80-120			QM-02
Chromium	101			ug/L	100.00	0.306	101	80-120			
Cobalt	95.3			ug/L	100.00	0.465	95	80-120			
Copper	93.2			ug/L	100.00	0.123	93	80-120			
Lead	94.2			ug/L	100.00	0.0087	94	80-120			
Molybdenum	128			ug/L	100.00	26.6	101	80-120			
Nickel	94.4			ug/L	100.00	1.09	93	80-120			
Selenium	95.4			ug/L	100.00	-0.575	96	80-120			
Silver	97.8			ug/L	100.00	0.0070	98	80-120			
Thallium	95.3			ug/L	100.00	0.0424	95	80-120			
Vanadium	98.9			ug/L	100.00	0.409	99	80-120			
Zinc	101			ug/L	100.00	2.66	98	80-120			
Lithium	101			ug/L	100.00	2.37	98	80-120			
Batch 6090210 - EPA 7470A											
Blank (6090210-BLK1)						Prepared & Analyzed: 09/09/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6090210-BS1)						Prepared & Analyzed: 09/09/16					
Mercury	0.00234	0.00050	0.000041	mg/L	2.5000E-3		94	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
Batch 6090210 - EPA 7470A											
Matrix Spike (6090210-MS1)			**Source: AZI0207-01**			Prepared & Analyzed: 09/09/16					
Mercury	0.00233	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125			
Matrix Spike Dup (6090210-MSD1)			**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	
Post Spike (6090210-PS1)			**Source: AZI0207-01**			Prepared & Analyzed: 09/09/16					
Mercury	1.69			ug/L	1.6667	-0.00477	102	80-120			

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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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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.

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 B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham
CC: Maria Padilla, Heath McCorkle
REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 1663199 Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4, & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
		CONTAINER TYPE:					P	P	P	
		PRESERVATION:					3	7	3	
9/7/16	0830	W		X	EB-1	3	1	1	1	1
9/7/16	0840	W		X	EB-2	3	1	1	1	2
9/7/16	0850	W		X	EB-3	3	1	1	1	3
9/7/16	1120	GW		X	DGWC-17	3	1	1	1	4
9/7/16	1321	GW		X	DGWC-42	4	1	1	2	5

1 extra Radium bottle

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

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

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Ben Hodges Field Lead — DATE/TIME: 9/7/16 1500
RELINQUISHED BY: — DATE/TIME: 9/7/16 1500
RECEIVED BY: Mike Nguyen — DATE/TIME: 9/7/16 1500
RELINQUISHED BY: — DATE/TIME: 9/7/16 1500
RECEIVED BY/LAB: — DATE/TIME: 9/7/16 1545
pH checked: Yes No NA — Ice: Yes No NA — Temperature: 2°C Min: 2°C Max:
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
Custody Seal: Intact Broken Not — # of Coolers — Cooler ID:

FOR LAB USE ONLY
LAB #: AZF0192
Entered into LIMS:
Tracking #:

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 5:39:51PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 09/07/16 15:45

Work Order: AZI0192
Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 5 **#Containers:** 16

Minimum Temp(C): 2.0 **Maximum Temp(C):** 2.0 **Custody Seal(s) Used:** N/A

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	NO
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 05, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McDonough AP
Pace Project No.: 30195375

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on September 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

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

CERTIFICATIONS

Project: Plant McDonough AP
Pace Project No.: 30195375

Pennsylvania Certification IDs

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

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SAMPLE SUMMARY

Project: Plant McDonough AP
Pace Project No.: 30195375

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30195375001	**EB-1**	Water	09/07/16 08:30	09/08/16 10:20
30195375002	**EB-2**	Water	09/07/16 08:40	09/08/16 10:20
30195375003	**EB-3**	Water	09/07/16 08:50	09/08/16 10:20
30195375004	**DGWC-17**	Water	09/07/16 11:20	09/08/16 10:20
30195375005	**DGWC-42**	Water	09/07/16 13:21	09/08/16 10:20

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SAMPLE ANALYTE COUNT

Project: Plant McDonough AP
Pace Project No.: 30195375

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30195375001	**EB-1**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195375002	**EB-2**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195375003	**EB-3**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195375004	**DGWC-17**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195375005	**DGWC-42**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195375

Sample: EB-1 **Lab ID: 30195375001** Collected: 09/07/16 08:30 Received: 09/08/16 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	**-0.0144 ± 0.141 (0.392) C:82% T:NA**	pCi/L	09/28/16 11:36	13982-63-3	
Radium-228	EPA 9320	**0.466 ± 0.363 (0.706) C:72% T:80%**	pCi/L	09/23/16 22:09	15262-20-1	
Total Radium	Total Radium Calculation	**0.466 ± 0.504 (1.10)**	pCi/L	10/05/16 11:20	7440-14-4	

Sample: EB-2 **Lab ID: 30195375002** Collected: 09/07/16 08:40 Received: 09/08/16 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	**0.197 ± 0.254 (0.544) C:64% T:NA**	pCi/L	09/28/16 11:36	13982-63-3	
Radium-228	EPA 9320	**0.676 ± 0.418 (0.775) C:77% T:79%**	pCi/L	09/23/16 22:09	15262-20-1	
Total Radium	Total Radium Calculation	**0.873 ± 0.672 (1.32)**	pCi/L	10/05/16 11:20	7440-14-4	

Sample: EB-3 **Lab ID: 30195375003** Collected: 09/07/16 08:50 Received: 09/08/16 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	**0.0623 ± 0.123 (0.285) C:77% T:NA**	pCi/L	09/28/16 11:40	13982-63-3	
Radium-228	EPA 9320	**0.323 ± 0.380 (0.800) C:79% T:81%**	pCi/L	09/23/16 22:35	15262-20-1	
Total Radium	Total Radium Calculation	**0.385 ± 0.503 (1.09)**	pCi/L	10/05/16 11:20	7440-14-4	

Sample: DGWC-17 **Lab ID: 30195375004** Collected: 09/07/16 11:20 Received: 09/08/16 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	**0.177 ± 0.166 (0.302) C:74% T:NA**	pCi/L	09/28/16 11:40	13982-63-3	
Radium-228	EPA 9320	**0.995 ± 0.458 (0.735) C:80% T:72%**	pCi/L	09/23/16 22:35	15262-20-1	
Total Radium	Total Radium Calculation	**1.17 ± 0.624 (1.04)**	pCi/L	10/05/16 11:20	7440-14-4	

Sample: DGWC-42 **Lab ID: 30195375005** Collected: 09/07/16 13:21 Received: 09/08/16 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	**0.00696 ± 0.180 (0.475) C:85% T:NA**	pCi/L	09/28/16 11:40	13982-63-3	
Radium-228	EPA 9320	**0.869 ± 0.426 (0.744) C:75% T:90%**	pCi/L	09/27/16 22:03	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195375

Sample: DGWC-42 **Lab ID: 30195375005** Collected: 09/07/16 13:21 Received: 09/08/16 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	**0.876 ± 0.606 (1.22)**	pCi/L	10/05/16 11:20	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195375

QC Batch: 232981 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30195375001, 30195375002, 30195375003, 30195375004

METHOD BLANK: 1141806 Matrix: Water
Associated Lab Samples: 30195375001, 30195375002, 30195375003, 30195375004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0211 ± 0.0919 (0.290) C:86% T:NA	pCi/L	09/28/16 11:34	

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 McDonough AP
Pace Project No.: 30195375

QC Batch: 232987 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30195375001, 30195375002, 30195375003, 30195375004

METHOD BLANK: 1141823 Matrix: Water
Associated Lab Samples: 30195375001, 30195375002, 30195375003, 30195375004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.450 ± 0.440 (0.907) C:80% T:77%	pCi/L	09/23/16 22:33	

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 McDonough AP
Pace Project No.: 30195375

QC Batch: 232982 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30195375005

METHOD BLANK: 1141808 Matrix: Water
Associated Lab Samples: 30195375005

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.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough AP
Pace Project No.: 30195375

QC Batch: 232988 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30195375005

METHOD BLANK: 1141826 Matrix: Water
Associated Lab Samples: 30195375005

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.

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QUALIFIERS

Project: Plant McDonough AP
Pace Project No.: 30195375

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.

SAMPLE QUALIFIERS

Sample: 30195375004

[1] Sample collection time was not present on the sample containers.

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Joju Abraham
CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 1663199 Phase II CCR

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P								
PRESERVATION:								3	7	3								
9/7/16	0830	W		X	EB-1	3		1	1	1							1	001
9/7/16	0840	W		X	EB-2	3		1	1	1							-	002
9/7/16	0850	W		X	EB-3	3		1	1	1								003
9/7/16	1120	GW		X	DGWC-17	3		1	1	1								004
9/7/16	1321	GW		X	DGWC-42	4		1	1	2								1 extra Radium bottle 005

ANALYSIS REQUESTED

WO#:30195375

30195375

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 9/7/16 1500
RELINQUISHED BY:
DATE/TIME: 9/7/16 1500

RECEIVED BY: Mike Nguyen
DATE/TIME: 9/7/16 1500
RELINQUISHED BY:
DATE/TIME: 9/7/16 1500

RECEIVED BY/LAB:
DATE/TIME: 9/7/16 1545
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS

pH checked: (Yes) No NA
Ice: (Yes) No NA
Temperature: 2°C Min: 2°C Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

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

Received: Karen E. Hill 9-8-16 10:20

Sample Condition Upon Receipt Pittsburgh

30195375

Pace Analytical

Client Name: Pace, Georgia Project # _____

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

Tracking #: 6812 5098 9525

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 9-8-16

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. ~~No Signature~~ name & signature
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: WT		✓		5. No time on sample DGWC-17
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. pH <2
All containers needing preservation are found to be in compliance with EPA recommendation.	✓			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: KH 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: KH Date: 9-8-16

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

Pace Analytical™ www.pacelabs.com

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
M/B 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

	LCSD (Y or N)?	N
	LCS31363	LCSD31363
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):	0.498	
Target Conc. (pCi/L, g, F):	8.972	
Uncertainty (Calculated):	0.422	
Result (pCi/L, g, F):	8.112	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.797	
Numerical Performance Indicator:	-1.87	
Percent Recovery:	90.41%	
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:	
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

		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30195375005	
Duplicate Sample I.D.	30195375005DUP	
Sample Result (pCi/L, g, F):	0.007	
Sample Result Counting Uncertainty (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	30195375005
Duplicate RPD:	-394.78%	30195375005DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:

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:	0.265
M/B Counting Uncertainty:	0.323
MB MDC:	0.690
MB Numerical Performance Indicator:	1.61
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS31368	LCSD31368
Count Date:	9/27/2016	
Spike I.D.:	16-025	
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	

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:	

Duplicate Sample Assessment		
Sample I.D.:	30195543001	Enter Duplicate
Duplicate Sample I.D.	30195543001DUP	sample IDs if
Sample Result (pCi/L, g, F):	0.224	other than
Sample Result Counting Uncertainty (pCi/L, g, F):	0.332	LCS/LCSD in
Sample Duplicate Result (pCi/L, g, F):	0.235	the space below.
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	30195543001
Duplicate RPD:	4.75%	30195543001DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JLW
Date:	9/15/2016
Worklist:	31367
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1141823
MB concentration:	0.450
M/B Counting Uncertainty:	0.432
MB MDC:	0.907
MB Numerical Performance Indicator:	2.04
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS31367	LCSD31367
Count Date:	9/23/2016	
Spike I.D.:	16-025	
Spike Concentration (pCi/mL):	25.595	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.813	
Target Conc. (pCi/L, g, F):	6.293	
Uncertainty (Calculated):	0.453	
Result (pCi/L, g, F):	7.559	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.863	
Numerical Performance Indicator:	2.55	
Percent Recovery:	120.12%	
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:	
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.:	30195128008	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30195128008DUP	
Sample Result (pCi/L, g, F):	1.816	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.475	
Sample Duplicate Result (pCi/L, g, F):	1.232	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.428	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	1.791	30195128008
Duplicate RPD:	38.33%	30195128008DUP
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:	
(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:

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

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	WRR
Date:	9/26/2016
Worklist:	31362
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1141806
MB concentration:	-0.021
M/B Counting Uncertainty:	0.092
MB MDC:	0.290
MB Numerical Performance Indicator:	-0.45
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS31362	LCSD31362
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):	0.504	
Target Conc. (pCi/L, g, F):	8.870	
Uncertainty (Calculated):	0.417	
Result (pCi/L, g, F):	7.482	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.849	
Numerical Performance Indicator:	-2.87	
Percent Recovery:	84.36%	
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:	
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.:	30195128008	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30195128008DUP	
Sample Result (pCi/L, g, F):	0.625	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.301	
Sample Duplicate Result (pCi/L, g, F):	0.359	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.228	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	1.384	30195128008
Duplicate RPD:	54.21%	30195128008DUP
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:

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

LABORATORY ANALYTICAL DATA

December 2016

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: AZL0284
December 19, 2016
Project: CCR Event
Project #:Plant McDonough

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

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

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWA-8	AZL0284-01	Ground Water	12/06/16 10:06	12/07/16 12:00
DGWA-9	AZL0284-02	Ground Water	12/06/16 10:06	12/07/16 12:00
DGWA-26	AZL0284-03	Ground Water	12/06/16 16:05	12/07/16 12:00
DGWA-27	AZL0284-04	Ground Water	12/06/16 14:05	12/07/16 12:00
DGWC-5	AZL0284-05	Ground Water	12/06/16 13:26	12/07/16 12:00
DGWC-11	AZL0284-06	Ground Water	12/06/16 15:44	12/07/16 12:00
DGWC-14	AZL0284-07	Ground Water	12/06/16 14:50	12/07/16 12:00
FB-1	AZL0284-08	Water	12/06/16 17:24	12/07/16 12:00
EB-1	AZL0284-09	Water	12/06/16 17:05	12/07/16 12:00
DGWC-10	AZL0284-10	Ground Water	12/06/16 10:50	12/07/16 12:00

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

December 19, 2016

Report No.: AZL0284
Client ID: DGWA-8
Date/Time Sampled: 12/6/2016 10:06:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0284-01
Date/Time Received: 12/7/2016 12:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	727	25	10	mg/L	SM 2540 C		1	12/10/16 18:16	12/10/16 18:16	6120287	JPT
Inorganic Anions											
Chloride	9.8	0.25	0.01	mg/L	EPA 300.0		1	12/13/16 08:57	12/13/16 19:00	6120363	RLC
Fluoride	0.47	0.30	0.02	mg/L	EPA 300.0		1	12/13/16 08:57	12/13/16 19:00	6120363	RLC
Sulfate	480	20	1.0	mg/L	EPA 300.0		20	12/13/16 08:57	12/14/16 14:34	6120363	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:37	6120325	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:37	6120325	KLH
Barium	0.0431	0.0100	0.0004	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:37	6120325	KLH
Beryllium	0.0034	0.0030	0.00008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:37	6120325	KLH
Boron	2.72	0.0400	0.0064	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:37	6120325	KLH
Cadmium	0.0025	0.0010	0.00007	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:37	6120325	KLH
Calcium	76.8	5.00	0.311	mg/L	EPA 6020B		10	12/12/16 16:35	12/17/16 02:41	6120325	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:37	6120325	KLH
Cobalt	0.0873	0.0100	0.0005	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:37	6120325	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:37	6120325	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:37	6120325	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:37	6120325	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:37	6120325	KLH
Lithium	0.0066	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:37	6120325	KLH
Mercury	0.00010	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/13/16 09:50	12/13/16 14:45	6120353	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

December 19, 2016

Report No.: AZL0284
Client ID: DGWA-9
Date/Time Sampled: 12/6/2016 10:06:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0284-02
Date/Time Received: 12/7/2016 12:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	449	25	10	mg/L	SM 2540 C		1	12/10/16 18:16	12/10/16 18:16	6120287	JPT
Inorganic Anions											
Chloride	6.2	0.25	0.01	mg/L	EPA 300.0		1	12/13/16 08:57	12/13/16 19:22	6120363	RLC
Fluoride	1.1	0.30	0.02	mg/L	EPA 300.0		1	12/13/16 08:57	12/13/16 19:22	6120363	RLC
Sulfate	320	20	1.0	mg/L	EPA 300.0		20	12/13/16 08:57	12/14/16 14:56	6120363	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:43	6120325	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:43	6120325	KLH
Barium	0.0138	0.0100	0.0004	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:43	6120325	KLH
Beryllium	0.0050	0.0030	0.00008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:43	6120325	KLH
Boron	1.92	0.0400	0.0064	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:43	6120325	KLH
Cadmium	0.0005	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:43	6120325	KLH
Calcium	59.3	5.00	0.311	mg/L	EPA 6020B		10	12/12/16 16:35	12/17/16 02:47	6120325	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:43	6120325	KLH
Cobalt	0.122	0.0100	0.0005	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:43	6120325	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:43	6120325	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:43	6120325	KLH
Selenium	0.0065	0.0100	0.0010	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:43	6120325	KLH
Thallium	0.0006	0.0010	0.0002	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:43	6120325	KLH
Lithium	0.0242	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:43	6120325	KLH
Mercury	0.00005	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/13/16 09:50	12/13/16 14:47	6120353	MTC

PACE ANALYTICAL SERVICES, LLC.

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0284
Client ID: DGWA-26
Date/Time Sampled: 12/6/2016 4:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0284-03
Date/Time Received: 12/7/2016 12:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	432	25	10	mg/L	SM 2540 C		1	12/10/16 18:16	12/10/16 18:16	6120287	JPT
Inorganic Anions											
Chloride	2.8	0.25	0.01	mg/L	EPA 300.0		1	12/13/16 08:57	12/13/16 19:43	6120363	RLC
Fluoride	0.15	0.30	0.02	mg/L	EPA 300.0	J	1	12/13/16 08:57	12/13/16 19:43	6120363	RLC
Sulfate	220	10	0.51	mg/L	EPA 300.0		10	12/13/16 08:57	12/14/16 15:18	6120363	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:49	6120325	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:49	6120325	KLH
Barium	0.0157	0.0100	0.0004	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:49	6120325	KLH
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:49	6120325	KLH
Boron	0.552	0.0400	0.0064	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:49	6120325	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:49	6120325	KLH
Calcium	46.2	5.00	0.311	mg/L	EPA 6020B		10	12/12/16 16:35	12/17/16 02:53	6120325	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:49	6120325	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:49	6120325	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:49	6120325	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:49	6120325	KLH
Selenium	0.0038	0.0100	0.0010	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:49	6120325	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:49	6120325	KLH
Lithium	0.0212	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:49	6120325	KLH
Mercury	0.00005	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/13/16 09:50	12/13/16 14:49	6120353	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0284
Client ID: DGWA-27
Date/Time Sampled: 12/6/2016 2:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0284-04
Date/Time Received: 12/7/2016 12:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1110	25	10	mg/L	SM 2540 C		1	12/10/16 18:16	12/10/16 18:16	6120287	JPT
Inorganic Anions											
Chloride	6.9	0.25	0.01	mg/L	EPA 300.0		1	12/13/16 08:57	12/13/16 20:04	6120363	RLC
Fluoride	0.81	0.30	0.02	mg/L	EPA 300.0		1	12/13/16 08:57	12/13/16 20:04	6120363	RLC
Sulfate	730	20	1.0	mg/L	EPA 300.0		20	12/13/16 08:57	12/14/16 17:10	6120363	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:55	6120325	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:55	6120325	KLH
Barium	0.0370	0.0100	0.0004	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:55	6120325	KLH
Beryllium	0.0184	0.0030	0.00008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:55	6120325	KLH
Boron	1.36	0.0400	0.0064	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:55	6120325	KLH
Cadmium	0.0046	0.0010	0.00007	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:55	6120325	KLH
Calcium	163	25.0	1.55	mg/L	EPA 6020B		50	12/12/16 16:35	12/17/16 03:10	6120325	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:55	6120325	KLH
Cobalt	0.598	0.0100	0.0005	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:55	6120325	KLH
Lead	0.0003	0.0050	0.0001	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:55	6120325	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:55	6120325	KLH
Selenium	0.0212	0.0100	0.0010	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:55	6120325	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:55	6120325	KLH
Lithium	0.0443	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:55	6120325	KLH
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/13/16 09:50	12/13/16 14:57	6120353	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

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0284
Client ID: DGWC-5
Date/Time Sampled: 12/6/2016 1:26:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0284-05
Date/Time Received: 12/7/2016 12:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	690	25	10	mg/L	SM 2540 C		1	12/10/16 18:16	12/10/16 18:16	6120287	JPT
Inorganic Anions											
Chloride	8.0	0.25	0.01	mg/L	EPA 300.0		1	12/13/16 08:57	12/13/16 20:25	6120363	RLC
Fluoride	0.76	0.30	0.02	mg/L	EPA 300.0		1	12/13/16 08:57	12/13/16 20:25	6120363	RLC
Sulfate	460	10	0.51	mg/L	EPA 300.0		10	12/13/16 08:57	12/14/16 17:32	6120363	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:02	6120325	KLH
Arsenic	0.0032	0.0050	0.0016	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 15:02	6120325	KLH
Barium	0.0186	0.0100	0.0004	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:02	6120325	KLH
Beryllium	0.0064	0.0030	0.00008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:02	6120325	KLH
Boron	5.64	0.0400	0.0064	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:02	6120325	KLH
Cadmium	0.0004	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 15:02	6120325	KLH
Calcium	73.9	5.00	0.311	mg/L	EPA 6020B		10	12/12/16 16:35	12/17/16 03:16	6120325	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:02	6120325	KLH
Cobalt	0.0432	0.0100	0.0005	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:02	6120325	KLH
Lead	0.0004	0.0050	0.0001	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 15:02	6120325	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:02	6120325	KLH
Selenium	0.0120	0.0100	0.0010	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:02	6120325	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:02	6120325	KLH
Lithium	0.0046	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 15:02	6120325	KLH
Mercury	0.00012	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/13/16 09:50	12/13/16 14:59	6120353	MTC

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0284
Client ID: DGWC-11
Date/Time Sampled: 12/6/2016 3:44:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0284-06
Date/Time Received: 12/7/2016 12:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	358	25	10	mg/L	SM 2540 C		1	12/10/16 18:16	12/10/16 18:16	6120287	JPT
Inorganic Anions											
Chloride	11	0.25	0.01	mg/L	EPA 300.0		1	12/13/16 08:57	12/13/16 20:47	6120363	RLC
Fluoride	0.06	0.30	0.02	mg/L	EPA 300.0	J	1	12/13/16 08:57	12/13/16 20:47	6120363	RLC
Sulfate	190	10	0.51	mg/L	EPA 300.0		10	12/13/16 08:57	12/14/16 17:55	6120363	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:08	6120325	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:08	6120325	KLH
Barium	0.0564	0.0100	0.0004	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:08	6120325	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:08	6120325	KLH
Boron	1.15	0.0400	0.0064	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:08	6120325	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:08	6120325	KLH
Calcium	48.3	5.00	0.311	mg/L	EPA 6020B		10	12/12/16 16:35	12/17/16 03:21	6120325	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:08	6120325	KLH
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 15:08	6120325	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:08	6120325	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:08	6120325	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:08	6120325	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:08	6120325	KLH
Lithium	0.0027	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 15:08	6120325	KLH
Mercury	0.00008	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/13/16 09:50	12/13/16 15:01	6120353	MTC

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0284
Client ID: DGWC-14
Date/Time Sampled: 12/6/2016 2:50:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0284-07
Date/Time Received: 12/7/2016 12:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	138	25	10	mg/L	SM 2540 C		1	12/10/16 18:16	12/10/16 18:16	6120287	JPT
Inorganic Anions											
Chloride	3.1	0.25	0.01	mg/L	EPA 300.0		1	12/13/16 08:57	12/13/16 21:08	6120363	RLC
Fluoride	0.10	0.30	0.02	mg/L	EPA 300.0	J	1	12/13/16 08:57	12/13/16 21:08	6120363	RLC
Sulfate	45	1.0	0.05	mg/L	EPA 300.0		1	12/13/16 08:57	12/13/16 21:08	6120363	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:14	6120325	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:14	6120325	KLH
Barium	0.0608	0.0100	0.0004	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:14	6120325	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:14	6120325	KLH
Boron	0.0804	0.0400	0.0064	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:14	6120325	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:14	6120325	KLH
Calcium	10.4	2.50	0.155	mg/L	EPA 6020B		5	12/12/16 16:35	12/17/16 14:19	6120325	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:14	6120325	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:14	6120325	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:14	6120325	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:14	6120325	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:14	6120325	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:14	6120325	KLH
Lithium	0.0042	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 15:14	6120325	KLH
Mercury	0.00008	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/13/16 09:50	12/13/16 15:04	6120353	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0284
Client ID: FB-1
Date/Time Sampled: 12/6/2016 5:24:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0284-08
Date/Time Received: 12/7/2016 12:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	12/10/16 18:16	12/10/16 18:16	6120287	JPT
Inorganic Anions											
Chloride	0.05	0.25	0.01	mg/L	EPA 300.0	J	1	12/13/16 08:57	12/13/16 22:14	6120363	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	12/13/16 08:57	12/13/16 22:14	6120363	RLC
Sulfate	0.11	1.0	0.05	mg/L	EPA 300.0	J	1	12/13/16 08:57	12/13/16 22:14	6120363	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:20	6120325	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:20	6120325	KLH
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:20	6120325	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:20	6120325	KLH
Boron	0.0084	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 15:20	6120325	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:20	6120325	KLH
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:20	6120325	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:20	6120325	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:20	6120325	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:20	6120325	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:20	6120325	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:20	6120325	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:20	6120325	KLH
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:20	6120325	KLH
Mercury	0.00008	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/13/16 09:50	12/13/16 15:06	6120353	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0284
Client ID: EB-1
Date/Time Sampled: 12/6/2016 5:05:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0284-09
Date/Time Received: 12/7/2016 12:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	11	25	10	mg/L	SM 2540 C	J	1	12/10/16 18:16	12/10/16 18:16	6120287	JPT
Inorganic Anions											
Chloride	0.04	0.25	0.01	mg/L	EPA 300.0	J	1	12/13/16 08:57	12/14/16 00:04	6120363	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	12/13/16 08:57	12/14/16 00:04	6120363	RLC
Sulfate	0.06	1.0	0.05	mg/L	EPA 300.0	J	1	12/13/16 08:57	12/14/16 00:04	6120363	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:26	6120325	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:26	6120325	KLH
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:26	6120325	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:26	6120325	KLH
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:26	6120325	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:26	6120325	KLH
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:26	6120325	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:26	6120325	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:26	6120325	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:26	6120325	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:26	6120325	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:26	6120325	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:26	6120325	KLH
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:26	6120325	KLH
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/13/16 09:50	12/13/16 15:08	6120353	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0284
Client ID: DGWC-10
Date/Time Sampled: 12/6/2016 10:50:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0284-10
Date/Time Received: 12/7/2016 12:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	595	25	10	mg/L	SM 2540 C		1	12/10/16 18:16	12/10/16 18:16	6120287	JPT
Inorganic Anions											
Chloride	10	0.25	0.01	mg/L	EPA 300.0		1	12/13/16 08:57	12/14/16 00:26	6120363	RLC
Fluoride	1.3	0.30	0.02	mg/L	EPA 300.0		1	12/13/16 08:57	12/14/16 00:26	6120363	RLC
Sulfate	190	10	0.51	mg/L	EPA 300.0		10	12/13/16 08:57	12/14/16 18:18	6120363	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:34	6120325	KLH
Arsenic	0.0017	0.0050	0.0016	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 15:34	6120325	KLH
Barium	0.0290	0.0100	0.0004	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:34	6120325	KLH
Beryllium	0.0048	0.0030	0.00008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:34	6120325	KLH
Boron	3.30	0.0400	0.0064	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:34	6120325	KLH
Cadmium	0.0013	0.0010	0.00007	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:34	6120325	KLH
Calcium	74.2	5.00	0.311	mg/L	EPA 6020B		10	12/12/16 16:35	12/17/16 03:33	6120325	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:34	6120325	KLH
Cobalt	0.200	0.0100	0.0005	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:34	6120325	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:34	6120325	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:34	6120325	KLH
Selenium	0.0026	0.0100	0.0010	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 15:34	6120325	KLH
Thallium	0.0004	0.0010	0.0002	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 15:34	6120325	KLH
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 15:34	6120325	KLH
Mercury	0.00009	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/13/16 09:50	12/13/16 15:11	6120353	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

December 19, 2016

Report No.: AZL0284

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120287 - SM 2540 C											
Blank (6120287-BLK1)						Prepared & Analyzed: 12/10/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6120287-BS1)						Prepared & Analyzed: 12/10/16					
Total Dissolved Solids	412	25	10	mg/L	400.00		103	84-108			
Duplicate (6120287-DUP1)		**Source: AZL0282-08**				Prepared & Analyzed: 12/10/16					
Total Dissolved Solids	739	25	10	mg/L		733			0.8	10	
Duplicate (6120287-DUP2)		**Source: AZL0284-08**				Prepared & Analyzed: 12/10/16					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	

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Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0284

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120363 - EPA 300.0											
Blank (6120363-BLK1)						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							
LCS (6120363-BS1)						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			
Matrix Spike (6120363-MS1)		**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
Matrix Spike (6120363-MS2)		**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			
Matrix Spike Dup (6120363-MSD1)		**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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Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0284

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0284

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120325 - EPA 3005A											
Matrix Spike (6120325-MS1)		**Source: AZL0282-07**			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			
Matrix Spike Dup (6120325-MSD1)		**Source: AZL0282-07**			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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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0284

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120325 - EPA 3005A											
Post Spike (6120325-PS1)			**Source: AZL0282-07**			Prepared: 12/12/16 Analyzed: 12/13/16					
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 6120353 - EPA 7470A											
Blank (6120353-BLK1)						Prepared & Analyzed: 12/13/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6120353-BS1)						Prepared & Analyzed: 12/13/16					
Mercury	0.00245	0.00050	0.000041	mg/L	2.5000E-3		98	80-120			

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December 19, 2016

Report No.: AZL0284

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120353 - EPA 7470A											
Matrix Spike (6120353-MS1)		**Source: AZL0284-06**				Prepared & Analyzed: 12/13/16					
Mercury	0.00250	0.00050	0.000041	mg/L	2.5000E-3	0.00008	97	75-125			
Matrix Spike Dup (6120353-MSD1)		**Source: AZL0284-06**				Prepared & Analyzed: 12/13/16					
Mercury	0.00244	0.00050	0.000041	mg/L	2.5000E-3	0.00008	94	75-125	2	20	
Post Spike (6120353-PS1)		**Source: AZL0284-06**				Prepared & Analyzed: 12/13/16					
Mercury	1.73			ug/L	1.6667	0.0524	101	80-120			

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Attention: Mr. Joju Abraham

December 19, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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.

CHAIN OF CUSTODY RECORD

Pace Analytical®

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: Kjurinko@golder.com, Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:
PO #:

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 1668496
Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals APP III & IV (EPA 6020 & EPA 7470) P 3&7	Cl, F, SO4 (EPA 300) TDS (SM2540C) P 7	Radium 226 & 228 (SW-846 9315 and 9320) P 3&7	LAB ID NUMBER
12/6/16	1006	GW		X	DGWA-8	3	1	1	1	1
12/6/16	1006				DGWA-9	3	1	1	1	2
12/6/16	1605				DGWA-26	3	1	1	1	3
12/6/16	1405				DGWA-27	3	1	1	1	4
12/6/16	1326				~~DGWA~~ DGWC-5 (per 12/6/16)	3	1	1	1	5
12/6/16	1544				DGWC-11	3	1	1	1	6
12/6/16	1450				DGWC-14	3	1	1	1	7
12/6/16	1724	W			FB-1	4	1	1	2	8
12/6/16	1705	W			FB-1	3	1	1	1	9
12/6/16	1050	GW			DGWC-10	3	1	1	1	10

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

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

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Kristen Jurinko, Field Lead
DATE/TIME: 12/6/16 - see above

RELINQUISHED BY:
DATE/TIME: 12/7/16 0953

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB:
DATE/TIME: 12/07/16 1200

Checked: No NA
Ice: Yes No NA
Temperature: 1°C Min: 1°C Max:

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AZL0284
Entered into LIMS: MR
Tracking #:

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 3:45:15PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 12/07/16 12:00

Work Order: AZL0284
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 10 **#Containers:** 31

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:

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

January 11, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McDonough
Pace Project No.: 30204841

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

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

CERTIFICATIONS

Project: Plant McDonough
Pace Project No.: 30204841

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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Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: Plant McDonough
Pace Project No.: 30204841

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30204841001	**DGWA-8**	Water	12/06/16 10:06	12/08/16 10:20
30204841002	**DGWA-9**	Water	12/06/16 10:06	12/08/16 10:20
30204841003	**DGWA-26**	Water	12/06/16 16:05	12/08/16 10:20
30204841004	**DGWA-27**	Water	12/06/16 14:05	12/08/16 10:20
30204841005	**DGWC-5**	Water	12/06/16 13:26	12/08/16 10:20
30204841006	**DGWC-11**	Water	12/06/16 15:44	12/08/16 10:20
30204841007	**DGWC-14**	Water	12/06/16 14:50	12/08/16 10:20
30204841008	**FB-1**	Water	12/06/16 17:24	12/08/16 10:20
30204841009	**EB-1**	Water	12/06/16 17:05	12/08/16 10:20
30204841010	**DGWC-10**	Water	12/06/16 10:50	12/08/16 10:20

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SAMPLE ANALYTE COUNT

Project: Plant McDonough
Pace Project No.: 30204841

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30204841001	**DGWA-8**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204841002	**DGWA-9**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204841003	**DGWA-26**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204841004	**DGWA-27**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204841005	**DGWC-5**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204841006	**DGWC-11**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204841007	**DGWC-14**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204841008	**FB-1**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204841009	**EB-1**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204841010	**DGWC-10**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough
Pace Project No.: 30204841

Sample: DGWA-8 **Lab ID: 30204841001** Collected: 12/06/16 10:06 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	**0.261 ± 0.149 (0.210) C:93% T:NA**	pCi/L	12/20/16 08:19	13982-63-3	
Radium-228	EPA 9320	**0.146 ± 0.397 (0.888) C:69% T:75%**	pCi/L	01/08/17 16:59	15262-20-1	
Total Radium	Total Radium Calculation	**0.407 ± 0.546 (1.10)**	pCi/L	01/11/17 16:00	7440-14-4	

Sample: DGWA-9 **Lab ID: 30204841002** Collected: 12/06/16 10:06 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	**0.184 ± 0.136 (0.218) C:91% T:NA**	pCi/L	12/19/16 08:32	13982-63-3	
Radium-228	EPA 9320	**0.644 ± 0.430 (0.818) C:68% T:79%**	pCi/L	01/08/17 16:59	15262-20-1	
Total Radium	Total Radium Calculation	**0.828 ± 0.566 (1.04)**	pCi/L	01/11/17 16:00	7440-14-4	

Sample: DGWA-26 **Lab ID: 30204841003** Collected: 12/06/16 16:05 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	**0.786 ± 0.264 (0.213) C:92% T:NA**	pCi/L	12/19/16 08:32	13982-63-3	
Radium-228	EPA 9320	**3.68 ± 0.955 (0.954) C:62% T:78%**	pCi/L	01/08/17 16:59	15262-20-1	
Total Radium	Total Radium Calculation	**4.47 ± 1.22 (1.17)**	pCi/L	01/11/17 16:00	7440-14-4	

Sample: DGWA-27 **Lab ID: 30204841004** Collected: 12/06/16 14:05 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	**0.942 ± 0.306 (0.257) C:84% T:NA**	pCi/L	12/19/16 08:32	13982-63-3	
Radium-228	EPA 9320	**0.296 ± 0.473 (1.03) C:65% T:68%**	pCi/L	01/08/17 16:59	15262-20-1	
Total Radium	Total Radium Calculation	**1.24 ± 0.779 (1.29)**	pCi/L	01/11/17 16:00	7440-14-4	

Sample: DGWC-5 **Lab ID: 30204841005** Collected: 12/06/16 13:26 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	**0.283 ± 0.152 (0.174) C:96% T:NA**	pCi/L	12/19/16 08:32	13982-63-3	
Radium-228	EPA 9320	**0.0648 ± 0.435 (0.999) C:55% T:84%**	pCi/L	01/08/17 16:59	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough
Pace Project No.: 30204841

Sample: DGWC-5 **Lab ID: 30204841005** Collected: 12/06/16 13:26 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
Total Radium	Total Radium Calculation	**0.348 ± 0.587 (1.17)**	pCi/L	01/11/17 16:00	7440-14-4	

Sample: DGWC-11 **Lab ID: 30204841006** Collected: 12/06/16 15:44 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	**0.132 ± 0.126 (0.237) C:95% T:NA**	pCi/L	12/19/16 08:32	13982-63-3	
Radium-228	EPA 9320	**0.277 ± 0.405 (0.872) C:61% T:79%**	pCi/L	01/08/17 17:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.409 ± 0.531 (1.11)**	pCi/L	01/11/17 16:00	7440-14-4	

Sample: DGWC-14 **Lab ID: 30204841007** Collected: 12/06/16 14:50 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	**0.127 ± 0.142 (0.291) C:93% T:NA**	pCi/L	12/19/16 08:32	13982-63-3	
Radium-228	EPA 9320	**0.532 ± 0.424 (0.838) C:68% T:77%**	pCi/L	01/08/17 17:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.659 ± 0.566 (1.13)**	pCi/L	01/11/17 16:00	7440-14-4	

Sample: FB-1 **Lab ID: 30204841008** Collected: 12/06/16 17:24 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	**0.0967 ± 0.105 (0.199) C:97% T:NA**	pCi/L	12/19/16 08:32	13982-63-3	
Radium-228	EPA 9320	**-0.300 ± 0.311 (0.799) C:70% T:79%**	pCi/L	01/08/17 17:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.0967 ± 0.416 (0.998)**	pCi/L	01/11/17 16:00	7440-14-4	

Sample: EB-1 **Lab ID: 30204841009** Collected: 12/06/16 17:05 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	**-0.0361 ± 0.0505 (0.203) C:96% T:NA**	pCi/L	12/19/16 08:32	13982-63-3	
Radium-228	EPA 9320	**0.118 ± 0.419 (0.948) C:63% T:76%**	pCi/L	01/08/17 17:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.118 ± 0.470 (1.15)**	pCi/L	01/11/17 15:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough
Pace Project No.: 30204841

Sample: DGWC-10 **Lab ID: 30204841010** Collected: 12/06/16 10:50 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	**0.324 ± 0.165 (0.184) C:93% T:NA**	pCi/L	12/19/16 08:32	13982-63-3	
Radium-228	EPA 9320	**0.984 ± 0.485 (0.838) C:61% T:89%**	pCi/L	01/08/17 17:00	15262-20-1	
Total Radium	Total Radium Calculation	**1.31 ± 0.650 (1.02)**	pCi/L	01/11/17 15:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough
Pace Project No.: 30204841

QC Batch: 243001 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30204841001

METHOD BLANK: 1195275 Matrix: Water
Associated Lab Samples: 30204841001

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 McDonough
Pace Project No.: 30204841

QC Batch: 243005 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30204841002, 30204841003, 30204841004, 30204841005, 30204841006, 30204841007, 30204841008, 30204841009, 30204841010

METHOD BLANK: 1195286 Matrix: Water
Associated Lab Samples: 30204841002, 30204841003, 30204841004, 30204841005, 30204841006, 30204841007, 30204841008, 30204841009, 30204841010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.149 ± 0.117 (0.179) C:96% T:NA	pCi/L	12/19/16 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: Plant McDonough
Pace Project No.: 30204841

QC Batch: 243004 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30204841001, 30204841002, 30204841003, 30204841004, 30204841005, 30204841006, 30204841007, 30204841008, 30204841009, 30204841010

METHOD BLANK: 1195284 Matrix: Water
Associated Lab Samples: 30204841001, 30204841002, 30204841003, 30204841004, 30204841005, 30204841006, 30204841007, 30204841008, 30204841009, 30204841010

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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Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: Plant McDonough
Pace Project No.: 30204841

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.

Chain of Custody

Pace Analytical

Workorder: AZL0284 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 1/6/2017

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

WO#:30204841

30204841

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3					Requested Analysis: Radium 226, 228, Total											LAB USE ONLY
1	DGWA-8	G	12/6/2016 10:06	AZL0284-01	GW	1					X											001
2	DGWA-9	G	12/6/2016 10:06	AZL0284-02	GW	1					X											002
3	DGWA-26	G	12/6/2016 16:05	AZL0284-03	GW	1					X											003
4	DGWA-27	G	12/6/2016 14:05	AZL0284-04	GW	1					X											004
5	DGWC-5	G	12/6/2016 13:26	AZL0284-05	GW	1					X											005
6	DGWC-11	G	12/6/2016 15:44	AZL0284-06	GW	1					X											006
7	DGWC-14	G	12/6/2016 14:50	AZL0284-07	GW	1					X											007
8	FB-1	G	12/6/2016 17:24	AZL0284-08	W	2					X											008
9	EB-1	G	12/6/2016 17:05	AZL0284-09	W	1					X											009
10	DGWC-10	G	12/6/2016 10:50	AZL0284-10	GW	1					X											010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Kiara Hill	12-8-16 1020	
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.

30204841

CHAIN OF CUSTODY RECORD

Pace 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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: Kjurinko@golder.com, Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:
PO #:

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 1668496
Phase II CCR

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals APP III & IV (EPA 6020 & EPA 7470)	Cl, F, SO4 (EPA 300) TDS (SM2540C)	Radium 226 & 228 (SW-846 9315 and 9320)	LAB ID NUMBER
12/6/16	1006	GW		X	DGWA-8	3	1	1	1	1
12/6/16	1006				DGWA-9	3	1	1	1	2
12/6/16	1605				DGWA-26	3	1	1	1	3
12/6/16	1405				DGWA-27	3	1	1	1	4
12/6/16	1326				~~DGWA~~ DGWC-5 (REPLACED)	3	1	1	1	5
12/6/16	1544				DGWC-11	3	1	1	1	6
12/6/16	1450	↓			DGWC-14	3	1	1	1	7
12/6/16	1724	W			FB-1	4	1	1	2	8
12/6/16	1705	W			FB-1	3	1	1	1	9
12/6/16	1050	GW		↓	DGWC-10	3	1	1	1	10

ANALYSIS REQUESTED

CONTAINER TYPE: P P P
PRESERVATION: 3&7 7 3&7

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

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

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Kristen Jurinko, Field Lead
DATE/TIME: 12/6/16 - see above

RELINQUISHED BY:
DATE/TIME: 12/7/16 0953

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB:
DATE/TIME: 12/07/16 1200

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

pH checked: Yes No NA
Ice: Yes No NA
Temperature: 1°C Min: 1°C Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AZL0284
Entered into LIMS: MR
Tracking #:

Plant McDonough COC.xlsx

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

30204841

Client Name: Pace, AT Project #

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

Tracking #: 6812 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 — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: DMR 12-8-16

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: -Includes date/time/ID/Analysis Matrix: WT	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:	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. pH <2
All containers needing preservation are found to be in compliance with EPA recommendation.	X			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: DMR 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: KH Date: 12-8-16

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

Pace Analytical™
www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	12/16/2016
Worklist:	32914
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1195286
MB concentration:	0.149
M/B Counting Uncertainty:	0.115
MB MDC:	0.179
MB Numerical Performance Indicator:	2.55
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS32914	LCSD32914
Count Date:	12/19/2016	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.672	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.500	
Target Conc. (pCi/L, g, F):	8.928	
Uncertainty (Calculated):	0.420	
Result (pCi/L, g, F):	7.471	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.709	
Numerical Performance Indicator:	-3.46	
Percent Recovery:	83.68%	
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:	
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.:	30204841008	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30204841008DUP	
Sample Result (pCi/L, g, F):	0.097	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.104	
Sample Duplicate Result (pCi/L, g, F):	-0.010	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.068	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	1.692	30204841008
Duplicate RPD:	248.57%	30204841008DUP
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:

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

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	12/29/2016
Worklist:	32913
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1195284
MB concentration:	0.135
M/B Counting Uncertainty:	0.405
MB MDC:	0.913
MB Numerical Performance Indicator:	0.65
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS32913	LCSD32913
Count Date:	1/8/2017	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	25.612	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.814	
Target Conc. (pCi/L, g, F):	6.296	
Uncertainty (Calculated):	0.453	
Result (pCi/L, g, F):	6.003	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.772	
Numerical Performance Indicator:	-0.64	
Percent Recovery:	95.35%	
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:	
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.:	30204841008	Enter Duplicate
Duplicate Sample I.D.	30204841008DUP	sample IDs if
Sample Result (pCi/L, g, F):	-0.300	other than
Sample Result Counting Uncertainty (pCi/L, g, F):	0.306	LCS/LCSD in
Sample Duplicate Result (pCi/L, g, F):	-0.115	the space below.
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.400	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.722	30204841008
Duplicate RPD:	-89.35%	30204841008DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

Quality Control Sample Performance Assessment

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Analyst Must Manually Enter All Fields Highlighted in Yellow.

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	LCSD (Y or N)?	N
	LCS32910	LCSD32910
Count Date:	12/20/2016	
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	
LCS/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	

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:	

Duplicate Sample Assessment		
Sample I.D.:	30204838001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30204838001DUP	
Sample Result (pCi/L, g, F):	0.301	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.155	
Sample Duplicate Result (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 Numerical Performance Indicator:	-1.279	30204838001
Duplicate RPD:	42.22%	30204838001DUP
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.

MPC

Comments:

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

6/11/17

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: AZL0383
December 28, 2016
Project: CCR Event
Project #:Plant McDonough

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

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWC-12	AZL0383-01	Ground Water	12/07/16 09:35	12/08/16 12:15
DGWC-13	AZL0383-02	Ground Water	12/07/16 10:55	12/08/16 12:15
DGWC-15	AZL0383-03	Ground Water	12/07/16 14:37	12/08/16 12:15
DGWC-19	AZL0383-04	Ground Water	12/07/16 13:10	12/08/16 12:15
DGWC-20	AZL0383-05	Ground Water	12/07/16 16:15	12/08/16 12:15
DGWC-37	AZL0383-06	Ground Water	12/07/16 13:05	12/08/16 12:15
DGWC-38	AZL0383-07	Ground Water	12/07/16 14:15	12/08/16 12:15
DGWC-39	AZL0383-08	Ground Water	12/07/16 15:25	12/08/16 12:15
FD-1	AZL0383-09	Ground Water	12/07/16 00:00	12/08/16 12:15
FD-2	AZL0383-10	Ground Water	12/07/16 00:00	12/08/16 12:15
FB-2	AZL0383-11	Water	12/07/16 16:39	12/08/16 12:15
EB-2	AZL0383-12	Water	12/07/16 16:14	12/08/16 12:15

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

Report No.: AZL0383
Client ID: DGWC-12
Date/Time Sampled: 12/7/2016 9:35:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0383-01
Date/Time Received: 12/8/2016 12:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	559	25	10	mg/L	SM 2540 C		1	12/13/16 08:56	12/13/16 08:56	6120342	JPT
Inorganic Anions											
Chloride	20	0.25	0.01	mg/L	EPA 300.0		1	12/17/16 10:12	12/22/16 15:36	6120528	RNB
Fluoride	0.16	0.30	0.02	mg/L	EPA 300.0	J	1	12/17/16 10:12	12/22/16 15:36	6120528	RNB
Sulfate	350	20	1.0	mg/L	EPA 300.0	B-01	20	12/17/16 10:12	12/23/16 18:32	6120528	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:18	6120326	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:18	6120326	CSW
Barium	0.0241	0.0100	0.0004	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:18	6120326	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:18	6120326	CSW
Boron	8.07	0.0400	0.0064	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:18	6120326	CSW
Cadmium	0.0003	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:18	6120326	CSW
Calcium	82.1	25.0	1.55	mg/L	EPA 6020B		50	12/14/16 15:30	12/21/16 13:06	6120326	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:18	6120326	CSW
Cobalt	0.0026	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:18	6120326	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:18	6120326	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:18	6120326	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:18	6120326	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:18	6120326	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:18	6120326	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 10:55	12/14/16 13:55	6120386	MTC

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

Report No.: AZL0383
Client ID: DGWC-13
Date/Time Sampled: 12/7/2016 10:55:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0383-02
Date/Time Received: 12/8/2016 12:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	270	25	10	mg/L	SM 2540 C		1	12/13/16 08:56	12/13/16 08:56	6120342	JPT
Inorganic Anions											
Chloride	14	0.25	0.01	mg/L	EPA 300.0		1	12/17/16 10:12	12/22/16 15:57	6120528	RNB
Fluoride	0.30	0.30	0.02	mg/L	EPA 300.0		1	12/17/16 10:12	12/22/16 15:57	6120528	RNB
Sulfate	160	10	0.51	mg/L	EPA 300.0	B-01	10	12/17/16 10:12	12/23/16 18:53	6120528	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:24	6120326	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:24	6120326	CSW
Barium	0.0266	0.0100	0.0004	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:24	6120326	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:24	6120326	CSW
Boron	0.900	0.0400	0.0064	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:24	6120326	CSW
Cadmium	0.0002	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:24	6120326	CSW
Calcium	39.8	5.00	0.311	mg/L	EPA 6020B		10	12/14/16 15:30	12/21/16 13:12	6120326	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:24	6120326	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:24	6120326	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:24	6120326	CSW
Molybdenum	0.0273	0.0100	0.0017	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:24	6120326	CSW
Selenium	0.0015	0.0100	0.0010	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:24	6120326	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:24	6120326	CSW
Lithium	0.0030	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:24	6120326	CSW
Mercury	0.00009	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/14/16 10:55	12/14/16 13:58	6120386	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

Report No.: AZL0383
Client ID: DGWC-15
Date/Time Sampled: 12/7/2016 2:37:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0383-03
Date/Time Received: 12/8/2016 12:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	287	25	10	mg/L	SM 2540 C		1	12/13/16 08:56	12/13/16 08:56	6120342	JPT
Inorganic Anions											
Chloride	20	0.25	0.01	mg/L	EPA 300.0		1	12/17/16 10:12	12/22/16 16:59	6120528	RNB
Fluoride	0.11	0.30	0.02	mg/L	EPA 300.0	J	1	12/17/16 10:12	12/22/16 16:59	6120528	RNB
Sulfate	180	10	0.51	mg/L	EPA 300.0	B-01	10	12/17/16 10:12	12/23/16 19:14	6120528	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:30	6120326	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:30	6120326	CSW
Barium	0.0469	0.0100	0.0004	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:30	6120326	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:30	6120326	CSW
Boron	1.56	0.0400	0.0064	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:30	6120326	CSW
Cadmium	0.000090	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:30	6120326	CSW
Calcium	34.7	5.00	0.311	mg/L	EPA 6020B		10	12/14/16 15:30	12/21/16 13:32	6120326	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:30	6120326	CSW
Cobalt	0.0028	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:30	6120326	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:30	6120326	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:30	6120326	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:30	6120326	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:30	6120326	CSW
Lithium	0.0066	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:30	6120326	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 10:55	12/14/16 14:00	6120386	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

Report No.: AZL0383
Client ID: DGWC-19
Date/Time Sampled: 12/7/2016 1:10:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0383-04
Date/Time Received: 12/8/2016 12:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	400	25	10	mg/L	SM 2540 C		1	12/13/16 08:56	12/13/16 08:56	6120342	JPT
Inorganic Anions											
Chloride	41	0.25	0.01	mg/L	EPA 300.0		1	12/17/16 10:12	12/22/16 17:19	6120528	RNB
Fluoride	0.37	0.30	0.02	mg/L	EPA 300.0		1	12/17/16 10:12	12/22/16 17:19	6120528	RNB
Sulfate	250	10	0.51	mg/L	EPA 300.0	B-01	10	12/17/16 10:12	12/23/16 19:36	6120528	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:36	6120326	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:36	6120326	CSW
Barium	0.0191	0.0100	0.0004	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:36	6120326	CSW
Beryllium	0.0021	0.0030	0.00008	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:36	6120326	CSW
Boron	3.34	0.0400	0.0064	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:36	6120326	CSW
Cadmium	0.0004	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:36	6120326	CSW
Calcium	68.3	25.0	1.55	mg/L	EPA 6020B		50	12/14/16 15:30	12/21/16 13:38	6120326	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:36	6120326	CSW
Cobalt	0.0561	0.0100	0.0005	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:36	6120326	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:36	6120326	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:36	6120326	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:36	6120326	CSW
Thallium	0.0005	0.0010	0.0002	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:36	6120326	CSW
Lithium	0.0034	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:36	6120326	CSW
Mercury	0.00005	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/14/16 10:55	12/14/16 14:07	6120386	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

Attention: Mr. Joju Abraham

December 28, 2016

Report No.: AZL0383
Client ID: DGWC-20
Date/Time Sampled: 12/7/2016 4:15:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0383-05
Date/Time Received: 12/8/2016 12:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	930	25	10	mg/L	SM 2540 C		1	12/13/16 08:56	12/13/16 08:56	6120342	JPT
Inorganic Anions											
Chloride	16	0.25	0.01	mg/L	EPA 300.0		1	12/17/16 10:12	12/22/16 17:40	6120528	RNB
Fluoride	0.66	0.30	0.02	mg/L	EPA 300.0		1	12/17/16 10:12	12/22/16 17:40	6120528	RNB
Sulfate	650	20	1.0	mg/L	EPA 300.0	B-01	20	12/17/16 10:12	12/23/16 19:57	6120528	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:43	6120326	CSW
Arsenic	0.0037	0.0050	0.0016	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:43	6120326	CSW
Barium	0.0087	0.0100	0.0004	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:43	6120326	CSW
Beryllium	0.0035	0.0030	0.00008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:43	6120326	CSW
Boron	6.04	0.0400	0.0064	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:43	6120326	CSW
Cadmium	0.0023	0.0010	0.00007	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:43	6120326	CSW
Calcium	91.9	25.0	1.55	mg/L	EPA 6020B		50	12/14/16 15:30	12/21/16 13:43	6120326	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:43	6120326	CSW
Cobalt	0.614	0.0100	0.0005	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:43	6120326	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:43	6120326	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:43	6120326	CSW
Selenium	0.0056	0.0100	0.0010	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:43	6120326	CSW
Thallium	0.0006	0.0010	0.0002	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:43	6120326	CSW
Lithium	0.0050	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:43	6120326	CSW
Mercury	0.00008	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/14/16 10:55	12/14/16 14:10	6120386	MTC

PACE ANALYTICAL SERVICES, LLC.

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

Report No.: AZL0383
Client ID: DGWC-37
Date/Time Sampled: 12/7/2016 1:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0383-06
Date/Time Received: 12/8/2016 12:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	300	25	10	mg/L	SM 2540 C		1	12/13/16 08:56	12/13/16 08:56	6120342	JPT
Inorganic Anions											
Chloride	6.1	0.25	0.01	mg/L	EPA 300.0		1	12/17/16 10:12	12/22/16 18:01	6120528	RNB
Fluoride	0.21	0.30	0.02	mg/L	EPA 300.0	J	1	12/17/16 10:12	12/22/16 18:01	6120528	RNB
Sulfate	100	10	0.51	mg/L	EPA 300.0	B-01	10	12/17/16 10:12	12/23/16 20:19	6120528	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:49	6120326	CSW
Arsenic	0.0019	0.0050	0.0016	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:49	6120326	CSW
Barium	0.125	0.0100	0.0004	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:49	6120326	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:49	6120326	CSW
Boron	2.01	0.0400	0.0064	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:49	6120326	CSW
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:49	6120326	CSW
Calcium	29.7	25.0	1.55	mg/L	EPA 6020B		50	12/14/16 15:30	12/21/16 13:49	6120326	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:49	6120326	CSW
Cobalt	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:49	6120326	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:49	6120326	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:49	6120326	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:49	6120326	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:49	6120326	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:49	6120326	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 10:55	12/14/16 14:12	6120386	MTC

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2480 Maner Road
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Attention: Mr. Joju Abraham

December 28, 2016

Report No.: AZL0383
Client ID: DGWC-38
Date/Time Sampled: 12/7/2016 2:15:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0383-07
Date/Time Received: 12/8/2016 12:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	478	25	10	mg/L	SM 2540 C		1	12/13/16 08:56	12/13/16 08:56	6120342	JPT
Inorganic Anions											
Chloride	7.4	0.25	0.01	mg/L	EPA 300.0		1	12/17/16 10:12	12/22/16 18:21	6120528	RNB
Fluoride	0.27	0.30	0.02	mg/L	EPA 300.0	J	1	12/17/16 10:12	12/22/16 18:21	6120528	RNB
Sulfate	250	10	0.51	mg/L	EPA 300.0	B-01	10	12/17/16 10:12	12/23/16 22:07	6120528	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:55	6120326	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:55	6120326	CSW
Barium	0.0336	0.0100	0.0004	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:55	6120326	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:55	6120326	CSW
Boron	3.08	0.0400	0.0064	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:55	6120326	CSW
Cadmium	0.0002	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:55	6120326	CSW
Calcium	38.4	25.0	1.55	mg/L	EPA 6020B		50	12/14/16 15:30	12/21/16 13:55	6120326	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:55	6120326	CSW
Cobalt	0.0017	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:55	6120326	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:55	6120326	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:55	6120326	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:55	6120326	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 14:55	6120326	CSW
Lithium	0.0035	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 14:55	6120326	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 10:55	12/14/16 14:14	6120386	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

Report No.: AZL0383
Client ID: DGWC-39
Date/Time Sampled: 12/7/2016 3:25:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0383-08
Date/Time Received: 12/8/2016 12:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	565	25	10	mg/L	SM 2540 C		1	12/13/16 08:56	12/13/16 08:56	6120342	JPT
Inorganic Anions											
Chloride	8.9	0.25	0.01	mg/L	EPA 300.0		1	12/17/16 10:12	12/22/16 18:42	6120528	RNB
Fluoride	0.33	0.30	0.02	mg/L	EPA 300.0		1	12/17/16 10:12	12/22/16 18:42	6120528	RNB
Sulfate	250	10	0.51	mg/L	EPA 300.0	B-01	10	12/17/16 10:12	12/23/16 22:29	6120528	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:01	6120326	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:01	6120326	CSW
Barium	0.0844	0.0100	0.0004	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:01	6120326	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:01	6120326	CSW
Boron	3.63	0.0400	0.0064	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:01	6120326	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:01	6120326	CSW
Calcium	96.7	50.0	3.11	mg/L	EPA 6020B		100	12/14/16 15:30	12/21/16 14:01	6120326	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:01	6120326	CSW
Cobalt	0.0071	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 15:01	6120326	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:01	6120326	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:01	6120326	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:01	6120326	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:01	6120326	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:01	6120326	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 10:55	12/14/16 14:17	6120386	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

Report No.: AZL0383
Client ID: FD-1
Date/Time Sampled: 12/7/2016 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0383-09
Date/Time Received: 12/8/2016 12:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	581	25	10	mg/L	SM 2540 C		1	12/13/16 08:56	12/13/16 08:56	6120342	JPT
Inorganic Anions											
Chloride	13	0.25	0.01	mg/L	EPA 300.0		1	12/17/16 10:12	12/22/16 20:25	6120528	RNB
Fluoride	0.17	0.30	0.02	mg/L	EPA 300.0	J	1	12/17/16 10:12	12/22/16 20:25	6120528	RNB
Sulfate	340	20	1.0	mg/L	EPA 300.0	B-01	20	12/17/16 10:12	12/23/16 22:51	6120528	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:07	6120326	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:07	6120326	CSW
Barium	0.0248	0.0100	0.0004	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:07	6120326	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 15:07	6120326	CSW
Boron	7.74	0.0400	0.0064	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:07	6120326	CSW
Cadmium	0.0004	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 15:07	6120326	CSW
Calcium	41.9	25.0	1.55	mg/L	EPA 6020B		50	12/14/16 15:30	12/21/16 14:06	6120326	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:07	6120326	CSW
Cobalt	0.0026	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 15:07	6120326	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:07	6120326	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:07	6120326	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:07	6120326	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:07	6120326	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:07	6120326	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 10:55	12/14/16 14:19	6120386	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

Report No.: AZL0383
Client ID: FD-2
Date/Time Sampled: 12/7/2016 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0383-10
Date/Time Received: 12/8/2016 12:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	421	25	10	mg/L	SM 2540 C		1	12/13/16 08:56	12/13/16 08:56	6120342	JPT
Inorganic Anions											
Chloride	41	0.25	0.01	mg/L	EPA 300.0		1	12/17/16 10:12	12/22/16 20:46	6120528	RNB
Fluoride	0.50	0.30	0.02	mg/L	EPA 300.0		1	12/17/16 10:12	12/22/16 20:46	6120528	RNB
Sulfate	240	10	0.51	mg/L	EPA 300.0	B-01	10	12/17/16 10:12	12/23/16 23:13	6120528	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:14	6120326	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:14	6120326	CSW
Barium	0.0188	0.0100	0.0004	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:14	6120326	CSW
Beryllium	0.0020	0.0030	0.00008	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 15:14	6120326	CSW
Boron	3.25	0.0400	0.0064	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:14	6120326	CSW
Cadmium	0.0004	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 15:14	6120326	CSW
Calcium	34.3	25.0	1.55	mg/L	EPA 6020B		50	12/14/16 15:30	12/21/16 14:12	6120326	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:14	6120326	CSW
Cobalt	0.0545	0.0100	0.0005	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:14	6120326	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:14	6120326	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:14	6120326	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:14	6120326	CSW
Thallium	0.0005	0.0010	0.0002	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 15:14	6120326	CSW
Lithium	0.0033	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 15:14	6120326	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 10:55	12/14/16 14:21	6120386	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

December 28, 2016

Report No.: AZL0383
Client ID: FB-2
Date/Time Sampled: 12/7/2016 4:39:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0383-11
Date/Time Received: 12/8/2016 12:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	12/13/16 08:56	12/13/16 08:56	6120342	JPT
Inorganic Anions											
Chloride	0.04	0.25	0.01	mg/L	EPA 300.0	J	1	12/17/16 10:12	12/22/16 21:07	6120528	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	12/17/16 10:12	12/22/16 21:07	6120528	RNB
Sulfate	0.19	1.0	0.05	mg/L	EPA 300.0	B-01, J	1	12/17/16 10:12	12/22/16 21:07	6120528	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:35	6120326	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:35	6120326	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:35	6120326	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:35	6120326	CSW
Boron	0.0109	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 15:35	6120326	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:35	6120326	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:35	6120326	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:35	6120326	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:35	6120326	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:35	6120326	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:35	6120326	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:35	6120326	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:35	6120326	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:35	6120326	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 10:55	12/14/16 14:24	6120386	MTC

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

Report No.: AZL0383
Client ID: EB-2
Date/Time Sampled: 12/7/2016 4:14:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0383-12
Date/Time Received: 12/8/2016 12:15:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	12/13/16 08:56	12/13/16 08:56	6120342	JPT
Inorganic Anions											
Chloride	0.05	0.25	0.01	mg/L	EPA 300.0	J	1	12/17/16 10:12	12/22/16 21:27	6120528	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	12/17/16 10:12	12/22/16 21:27	6120528	RNB
Sulfate	0.09	1.0	0.05	mg/L	EPA 300.0	B-01, J	1	12/17/16 10:12	12/22/16 21:27	6120528	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:41	6120326	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:41	6120326	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:41	6120326	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:41	6120326	CSW
Boron	0.0091	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/14/16 15:30	12/15/16 15:41	6120326	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:41	6120326	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:41	6120326	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:41	6120326	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:41	6120326	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:41	6120326	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:41	6120326	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:41	6120326	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:41	6120326	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/14/16 15:30	12/15/16 15:41	6120326	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 10:55	12/14/16 14:26	6120386	MTC

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Report No.: AZL0383

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120342 - SM 2540 C											
Blank (6120342-BLK1)						Prepared & Analyzed: 12/13/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6120342-BS1)						Prepared & Analyzed: 12/13/16					
Total Dissolved Solids	381	25	10	mg/L	400.00		95	84-108			
Duplicate (6120342-DUP1)		**Source: AZL0383-08**				Prepared & Analyzed: 12/13/16					
Total Dissolved Solids	557	25	10	mg/L		565			1	10	
Duplicate (6120342-DUP2)		**Source: AZL0383-11**				Prepared & Analyzed: 12/13/16					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	

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Report No.: AZL0383

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120528 - EPA 300.0											
Blank (6120528-BLK1)						Prepared: 12/17/16 Analyzed: 12/22/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	0.15	1.0	0.05	mg/L							J
LCS (6120528-BS1)						Prepared: 12/17/16 Analyzed: 12/22/16					
Chloride	9.89	0.25	0.01	mg/L	10.010		99	90-110			
Fluoride	9.76	0.30	0.02	mg/L	10.020		97	90-110			
Sulfate	10.0	1.0	0.05	mg/L	10.020		100	90-110			
Matrix Spike (6120528-MS1)			**Source: AZL0383-02**			Prepared: 12/17/16 Analyzed: 12/22/16					
Chloride	22.5	0.25	0.01	mg/L	10.010	13.6	89	90-110			QM-05
Fluoride	9.73	0.30	0.02	mg/L	10.020	0.30	94	90-110			
Sulfate	131	1.0	0.05	mg/L	10.020	133	NR	90-110			QM-02
Matrix Spike (6120528-MS2)			**Source: AZL0406-03**			Prepared: 12/17/16 Analyzed: 12/22/16					
Chloride	43.3	0.25	0.01	mg/L	10.010	37.6	57	90-110			QM-05
Fluoride	10.2	0.30	0.02	mg/L	10.020	0.31	99	90-110			
Sulfate	155	1.0	0.05	mg/L	10.020	160	NR	90-110			QM-02
Matrix Spike Dup (6120528-MSD1)			**Source: AZL0383-02**			Prepared: 12/17/16 Analyzed: 12/22/16					
Chloride	23.0	0.25	0.01	mg/L	10.010	13.6	94	90-110	2	15	
Fluoride	10.4	0.30	0.02	mg/L	10.020	0.30	101	90-110	7	15	
Sulfate	130	1.0	0.05	mg/L	10.020	133	NR	90-110	0.7	15	QM-02

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Report No.: AZL0383

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120326 - EPA 3005A											
Blank (6120326-BLK1)						Prepared: 12/14/16 Analyzed: 12/15/16					
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 (6120326-BS1)						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			

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December 28, 2016

Report No.: AZL0383

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120326 - EPA 3005A											
Matrix Spike (6120326-MS1)		**Source: AZL0316-02**			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			
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			
Matrix Spike Dup (6120326-MSD1)		**Source: AZL0316-02**			Prepared: 12/14/16 Analyzed: 12/15/16						
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	

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December 28, 2016

Report No.: AZL0383

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120326 - EPA 3005A											
Post Spike (6120326-PS1)		**Source: AZL0316-02**				Prepared: 12/14/16 Analyzed: 12/15/16					
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			
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			
Batch 6120386 - EPA 7470A											
Blank (6120386-BLK1)						Prepared & Analyzed: 12/14/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6120386-BS1)						Prepared & Analyzed: 12/14/16					
Mercury	0.00252	0.00050	0.000041	mg/L	2.5000E-3		101	80-120			

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Report No.: AZL0383

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120386 - EPA 7470A											
Matrix Spike (6120386-MS1)		**Source: AZL0316-05**				Prepared & Analyzed: 12/14/16					
Mercury	0.00247	0.00050	0.000041	mg/L	2.5000E-3	ND	99	75-125			
Matrix Spike Dup (6120386-MSD1)		**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	
Post Spike (6120386-PS1)		**Source: AZL0316-05**				Prepared & Analyzed: 12/14/16					
Mercury	1.69			ug/L	1.6667	0.00473	101	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 28, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

Report Notes

Sample DGWC-14 was not present in the cooler. MMR

Per communication with consultant on 12/9/2016, DGWC-14 was sampled 12/6/2016, received 12/7/2016 on work order AZL0284, and does not apply to work order AZL0383. BMcD

CHAIN OF CUSTODY RECORD

Pace Analytical®

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: Kjurinko@golder.com, Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:
PO #:

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 1668496
Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals APP III & IV (EPA 6020 & EPA 7470)	Cl, F, SO4 (EPA 300) TDS (SM2540C)	Radium 226 & 228 (SW-846 9315 and 9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:		P	P	P		
					PRESERVATION:		3&7	7	3&7		
12/7/16	0935	GW		X	DGWC-12	4	1	1	2	1	
12/7/16	1055				DGWC-13	3	1	1	1	2	
12/7/16	1450				DGWC-14	3	1	1	1		→ sample 267, Present NR 12/08/16
12/7/16	1437				DGWC-15	3	1	1	1	3	
12/7/16	1310				DGWC-19	3	1	1	1	4	
12/7/16	1615				DGWC-20	3	1	1	1	5	
12/7/16	1305				DGWC-37	3	1	1	1	6	
12/7/16	1415				DGWC-38	3	1	1	1	7	← possible preservative loss in Radium bottle due to packaging
12/7/16	1525				DGWC-39	3	1	1	1	8	
12/7/16	—				FD-1	3	1	1	1	9	
12/7/16	—	↓			FD-2	3	1	1	1	10	
12/7/16	1639	W		↓	FB-2	3	1	1	1	11	

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Kristen Jurinko, Field Lead
DATE/TIME: 12/7/16 See Above

RELINQUISHED BY:
DATE/TIME: 12/8/16

RECEIVED BY: Erika Nagyer
DATE/TIME: 12/8/16 1030

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB: Rahman
DATE/TIME: 12/08/16 1215

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

Custody Seal: Intact / Broken Not Present (NA)
# of Coolers:
Cooler ID:

Temperature: 1°C Min: 1°C Max:

Ice: (Yes) No NA

Received on Ice: Yes No NA

FOR LAB USE ONLY
LAB #: AZL0383
Entered into LIMS: NR
Tracking #:

CHAIN OF CUSTODY RECORD

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(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: Kjurinko@golder.com, Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:
PO #:

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 1668496
Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals APP III & IV (EPA 6020 & EPA 7470)	Cl, F, SO4 (EPA 300) TDS (SM2540C)	Radium 226 & 228 (SW-846 9315 and 9320)	LAB ID NUMBER
					CONTAINER TYPE:		P	P	P	
					PRESERVATION:		3&7	7	3&7	
12/7/16	1614	W		X	EB-2	3	1	1	1	12

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Kristen Jurinko Field Lead
DATE/TIME: 12/7/16-see above

RELINQUISHED BY:
DATE/TIME: 12/8/16

RECEIVED BY: Mike Nguyen
DATE/TIME: 12/8/16 1030

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Rachman
DATE/TIME: 12/08/16 1215

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

Packed: No NA
Ice: Yes No NA
Temperature: 1°C Min: 1°C Max:
Custody Seal: Intact Broken Not Present
# of Coolers
Cooler ID:

FOR LAB USE ONLY
LAB #: AZL0383
Entered into LIMS: MR
Tracking #:

Plant McDonough COC.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: 12/12/2016 9:34:49AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 12/08/16 12:15

Work Order: AZL0383
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 12 **#Containers:** 37

Minimum Temp(C): 1.0 **Maximum Temp(C):** 1.0 **Custody Seal(s) Used:** N/A

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	NO
Custody seal Intact	NO
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:

Sample DGWC-14 was not present in the cooler. MMR

Per communication with consultant on 12/9/2016, DGWC-14 was sampled 12/6/2016, received 12/7/2016 on work order AZL0284, and does not apply to work order AZL0383. BMcD

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

January 23, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McDonough
Pace Project No.: 30205162

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

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

CERTIFICATIONS

Project: Plant McDonough
Pace Project No.: 30205162

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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(724)850-5600

SAMPLE SUMMARY

Project: Plant McDonough
Pace Project No.: 30205162

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30205162001	**DGWC-12**	Water	12/07/16 09:35	12/12/16 09:20
30205162002	**DGWC-13**	Water	12/07/16 10:55	12/12/16 09:20
30205162003	**DGWC-15**	Water	12/07/16 14:37	12/12/16 09:20
30205162004	**DGWC-19**	Water	12/07/16 13:10	12/12/16 09:20
30205162005	**DGWC-20**	Water	12/07/16 16:15	12/12/16 09:20
30205162006	**DGWC-37**	Water	12/07/16 13:05	12/12/16 09:20
30205162007	**DGWC-38**	Water	12/07/16 14:15	12/12/16 09:20
30205162008	**DGWC-39**	Water	12/07/16 15:25	12/12/16 09:20
30205162009	**FD-1**	Water	12/07/16 00:00	12/12/16 09:20
30205162010	**FD-2**	Water	12/07/16 00:00	12/12/16 09:20
30205162011	**FB-2**	Water	12/07/16 16:39	12/12/16 09:20
30205162012	**EB-2**	Water	12/07/16 16:14	12/12/16 09:20

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SAMPLE ANALYTE COUNT

Project: Plant McDonough
Pace Project No.: 30205162

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30205162001	DGWC-12	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205162002	DGWC-13	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205162003	DGWC-15	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205162004	DGWC-19	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205162005	DGWC-20	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205162006	DGWC-37	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205162007	DGWC-38	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205162008	DGWC-39	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205162009	FD-1	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205162010	FD-2	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205162011	FB-2	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1
30205162012	EB-2	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough
Pace Project No.: 30205162

Sample: DGWC-12 **Lab ID: 30205162001** Collected: 12/07/16 09:35 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	**0.230 ± 0.192 (0.332) C:94% T:NA**	pCi/L	01/13/17 08:21	13982-63-3	
Radium-228	EPA 9320	**2.43 ± 0.720 (0.822) C:70% T:81%**	pCi/L	01/21/17 16:46	15262-20-1	
Total Radium	Total Radium Calculation	**2.66 ± 0.912 (1.15)**	pCi/L	01/23/17 08:32	7440-14-4	

Sample: DGWC-13 **Lab ID: 30205162002** Collected: 12/07/16 10:55 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	**0.434 ± 0.251 (0.354) C:90% T:NA**	pCi/L	01/13/17 08:21	13982-63-3	
Radium-228	EPA 9320	**1.33 ± 0.544 (0.835) C:69% T:82%**	pCi/L	01/21/17 16:46	15262-20-1	
Total Radium	Total Radium Calculation	**1.76 ± 0.795 (1.19)**	pCi/L	01/23/17 08:32	7440-14-4	

Sample: DGWC-15 **Lab ID: 30205162003** Collected: 12/07/16 14:37 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	**0.0845 ± 0.183 (0.430) C:92% T:NA**	pCi/L	01/13/17 08:21	13982-63-3	
Radium-228	EPA 9320	**1.65 ± 0.670 (1.06) C:67% T:76%**	pCi/L	01/21/17 16:46	15262-20-1	
Total Radium	Total Radium Calculation	**1.73 ± 0.853 (1.49)**	pCi/L	01/23/17 08:32	7440-14-4	

Sample: DGWC-19 **Lab ID: 30205162004** Collected: 12/07/16 13:10 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	**0.166 ± 0.207 (0.432) C:93% T:NA**	pCi/L	01/13/17 08:21	13982-63-3	
Radium-228	EPA 9320	**0.737 ± 0.467 (0.884) C:71% T:89%**	pCi/L	01/21/17 16:48	15262-20-1	
Total Radium	Total Radium Calculation	**0.903 ± 0.674 (1.32)**	pCi/L	01/23/17 08:32	7440-14-4	

Sample: DGWC-20 **Lab ID: 30205162005** Collected: 12/07/16 16:15 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	**0.359 ± 0.273 (0.497) C:92% T:NA**	pCi/L	01/13/17 08:21	13982-63-3	
Radium-228	EPA 9320	**0.905 ± 0.510 (0.932) C:74% T:81%**	pCi/L	01/21/17 16:48	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough
Pace Project No.: 30205162

Sample: DGWC-20 **Lab ID: 30205162005** Collected: 12/07/16 16:15 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
Total Radium	Total Radium Calculation	**1.26 ± 0.783 (1.43)**	pCi/L	01/23/17 08:32	7440-14-4	

Sample: DGWC-37 **Lab ID: 30205162006** Collected: 12/07/16 13:05 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	**0.190 ± 0.178 (0.309) C:86% T:NA**	pCi/L	01/13/17 08:27	13982-63-3	
Radium-228	EPA 9320	**0.370 ± 0.496 (1.06) C:77% T:80%**	pCi/L	01/21/17 16:48	15262-20-1	
Total Radium	Total Radium Calculation	**0.560 ± 0.674 (1.37)**	pCi/L	01/23/17 08:32	7440-14-4	

Sample: DGWC-38 **Lab ID: 30205162007** Collected: 12/07/16 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	**0.00686 ± 0.103 (0.296) C:97% T:NA**	pCi/L	01/13/17 08:27	13982-63-3	
Radium-228	EPA 9320	**0.213 ± 0.403 (0.885) C:75% T:88%**	pCi/L	01/22/17 12:51	15262-20-1	
Total Radium	Total Radium Calculation	**0.220 ± 0.506 (1.18)**	pCi/L	01/23/17 08:45	7440-14-4	

Sample: DGWC-39 **Lab ID: 30205162008** Collected: 12/07/16 15:25 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
Radium-226	EPA 9315	**0.0206 ± 0.147 (0.387) C:93% T:NA**	pCi/L	01/13/17 08:27	13982-63-3	
Radium-228	EPA 9320	**2.14 ± 0.690 (0.932) C:68% T:82%**	pCi/L	01/22/17 12:51	15262-20-1	
Total Radium	Total Radium Calculation	**2.16 ± 0.837 (1.32)**	pCi/L	01/23/17 08:45	7440-14-4	

Sample: FD-1 **Lab ID: 30205162009** Collected: 12/07/16 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	**0.249 ± 0.226 (0.431) C:95% T:NA**	pCi/L	01/13/17 08:27	13982-63-3	
Radium-228	EPA 9320	**1.37 ± 0.551 (0.862) C:70% T:85%**	pCi/L	01/22/17 12:51	15262-20-1	
Total Radium	Total Radium Calculation	**1.62 ± 0.777 (1.29)**	pCi/L	01/23/17 08:45	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough
Pace Project No.: 30205162

Sample: FD-2 **Lab ID: 30205162010** Collected: 12/07/16 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	**0.0572 ± 0.142 (0.343) C:93% T:NA**	pCi/L	01/13/17 08:27	13982-63-3	
Radium-228	EPA 9320	**0.419 ± 0.399 (0.819) C:73% T:88%**	pCi/L	01/22/17 12:51	15262-20-1	
Total Radium	Total Radium Calculation	**0.476 ± 0.541 (1.16)**	pCi/L	01/23/17 08:45	7440-14-4	

Sample: FB-2 **Lab ID: 30205162011** Collected: 12/07/16 16:39 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	**0.0740 ± 0.137 (0.313) C:95% T:NA**	pCi/L	01/13/17 08:27	13982-63-3	
Radium-228	EPA 9320	**0.398 ± 0.445 (0.932) C:66% T:85%**	pCi/L	01/22/17 12:51	15262-20-1	
Total Radium	Total Radium Calculation	**0.472 ± 0.582 (1.25)**	pCi/L	01/23/17 08:45	7440-14-4	

Sample: EB-2 **Lab ID: 30205162012** Collected: 12/07/16 16:14 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	**-0.102 ± 0.0798 (0.356) C:98% T:NA**	pCi/L	01/13/17 08:27	13982-63-3	
Radium-228	EPA 9320	**0.997 ± 0.484 (0.835) C:71% T:84%**	pCi/L	01/22/17 12:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.997 ± 0.564 (1.19)**	pCi/L	01/23/17 08:45	7440-14-4	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough
Pace Project No.: 30205162

QC Batch: 245738 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30205162007, 30205162008, 30205162009, 30205162010, 30205162011, 30205162012

METHOD BLANK: 1208849 Matrix: Water
Associated Lab Samples: 30205162007, 30205162008, 30205162009, 30205162010, 30205162011, 30205162012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.754 ± 0.449 (0.836) C:74% T:81%	pCi/L	01/22/17 12:51	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough
Pace Project No.: 30205162

QC Batch: 245735 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30205162001, 30205162002, 30205162003, 30205162004, 30205162005, 30205162006

METHOD BLANK: 1208845 Matrix: Water
Associated Lab Samples: 30205162001, 30205162002, 30205162003, 30205162004, 30205162005, 30205162006

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

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough
Pace Project No.: 30205162

QC Batch: 245736 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30205162001, 30205162002, 30205162003, 30205162004, 30205162005, 30205162006

METHOD BLANK: 1208846 Matrix: Water
Associated Lab Samples: 30205162001, 30205162002, 30205162003, 30205162004, 30205162005, 30205162006

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

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough
Pace Project No.: 30205162

QC Batch: 245737 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30205162007, 30205162008, 30205162009, 30205162010, 30205162011, 30205162012

METHOD BLANK: 1208848 Matrix: Water
Associated Lab Samples: 30205162007, 30205162008, 30205162009, 30205162010, 30205162011, 30205162012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0643 ± 0.137 (0.321) C:95% T:NA	pCi/L	01/13/17 08:27	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: Plant McDonough
Pace Project No.: 30205162

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.

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AZL0383 | Workorder Name: Plant McDonough | Owner Received Date: | Results Requested By: 1/10/2017

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

WO#:30205162

30205162

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3					Requested Analysis Radium 226, 228, Total											LAB USE ONLY
1	DGWC-12	G	12/7/2016 9:35	AZL0383-01	GW	2					X											001
2	DGWC-13	G	12/7/2016 10:55	AZL0383-02	GW	1					X											002
3	DGWC-15	G	12/7/2016 14:37	AZL0383-03	GW	1					X											003
4	DGWC-19	G	12/7/2016 13:10	AZL0383-04	GW	1					X											004
5	DGWC-20	G	12/7/2016 16:15	AZL0383-05	GW	1					X											005
6	DGWC-37	G	12/7/2016 13:05	AZL0383-06	GW	1					X											006
7	DGWC-38	G	12/7/2016 14:15	AZL0383-07	GW	1					X											007
8	DGWC-39	G	12/7/2016 15:25	AZL0383-08	GW	1					X											008
9	FD-1	G	12/7/2016 0:00	AZL0383-09	GW	1					X											009
10	FD-2	G	12/7/2016 0:00	AZL0383-10	GW	1					X											010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Karen Lee	12-17-16 0970	
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.

30205162

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AZL0383 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 1/10/2017

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 HNO3	Requested Analysis Radium 226, 228, Total	LAB USE ONLY
11	FB-2	G	12/7/2016 16:39	AZI0383-11	W	1	X	
12	EB-2	G	12/7/2016 16:14	AZI0383-12	W	1	X	
13								
14								
15								
16								
17								
18								
19								
20								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Ashley Rose / Pace	12-12-16 / 0920	
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.

30205162

CHAIN OF CUSTODY RECORD

Pace Analytical®

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: Kjurinko@golder.com, Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:
PO #:

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 1668496
Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals APP III & IV (EPA 6020 & EPA 7470) P 3&7	Cl, F, SO4 (EPA 300) TDS (SM2540C) P 7	Radium 226 & 228 (SW-846 9315 and 9320) P 3&7	LAB ID NUMBER
12/7/16	0935	GW		X	DGWC-12	4	1	1	2	1
12/7/16	1055				DGWC-13	3	1	1	1	2
12/7/16	1450				DGWC-14	3	1	1	1	→ Sample 267, Present MR 12/08/16
12/7/16	1437				DGWC-15	3	1	1	1	3
12/7/16	1310				DGWC-19	3	1	1	1	4
12/7/16	1615				DGWC-20	3	1	1	1	5
12/7/16	1305				DGWC-37	3	1	1	1	6
12/7/16	1415				DGWC-38	3	1	1	1	7 ← possible preservative loss in
12/7/16	1525				DGWC-39	3	1	1	1	8 Radium bottle due to packaging
12/7/16	—				FD-1	3	1	1	1	9
12/7/16	—	↓			FD-2	3	1	1	1	10
12/7/16	1639	W		↓	FB-2	3	1	1	1	11

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Kristen Jurinko, Field Lead
DATE/TIME: 12/7/16 See Above

RELINQUISHED BY: [signature]
DATE/TIME: 12/8/16

RECEIVED BY: Mike Nayer
DATE/TIME: 12/8/16 1030

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB: Mallman
DATE/TIME: 12/09/16 1215

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

pH checked: Yes No NA
Ice: Yes No NA
Temperature: 1°C Min: 1°C Max:

Custody Seal: Intact Broken Not Present: N/A
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AZL0383
Entered into LIMS: MR
Tracking #:

30205162

CHAIN OF CUSTODY RECORD

Pace Analytical®

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: Kjurinko@golder.com, Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:
PO #:

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 1668496
Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals APP III & IV (EPA 6020 & EPA 7470)	Cl, F, SO4 (EPA 300) TDS (SM2540C)	Radium 226 & 226 (SW-846 9315 and 9320)	LAB ID NUMBER
					CONTAINER TYPE:		P	P	P	
					PRESERVATION:		3&7	7	3&7	
12/7/16	1614	W		X	EB-2	3	1	1	1	12

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Kristen Jurinko Field Lead
DATE/TIME: 12/7/16-see above

RELINQUISHED BY:
DATE/TIME: 12/8/16

RECEIVED BY: Mike Nguyen
DATE/TIME: 12/8/16 1030

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: M Latman
DATE/TIME: 12/08/16 1215

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

pH checked: Yes No NA
Ice: Yes No NA
Temperature: 1°C Min: 1°C Max:

Custody Seal: Intact Broken Not Present: N/A
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AZLA383
Entered into LIMS: MK
Tracking #:

Plant McDonough COC.xlsx

Sample Condition Upon Receipt Pittsburgh

30205162

Pace Analytical

Client Name: Pace Georgia Project #

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

Tracking #: 6812 5101 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: KH 12-12-16

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.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: WT	✓			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:	✓			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.	✓			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: NA 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: NA Date: 12-13-16

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

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JAL
Date:	1/11/2017
Worklist:	33369
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1208849
MB concentration:	0.754
M/B Counting Uncertainty:	0.429
MB MDC:	0.836
MB Numerical Performance Indicator:	3.45
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS33369	LCSD33369
Count Date:	1/22/2017	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	25.496	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.805	
Target Conc. (pCi/L, g, F):	6.333	
Uncertainty (Calculated):	0.456	
Result (pCi/L, g, F):	7.208	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.813	
Numerical Performance Indicator:	1.84	
Percent Recovery:	113.81%	
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:	
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.:	30205165010	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30205165010DUP	
Sample Result (pCi/L, g, F):	1.294	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.518	
Sample Duplicate Result (pCi/L, g, F):	2.243	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.546	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-2.471	30205165010
Duplicate RPD:	53.69%	30205165010DUP
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:	
(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:

1/23/17

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

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	1/12/2017
Worklist:	33368
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1208848
MB concentration:	0.064
M/B Counting Uncertainty:	0.136
MB MDC:	0.321
MB Numerical Performance Indicator:	0.92
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS33368	LCSD33368
Count Date:	1/16/2017	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.671	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.504	
Target Conc. (pCi/L, g, F):	8.856	
Uncertainty (Calculated):	0.417	
Result (pCi/L, g, F):	7.727	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.676	
Numerical Performance Indicator:	-2.79	
Percent Recovery:	87.25%	
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:	
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.:	30205165010	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30205165010DUP	
Sample Result (pCi/L, g, F):	-0.030	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.079	
Sample Duplicate Result (pCi/L, g, F):	0.183	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.132	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-2.717	30205165010
Duplicate RPD:	277.85%	30205165010DUP
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:

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

1/23/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	1/12/2017
Worklist:	33366
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1208845
MB concentration:	0.064
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

	LCSD (Y or N)?	N
	LCS33366	LCSD33366
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	

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:	

Duplicate Sample Assessment

		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
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	30205160001
Duplicate RPD:	173.30%	30205160001DUP
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:

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

1/23/17

Quality Control Sample Performance Assessment

Test: Ra-228
Analyst: JAL
Date: 1/11/2017
Worklist: 33367
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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	LCSD (Y or N)?	N
	LCS33367	LCSD33367
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):	6.307	
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	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30205160004DUP	
Sample Result (pCi/L, g, F):	1.855	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.553	
Sample Duplicate Result (pCi/L, g, F):	2.225	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.584	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.903	30205160004
Duplicate RPD:	18.15%	30205160004DUP
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:	
(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:

1/23/17

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: AZL0437
December 30, 2016
Project: CCR Event
Project #:Plant McDonough

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

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 30, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWC-17	AZL0437-01	Ground Water	12/08/16 09:35	12/09/16 11:45
DGWC-21	AZL0437-02	Ground Water	12/08/16 11:00	12/09/16 11:45
DGWC-22	AZL0437-03	Ground Water	12/08/16 12:16	12/09/16 11:45
DGWC-40	AZL0437-04	Ground Water	12/08/16 09:10	12/09/16 11:45
DGWC-42	AZL0437-05	Ground Water	12/08/16 11:20	12/09/16 11:45
DGWC-47	AZL0437-06	Ground Water	12/08/16 14:10	12/09/16 11:45
DGWC-48	AZL0437-07	Ground Water	12/08/16 14:07	12/09/16 11:45
FD-3	AZL0437-08	Ground Water	12/08/16 00:00	12/09/16 11:45
FB-3	AZL0437-09	Water	12/08/16 13:08	12/09/16 11:45
EB-3	AZL0437-10	Water	12/08/16 13:03	12/09/16 11:45

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 30, 2016

Report No.: AZL0437
Client ID: DGWC-17
Date/Time Sampled: 12/8/2016 9:35:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0437-01
Date/Time Received: 12/9/2016 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	408	25	10	mg/L	SM 2540 C		1	12/14/16 19:17	12/14/16 19:17	6120357	JPT
Inorganic Anions											
Chloride	19	0.25	0.01	mg/L	EPA 300.0		1	12/23/16 08:53	12/24/16 08:17	6120720	RNB
Fluoride	0.31	0.30	0.02	mg/L	EPA 300.0		1	12/23/16 08:53	12/24/16 08:17	6120720	RNB
Sulfate	240	10	0.51	mg/L	EPA 300.0		10	12/23/16 08:53	12/24/16 21:15	6120720	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:27	6120446	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:27	6120446	CSW
Barium	0.0620	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:27	6120446	CSW
Beryllium	0.0005	0.0030	0.00008	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/16/16 23:27	6120446	CSW
Boron	0.688	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:27	6120446	CSW
Cadmium	0.0003	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/16/16 23:27	6120446	CSW
Calcium	7.92	0.500	0.0311	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:27	6120446	CSW
Chromium	0.0025	0.0100	0.0009	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/16/16 23:27	6120446	CSW
Cobalt	0.0290	0.0100	0.0005	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:27	6120446	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:27	6120446	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:27	6120446	CSW
Selenium	0.0087	0.0100	0.0010	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/16/16 23:27	6120446	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:27	6120446	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:27	6120446	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 15:45	6120427	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 30, 2016

Report No.: AZL0437
Client ID: DGWC-21
Date/Time Sampled: 12/8/2016 11:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0437-02
Date/Time Received: 12/9/2016 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	491	25	10	mg/L	SM 2540 C		1	12/14/16 19:17	12/14/16 19:17	6120357	JPT
Inorganic Anions											
Chloride	24	0.25	0.01	mg/L	EPA 300.0		1	12/23/16 08:53	12/24/16 08:39	6120720	RNB
Fluoride	0.14	0.30	0.02	mg/L	EPA 300.0	J	1	12/23/16 08:53	12/24/16 08:39	6120720	RNB
Sulfate	280	10	0.51	mg/L	EPA 300.0		10	12/23/16 08:53	12/24/16 21:36	6120720	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:44	6120446	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:44	6120446	CSW
Barium	0.0262	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:44	6120446	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/16/16 23:44	6120446	CSW
Boron	3.57	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:44	6120446	CSW
Cadmium	0.0006	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/16/16 23:44	6120446	CSW
Calcium	70.1	5.00	0.311	mg/L	EPA 6020B		10	12/15/16 09:25	12/23/16 13:08	6120446	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:44	6120446	CSW
Cobalt	0.0095	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/16/16 23:44	6120446	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:44	6120446	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:44	6120446	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:44	6120446	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:44	6120446	CSW
Lithium	0.0054	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/16/16 23:44	6120446	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 15:47	6120427	MTC

PACE ANALYTICAL SERVICES, LLC.

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 30, 2016

Report No.: AZL0437
Client ID: DGWC-22
Date/Time Sampled: 12/8/2016 12:16:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0437-03
Date/Time Received: 12/9/2016 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	464	25	10	mg/L	SM 2540 C		1	12/14/16 19:17	12/14/16 19:17	6120357	JPT
Inorganic Anions											
Chloride	26	0.25	0.01	mg/L	EPA 300.0		1	12/23/16 08:53	12/24/16 09:01	6120720	RNB
Fluoride	0.12	0.30	0.02	mg/L	EPA 300.0	J	1	12/23/16 08:53	12/24/16 09:01	6120720	RNB
Sulfate	260	100	5.1	mg/L	EPA 300.0		100	12/23/16 08:53	12/26/16 11:12	6120720	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:50	6120446	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:50	6120446	CSW
Barium	0.0408	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:50	6120446	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/16/16 23:50	6120446	CSW
Boron	3.10	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:50	6120446	CSW
Cadmium	0.0004	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/16/16 23:50	6120446	CSW
Calcium	60.1	5.00	0.311	mg/L	EPA 6020B		10	12/15/16 09:25	12/23/16 13:15	6120446	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:50	6120446	CSW
Cobalt	0.0079	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/16/16 23:50	6120446	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:50	6120446	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:50	6120446	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:50	6120446	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:50	6120446	CSW
Lithium	0.0047	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/16/16 23:50	6120446	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 15:50	6120427	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 30, 2016

Report No.: AZL0437
Client ID: DGWC-40
Date/Time Sampled: 12/8/2016 9:10:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0437-04
Date/Time Received: 12/9/2016 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	319	25	10	mg/L	SM 2540 C		1	12/14/16 19:17	12/14/16 19:17	6120357	JPT
Inorganic Anions											
Chloride	18	0.25	0.01	mg/L	EPA 300.0		1	12/23/16 08:53	12/24/16 09:22	6120720	RNB
Fluoride	0.35	0.30	0.02	mg/L	EPA 300.0		1	12/23/16 08:53	12/24/16 09:22	6120720	RNB
Sulfate	270	10	0.51	mg/L	EPA 300.0		10	12/23/16 08:53	12/24/16 23:40	6120720	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:55	6120446	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:55	6120446	CSW
Barium	0.0163	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:55	6120446	CSW
Beryllium	0.0026	0.0030	0.00008	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/16/16 23:55	6120446	CSW
Boron	0.841	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:55	6120446	CSW
Cadmium	0.0007	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/16/16 23:55	6120446	CSW
Calcium	37.9	2.50	0.155	mg/L	EPA 6020B		5	12/15/16 09:25	12/23/16 13:21	6120446	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:55	6120446	CSW
Cobalt	0.0318	0.0100	0.0005	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:55	6120446	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:55	6120446	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:55	6120446	CSW
Selenium	0.0022	0.0100	0.0010	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/16/16 23:55	6120446	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:55	6120446	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/15/16 09:25	12/16/16 23:55	6120446	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 15:52	6120427	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

Attention: Mr. Joju Abraham

December 30, 2016

Report No.: AZL0437
Client ID: DGWC-42
Date/Time Sampled: 12/8/2016 11:20:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0437-05
Date/Time Received: 12/9/2016 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	535	25	10	mg/L	SM 2540 C		1	12/14/16 19:17	12/14/16 19:17	6120357	JPT
Inorganic Anions											
Chloride	32	0.25	0.01	mg/L	EPA 300.0		1	12/23/16 08:53	12/24/16 10:35	6120720	RNB
Fluoride	0.06	0.30	0.02	mg/L	EPA 300.0	J	1	12/23/16 08:53	12/24/16 10:35	6120720	RNB
Sulfate	350	10	0.51	mg/L	EPA 300.0		10	12/23/16 08:53	12/25/16 00:00	6120720	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:01	6120446	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:01	6120446	CSW
Barium	0.0189	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:01	6120446	CSW
Beryllium	0.0023	0.0030	0.00008	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/17/16 00:01	6120446	CSW
Boron	0.957	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:01	6120446	CSW
Cadmium	0.0003	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/17/16 00:01	6120446	CSW
Calcium	45.8	2.50	0.155	mg/L	EPA 6020B		5	12/15/16 09:25	12/23/16 13:27	6120446	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:01	6120446	CSW
Cobalt	0.0652	0.0100	0.0005	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:01	6120446	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/17/16 00:01	6120446	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:01	6120446	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:01	6120446	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:01	6120446	CSW
Lithium	0.0118	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/17/16 00:01	6120446	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 15:54	6120427	MTC

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 30, 2016

Report No.: AZL0437
Client ID: DGWC-47
Date/Time Sampled: 12/8/2016 2:10:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0437-06
Date/Time Received: 12/9/2016 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	587	25	10	mg/L	SM 2540 C		1	12/14/16 19:17	12/14/16 19:17	6120357	JPT
Inorganic Anions											
Chloride	12	0.25	0.01	mg/L	EPA 300.0		1	12/23/16 08:53	12/24/16 10:55	6120720	RNB
Fluoride	1.1	0.30	0.02	mg/L	EPA 300.0		1	12/23/16 08:53	12/24/16 10:55	6120720	RNB
Sulfate	400	10	0.51	mg/L	EPA 300.0		10	12/23/16 08:53	12/25/16 00:21	6120720	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:07	6120446	CSW
Arsenic	0.0032	0.0050	0.0016	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/17/16 00:07	6120446	CSW
Barium	0.0247	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:07	6120446	CSW
Beryllium	0.0116	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:07	6120446	CSW
Boron	0.352	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:07	6120446	CSW
Cadmium	0.0002	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/17/16 00:07	6120446	CSW
Calcium	71.1	5.00	0.311	mg/L	EPA 6020B		10	12/15/16 09:25	12/23/16 13:33	6120446	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:07	6120446	CSW
Cobalt	0.381	0.0100	0.0005	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:07	6120446	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:07	6120446	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:07	6120446	CSW
Selenium	0.0170	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:07	6120446	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:07	6120446	CSW
Lithium	0.0667	0.0500	0.0021	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:07	6120446	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 15:57	6120427	MTC

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Attention: Mr. Joju Abraham

December 30, 2016

Report No.: AZL0437
Client ID: DGWC-48
Date/Time Sampled: 12/8/2016 2:07:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0437-07
Date/Time Received: 12/9/2016 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	777	25	10	mg/L	SM 2540 C		1	12/14/16 19:17	12/14/16 19:17	6120357	JPT
Inorganic Anions											
Chloride	17	0.25	0.01	mg/L	EPA 300.0		1	12/23/16 08:53	12/24/16 11:16	6120720	RNB
Fluoride	1.6	0.30	0.02	mg/L	EPA 300.0		1	12/23/16 08:53	12/24/16 11:16	6120720	RNB
Sulfate	540	20	1.0	mg/L	EPA 300.0		20	12/23/16 08:53	12/26/16 11:32	6120720	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:13	6120446	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:13	6120446	CSW
Barium	0.0155	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:13	6120446	CSW
Beryllium	0.0086	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:13	6120446	CSW
Boron	0.919	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:13	6120446	CSW
Cadmium	0.0042	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:13	6120446	CSW
Calcium	105	25.0	1.55	mg/L	EPA 6020B		50	12/15/16 09:25	12/23/16 14:15	6120446	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:13	6120446	CSW
Cobalt	0.575	0.0100	0.0005	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:13	6120446	CSW
Lead	0.0019	0.0050	0.0001	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/17/16 00:13	6120446	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:13	6120446	CSW
Selenium	0.0084	0.0100	0.0010	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/17/16 00:13	6120446	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:13	6120446	CSW
Lithium	0.122	0.0500	0.0021	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:13	6120446	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 15:59	6120427	MTC

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 30, 2016

Report No.: AZL0437
Client ID: FD-3
Date/Time Sampled: 12/8/2016 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZL0437-08
Date/Time Received: 12/9/2016 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	426	25	10	mg/L	SM 2540 C		1	12/14/16 19:17	12/14/16 19:17	6120357	JPT
Inorganic Anions											
Chloride	24	0.25	0.01	mg/L	EPA 300.0		1	12/23/16 08:53	12/24/16 11:57	6120720	RNB
Fluoride	0.14	0.30	0.02	mg/L	EPA 300.0	J	1	12/23/16 08:53	12/24/16 11:57	6120720	RNB
Sulfate	260	10	0.51	mg/L	EPA 300.0		10	12/23/16 08:53	12/25/16 01:02	6120720	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:18	6120446	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:18	6120446	CSW
Barium	0.0258	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:18	6120446	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/17/16 00:18	6120446	CSW
Boron	3.43	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:18	6120446	CSW
Cadmium	0.0005	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/17/16 00:18	6120446	CSW
Calcium	70.5	5.00	0.311	mg/L	EPA 6020B		10	12/15/16 09:25	12/23/16 13:56	6120446	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:18	6120446	CSW
Cobalt	0.0092	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/17/16 00:18	6120446	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:18	6120446	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:18	6120446	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:18	6120446	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:18	6120446	CSW
Lithium	0.0053	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/17/16 00:18	6120446	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 16:06	6120427	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 30, 2016

Report No.: AZL0437
Client ID: FB-3
Date/Time Sampled: 12/8/2016 1:08:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0437-09
Date/Time Received: 12/9/2016 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	12/14/16 19:17	12/14/16 19:17	6120357	JPT
Inorganic Anions											
Chloride	0.04	0.25	0.01	mg/L	EPA 300.0	J	1	12/23/16 08:53	12/24/16 12:18	6120720	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	12/23/16 08:53	12/24/16 12:18	6120720	RNB
Sulfate	0.31	1.0	0.05	mg/L	EPA 300.0	J	1	12/23/16 08:53	12/24/16 12:18	6120720	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:24	6120446	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:24	6120446	CSW
Barium	0.0007	0.0100	0.0004	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/17/16 00:24	6120446	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:24	6120446	CSW
Boron	0.0172	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/17/16 00:24	6120446	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:24	6120446	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:24	6120446	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:24	6120446	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:24	6120446	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:24	6120446	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:24	6120446	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:24	6120446	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:24	6120446	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:24	6120446	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 16:09	6120427	MTC

PACE ANALYTICAL SERVICES, LLC.

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 30, 2016

Report No.: AZL0437
Client ID: EB-3
Date/Time Sampled: 12/8/2016 1:03:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0437-10
Date/Time Received: 12/9/2016 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	12/14/16 19:17	12/14/16 19:17	6120357	JPT
Inorganic Anions											
Chloride	0.04	0.25	0.01	mg/L	EPA 300.0	J	1	12/28/16 13:22	12/28/16 14:47	6120802	RNB
Fluoride	0.05	0.30	0.02	mg/L	EPA 300.0	J	1	12/28/16 13:22	12/28/16 14:47	6120802	RNB
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	12/28/16 13:22	12/28/16 14:47	6120802	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:30	6120446	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:30	6120446	CSW
Barium	0.0007	0.0100	0.0004	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/17/16 00:30	6120446	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:30	6120446	CSW
Boron	0.0085	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/15/16 09:25	12/17/16 00:30	6120446	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:30	6120446	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:30	6120446	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:30	6120446	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:30	6120446	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:30	6120446	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:30	6120446	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:30	6120446	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:30	6120446	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/15/16 09:25	12/17/16 00:30	6120446	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 16:11	6120427	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 30, 2016

Report No.: AZL0437

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120357 - SM 2540 C											
Blank (6120357-BLK1)						Prepared & Analyzed: 12/14/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6120357-BS1)						Prepared & Analyzed: 12/14/16					
Total Dissolved Solids	389	25	10	mg/L	400.00		97	84-108			
Duplicate (6120357-DUP1)		**Source: AZL0436-05**				Prepared & Analyzed: 12/14/16					
Total Dissolved Solids	237	25	10	mg/L		227			4	10	
Duplicate (6120357-DUP2)		**Source: AZL0436-07**				Prepared & Analyzed: 12/14/16					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	

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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

Attention: Mr. Joju Abraham

December 30, 2016

Report No.: AZL0437

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120720 - EPA 300.0											
Blank (6120720-BLK1)						Prepared: 12/23/16 Analyzed: 12/24/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
LCS (6120720-BS1)						Prepared: 12/23/16 Analyzed: 12/24/16					
Chloride	10.1	0.25	0.01	mg/L	10.010		101	90-110			
Fluoride	10.6	0.30	0.02	mg/L	10.020		106	90-110			
Sulfate	10.1	1.0	0.05	mg/L	10.020		101	90-110			
Matrix Spike (6120720-MS1)		**Source: AZL0436-02**				Prepared: 12/23/16 Analyzed: 12/24/16					
Chloride	11.0	0.25	0.01	mg/L	10.010	1.96	91	90-110			
Fluoride	9.72	0.30	0.02	mg/L	10.020	0.13	96	90-110			
Sulfate	94.9	1.0	0.05	mg/L	10.020	95.1	NR	90-110			QM-02
Matrix Spike (6120720-MS2)		**Source: AZL0437-07**				Prepared: 12/23/16 Analyzed: 12/24/16					
Chloride	25.4	0.25	0.01	mg/L	10.010	17.2	83	90-110			QM-05
Fluoride	14.7	0.30	0.02	mg/L	10.020	1.56	131	90-110			QM-05
Sulfate	301	1.0	0.05	mg/L	10.020	315	NR	90-110			QM-02
Matrix Spike Dup (6120720-MSD1)		**Source: AZL0436-02**				Prepared: 12/23/16 Analyzed: 12/24/16					
Chloride	11.8	0.25	0.01	mg/L	10.010	1.96	99	90-110	7	15	
Fluoride	10.5	0.30	0.02	mg/L	10.020	0.13	104	90-110	8	15	
Sulfate	94.8	1.0	0.05	mg/L	10.020	95.1	NR	90-110	0.03	15	QM-02
Batch 6120802 - EPA 300.0											
Blank (6120802-BLK1)						Prepared & Analyzed: 12/28/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							

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Attention: Mr. Joju Abraham

December 30, 2016

Report No.: AZL0437

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120802 - EPA 300.0											
LCS (6120802-BS1)						Prepared & Analyzed: 12/28/16					
Chloride	9.93	0.25	0.01	mg/L	10.010		99	90-110			
Fluoride	10.6	0.30	0.02	mg/L	10.020		106	90-110			
Sulfate	10.0	1.0	0.05	mg/L	10.020		100	90-110			
Matrix Spike (6120802-MS1)		**Source: AZL0437-10**				Prepared & Analyzed: 12/28/16					
Chloride	7.81	0.25	0.01	mg/L	10.010	0.04	78	90-110			QM-05
Fluoride	8.48	0.30	0.02	mg/L	10.020	0.05	84	90-110			QM-05
Sulfate	8.63	1.0	0.05	mg/L	10.020	ND	86	90-110			QM-05
Matrix Spike Dup (6120802-MSD1)		**Source: AZL0437-10**				Prepared & Analyzed: 12/28/16					
Chloride	9.07	0.25	0.01	mg/L	10.010	0.04	90	90-110	15	15	
Fluoride	9.74	0.30	0.02	mg/L	10.020	0.05	97	90-110	14	15	
Sulfate	9.72	1.0	0.05	mg/L	10.020	ND	97	90-110	12	15	

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December 30, 2016

Report No.: AZL0437

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120427 - EPA 7470A											
Blank (6120427-BLK1)						Prepared & Analyzed: 12/15/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6120427-BS1)						Prepared & Analyzed: 12/15/16					
Mercury	0.00235	0.00050	0.000041	mg/L	2.5000E-3		94	80-120			
Matrix Spike (6120427-MS1)		**Source: AZL0436-01**				Prepared & Analyzed: 12/15/16					
Mercury	0.00238	0.00050	0.000041	mg/L	2.5000E-3	ND	95	75-125			
Matrix Spike Dup (6120427-MSD1)		**Source: AZL0436-01**				Prepared & Analyzed: 12/15/16					
Mercury	0.00238	0.00050	0.000041	mg/L	2.5000E-3	ND	95	75-125	0.09	20	
Post Spike (6120427-PS1)		**Source: AZL0436-01**				Prepared & Analyzed: 12/15/16					
Mercury	1.72			ug/L	1.6667	-0.00768	103	80-120			
Batch 6120446 - EPA 3005A											
Blank (6120446-BLK1)						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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Attention: Mr. Joju Abraham

December 30, 2016

Report No.: AZL0437

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120446 - EPA 3005A											
LCS (6120446-BS1)						Prepared: 12/15/16 Analyzed: 12/16/16					
Antimony	0.113	0.0030	0.0008	mg/L	0.10000		113	80-120			
Arsenic	0.101	0.0050	0.0016	mg/L	0.10000		101	80-120			
Barium	0.101	0.0100	0.0004	mg/L	0.10000		101	80-120			
Beryllium	0.0946	0.0030	0.00008	mg/L	0.10000		95	80-120			
Boron	0.952	0.0400	0.0064	mg/L	1.0000		95	80-120			
Cadmium	0.103	0.0010	0.00007	mg/L	0.10000		103	80-120			
Calcium	1.02	0.500	0.0311	mg/L	1.0000		102	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	0.105	0.0250	0.0005	mg/L	0.10000		105	80-120			
Lead	0.101	0.0050	0.0001	mg/L	0.10000		101	80-120			
Molybdenum	0.105	0.0100	0.0017	mg/L	0.10000		105	80-120			
Nickel	0.103	0.0100	0.0006	mg/L	0.10000		103	80-120			
Selenium	0.0982	0.0100	0.0010	mg/L	0.10000		98	80-120			
Silver	0.102	0.0100	0.0005	mg/L	0.10000		102	80-120			
Thallium	0.101	0.0010	0.0002	mg/L	0.10000		101	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	0.0940	0.0500	0.0021	mg/L	0.10000		94	80-120			
Matrix Spike (6120446-MS1)		**Source: AZL0436-05**				Prepared: 12/15/16 Analyzed: 12/16/16					
Antimony	0.110	0.0030	0.0008	mg/L	0.10000	0.0012	109	75-125			
Arsenic	0.103	0.0050	0.0016	mg/L	0.10000	ND	103	75-125			
Barium	0.154	0.0100	0.0004	mg/L	0.10000	0.0648	89	75-125			
Beryllium	0.0886	0.0030	0.00008	mg/L	0.10000	ND	89	75-125			
Boron	0.913	0.0400	0.0064	mg/L	1.0000	0.0178	90	75-125			
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125			
Calcium	33.2	2.50	0.155	mg/L	1.0000	33.4	NR	75-125			QM-02
Chromium	0.104	0.0100	0.0009	mg/L	0.10000	ND	104	75-125			
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000	ND	103	75-125			
Copper	0.102	0.0250	0.0005	mg/L	0.10000	ND	102	75-125			
Lead	0.0996	0.0050	0.0001	mg/L	0.10000	ND	100	75-125			
Molybdenum	0.105	0.0100	0.0017	mg/L	0.10000	ND	105	75-125			
Nickel	0.103	0.0100	0.0006	mg/L	0.10000	0.0023	101	75-125			
Selenium	0.0993	0.0100	0.0010	mg/L	0.10000	ND	99	75-125			
Silver	0.0987	0.0100	0.0005	mg/L	0.10000	ND	99	75-125			
Thallium	0.0995	0.0010	0.0002	mg/L	0.10000	ND	99	75-125			
Vanadium	0.104	0.0100	0.0071	mg/L	0.10000	ND	104	75-125			
Zinc	0.107	0.0100	0.0021	mg/L	0.10000	ND	107	75-125			
Lithium	0.102	0.0500	0.0021	mg/L	0.10000	0.0152	86	75-125			

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Attention: Mr. Joju Abraham

December 30, 2016

Report No.: AZL0437

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120446 - EPA 3005A											
Matrix Spike Dup (6120446-MSD1)		**Source: AZL0436-05**			Prepared: 12/15/16 Analyzed: 12/16/16						
Antimony	0.113	0.0030	0.0008	mg/L	0.10000	0.0012	112	75-125	2	20	
Arsenic	0.104	0.0050	0.0016	mg/L	0.10000	ND	104	75-125	1	20	
Barium	0.157	0.0100	0.0004	mg/L	0.10000	0.0648	93	75-125	2	20	
Beryllium	0.0926	0.0030	0.00008	mg/L	0.10000	ND	93	75-125	4	20	
Boron	0.916	0.0400	0.0064	mg/L	1.0000	0.0178	90	75-125	0.3	20	
Cadmium	0.103	0.0010	0.00007	mg/L	0.10000	ND	103	75-125	2	20	
Calcium	34.4	2.50	0.155	mg/L	1.0000	33.4	96	75-125	4	20	
Chromium	0.105	0.0100	0.0009	mg/L	0.10000	ND	105	75-125	2	20	
Cobalt	0.104	0.0100	0.0005	mg/L	0.10000	ND	104	75-125	0.8	20	
Copper	0.104	0.0250	0.0005	mg/L	0.10000	ND	104	75-125	1	20	
Lead	0.0982	0.0050	0.0001	mg/L	0.10000	ND	98	75-125	1	20	
Molybdenum	0.105	0.0100	0.0017	mg/L	0.10000	ND	105	75-125	0.05	20	
Nickel	0.106	0.0100	0.0006	mg/L	0.10000	0.0023	104	75-125	3	20	
Selenium	0.101	0.0100	0.0010	mg/L	0.10000	ND	101	75-125	2	20	
Silver	0.0994	0.0100	0.0005	mg/L	0.10000	ND	99	75-125	0.7	20	
Thallium	0.0998	0.0010	0.0002	mg/L	0.10000	ND	100	75-125	0.3	20	
Vanadium	0.108	0.0100	0.0071	mg/L	0.10000	ND	108	75-125	4	20	
Zinc	0.110	0.0100	0.0021	mg/L	0.10000	ND	110	75-125	2	20	
Lithium	0.105	0.0500	0.0021	mg/L	0.10000	0.0152	90	75-125	3	20	
Post Spike (6120446-PS1)		**Source: AZL0436-05**			Prepared: 12/15/16 Analyzed: 12/16/16						
Antimony	105			ug/L	100.00	1.16	104	80-120			
Arsenic	105			ug/L	100.00	-0.392	105	80-120			
Barium	158			ug/L	100.00	64.8	94	80-120			
Beryllium	92.0			ug/L	100.00	0.0162	92	80-120			
Boron	932			ug/L	1000.0	17.8	91	80-120			
Cadmium	103			ug/L	100.00	0.0069	103	80-120			
Calcium	33200			ug/L	1000.0	33400	NR	80-120			QM-02
Chromium	103			ug/L	100.00	0.0236	103	80-120			
Cobalt	101			ug/L	100.00	0.446	101	80-120			
Copper	99.3			ug/L	100.00	0.0839	99	80-120			
Lead	96.2			ug/L	100.00	0.0213	96	80-120			
Molybdenum	107			ug/L	100.00	0.255	106	80-120			
Nickel	102			ug/L	100.00	2.31	100	80-120			
Selenium	104			ug/L	100.00	-0.0806	104	80-120			
Silver	99.8			ug/L	100.00	0.0111	100	80-120			
Thallium	96.9			ug/L	100.00	0.106	97	80-120			
Vanadium	106			ug/L	100.00	-1.30	106	80-120			
Zinc	105			ug/L	100.00	1.83	104	80-120			
Lithium	102			ug/L	100.00	15.2	87	80-120			

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Attention: Mr. Joju Abraham

December 30, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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®

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: Kjurinko@golder.com, Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:
PO #:

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 1668496
Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	CONTAINER TYPE	PRESERVATION	# of CONTAINERS	Metals APP III & IV (EPA 6020 & EPA 7470)	Cl, F, SO4 (EPA 300) TDS (SM2540C)	Radium 226 & 228 (SW-846 9315 and 9320)	LAB NUMBER
12/8/16	0935	GW		X	DGWC-17	P	3&7	3	1	1	1	1
12/8/16	1100	"		"	DGWC-21	P	3&7	3	1	1	1	2
12/8/16	1216	"		"	DGWC-22	P	3&7	3	1	1	1	3
12/8/16	0910	"		"	DGWC-40	P	3&7	3	1	1	1	4
12/8/16	1120	"		"	DGWC-42	P	3&7	3	1	1	1	5
12/8/16	1410	"		"	DGWC-47	P	3&7	3	1	1	1	6
12/8/16	1407	"		"	DGWC-48	P	3&7	3	1	1	1	7
12/8/16	—	↓		"	FD-3	P	3&7	3	1	1	1	8
12/8/16	1308	W		"	FB-3	P	3&7	3	1	1	1	9
12/8/16	1303	W		↓	EB-3	P	3&7	4	1	1	2	10

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

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

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Kristen Jurinko, Field Lead
DATE/TIME: 12/8/16 - SEE ABOVE

RELINQUISHED BY:
DATE/TIME: 12/9/16 1118

RECEIVED BY:
DATE/TIME: 12/9/16 1118

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB:
DATE/TIME: 12/09/16 1145

FOR LAB USE ONLY
LAB #: AZL04437
Entered into LIMS: MG

Tracking #:

Packed: No NA
Ice: Yes No NA
Temperature: 1°C Min: 1°C Max:

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

PACE ANALYTICAL SERVICES, INC.

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LOG-IN CHECKLIST **Printed: 12/12/2016 11:21:58AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 12/09/16 11:45

Work Order: AZL0437
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 10 **#Containers:** 31

Minimum Temp(C): 1.0 **Maximum Temp(C):** 1.0 **Custody Seal(s) Used:** No

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	NO
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

January 23, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McDonough
Pace Project No.: 30205165

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

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

CERTIFICATIONS

Project: Plant McDonough
Pace Project No.: 30205165

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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Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: Plant McDonough
Pace Project No.: 30205165

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30205165001	**DGWC-17**	Water	12/08/16 09:35	12/12/16 09:20
30205165002	**DGWC-21**	Water	12/08/16 11:00	12/12/16 09:20
30205165003	**DGWC-22**	Water	12/08/16 12:16	12/12/16 09:20
30205165004	**DGWC-40**	Water	12/08/16 09:10	12/12/16 09:20
30205165005	**DGWC-42**	Water	12/08/16 11:20	12/12/16 09:20
30205165006	**DGWC-47**	Water	12/08/16 14:10	12/12/16 09:20
30205165007	**DGWC-48**	Water	12/08/16 14:07	12/12/16 09:20
30205165008	**FD-3**	Water	12/08/16 00:00	12/12/16 09:20
30205165009	**FB-3**	Water	12/08/16 13:08	12/12/16 09:20
30205165010	**EB-3**	Water	12/08/16 13:03	12/12/16 09:20

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Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: Plant McDonough
Pace Project No.: 30205165

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30205165001	**DGWC-17**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205165002	**DGWC-21**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205165003	**DGWC-22**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205165004	**DGWC-40**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205165005	**DGWC-42**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205165006	**DGWC-47**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205165007	**DGWC-48**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205165008	**FD-3**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205165009	**FB-3**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205165010	**EB-3**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough
Pace Project No.: 30205165

Sample: DGWC-17 **Lab ID: 30205165001** Collected: 12/08/16 09:35 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	**0.121 ± 0.107 (0.189) C:93% T:NA**	pCi/L	01/16/17 08:08	13982-63-3	
Radium-228	EPA 9320	**1.53 ± 0.551 (0.780) C:70% T:83%**	pCi/L	01/22/17 12:52	15262-20-1	
Total Radium	Total Radium Calculation	**1.65 ± 0.658 (0.969)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: DGWC-21 **Lab ID: 30205165002** Collected: 12/08/16 11:00 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	**0.161 ± 0.126 (0.221) C:93% T:NA**	pCi/L	01/16/17 08:08	13982-63-3	
Radium-228	EPA 9320	**0.864 ± 0.555 (1.07) C:64% T:85%**	pCi/L	01/22/17 12:52	15262-20-1	
Total Radium	Total Radium Calculation	**1.03 ± 0.681 (1.29)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: DGWC-22 **Lab ID: 30205165003** Collected: 12/08/16 12:16 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	**0.0754 ± 0.116 (0.257) C:96% T:NA**	pCi/L	01/16/17 08:08	13982-63-3	
Radium-228	EPA 9320	**0.430 ± 0.377 (0.760) C:68% T:92%**	pCi/L	01/22/17 12:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.505 ± 0.493 (1.02)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: DGWC-40 **Lab ID: 30205165004** Collected: 12/08/16 09:10 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	**0.0616 ± 0.128 (0.297) C:96% T:NA**	pCi/L	01/16/17 08:08	13982-63-3	
Radium-228	EPA 9320	**2.50 ± 0.813 (1.10) C:60% T:78%**	pCi/L	01/22/17 12:52	15262-20-1	
Total Radium	Total Radium Calculation	**2.56 ± 0.941 (1.40)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: DGWC-42 **Lab ID: 30205165005** Collected: 12/08/16 11:20 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	**0.177 ± 0.111 (0.138) C:95% T:NA**	pCi/L	01/16/17 08:46	13982-63-3	
Radium-228	EPA 9320	**0.778 ± 0.436 (0.792) C:69% T:90%**	pCi/L	01/22/17 12:52	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough
Pace Project No.: 30205165

Sample: DGWC-42 **Lab ID: 30205165005** Collected: 12/08/16 11:20 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	**0.955 ± 0.547 (0.930)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: DGWC-47 **Lab ID: 30205165006** Collected: 12/08/16 14:10 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	**0.569 ± 0.204 (0.170) C:96% T:NA**	pCi/L	01/16/17 08:46	13982-63-3	
Radium-228	EPA 9320	**2.31 ± 0.685 (0.832) C:69% T:85%**	pCi/L	01/22/17 12:52	15262-20-1	
Total Radium	Total Radium Calculation	**2.88 ± 0.889 (1.00)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: DGWC-48 **Lab ID: 30205165007** Collected: 12/08/16 14:07 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	**0.435 ± 0.180 (0.188) C:98% T:NA**	pCi/L	01/16/17 08:46	13982-63-3	
Radium-228	EPA 9320	**2.43 ± 0.722 (0.863) C:65% T:84%**	pCi/L	01/22/17 12:52	15262-20-1	
Total Radium	Total Radium Calculation	**2.87 ± 0.902 (1.05)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: FD-3 **Lab ID: 30205165008** 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	**0.157 ± 0.112 (0.168) C:97% T:NA**	pCi/L	01/16/17 08:46	13982-63-3	
Radium-228	EPA 9320	**1.51 ± 0.527 (0.721) C:71% T:84%**	pCi/L	01/22/17 12:53	15262-20-1	
Total Radium	Total Radium Calculation	**1.67 ± 0.639 (0.889)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: FB-3 **Lab ID: 30205165009** Collected: 12/08/16 13:08 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	**0.0394 ± 0.0698 (0.157) C:98% T:NA**	pCi/L	01/16/17 08:46	13982-63-3	
Radium-228	EPA 9320	**1.02 ± 0.500 (0.859) C:66% T:85%**	pCi/L	01/22/17 12:53	15262-20-1	
Total Radium	Total Radium Calculation	**1.06 ± 0.570 (1.02)**	pCi/L	01/23/17 12:09	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough
Pace Project No.: 30205165

Sample: EB-3 **Lab ID: 30205165010** Collected: 12/08/16 13:03 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	**-0.0299 ± 0.0793 (0.241) C:95% T:NA**	pCi/L	01/16/17 08:46	13982-63-3	
Radium-228	EPA 9320	**1.29 ± 0.567 (0.929) C:73% T:72%**	pCi/L	01/22/17 12:53	15262-20-1	
Total Radium	Total Radium Calculation	**1.29 ± 0.646 (1.17)**	pCi/L	01/23/17 12:09	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough
Pace Project No.: 30205165

QC Batch: 245738 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30205165001, 30205165002, 30205165003, 30205165004, 30205165005, 30205165006, 30205165007, 30205165008, 30205165009, 30205165010

METHOD BLANK: 1208849 Matrix: Water
Associated Lab Samples: 30205165001, 30205165002, 30205165003, 30205165004, 30205165005, 30205165006, 30205165007, 30205165008, 30205165009, 30205165010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.754 ± 0.449 (0.836) C:74% T:81%	pCi/L	01/22/17 12:51	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough
Pace Project No.: 30205165

QC Batch: 245737 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30205165001, 30205165002, 30205165003, 30205165004, 30205165005, 30205165006, 30205165007, 30205165008, 30205165009, 30205165010

METHOD BLANK: 1208848 Matrix: Water
Associated Lab Samples: 30205165001, 30205165002, 30205165003, 30205165004, 30205165005, 30205165006, 30205165007, 30205165008, 30205165009, 30205165010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0643 ± 0.137 (0.321) C:95% T:NA	pCi/L	01/13/17 08:27	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: Plant McDonough
Pace Project No.: 30205165

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.

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AZL0437 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 1/10/2017

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

WO#:30205165

30205165

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	DGWC-17	G	12/8/2016 9:35	AZL0437-01	GW	1	X	001
2	DGWC-21	G	12/8/2016 11:00	AZL0437-02	GW	1	X	002
3	DGWC-22	G	12/8/2016 12:16	AZL0437-03	GW	1	X	003
4	DGWC-40	G	12/8/2016 9:10	AZL0437-04	GW	1	X	004
5	DGWC-42	G	12/8/2016 11:20	AZL0437-05	GW	1	X	005
6	DGWC-47	G	12/8/2016 14:10	AZL0437-06	GW	1	X	006
7	DGWC-48	G	12/8/2016 14:07	AZL0437-07	GW	1	X	007
8	FD-3	G	12/8/2016 0:00	AZL0437-08	GW	1	X	008
9	FB-3	G	12/8/2016 13:08	AZL0437-09	W	1	X	009
10	EB-3	G	12/8/2016 13:03	AZL0437-10	W	2	X	010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Karen Dill	12-12-16 0920	
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.

30205165

CHAIN OF CUSTODY RECORD

Pace Analytical®

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: Kjurinko@golder.com, Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:
PO #:

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 1668496
Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals APP III & IV (EPA 6020 & EPA 7470)	Cl, F, SO4 (EPA 300) TDS (SM2540C)	Radium 226 & 228 (SW-846 9315 and 9320)	LAB ID NUMBER
					CONTAINER TYPE:		P	P	P	
					PRESERVATION:		3&7	7	3&7	
12/8/16	0935	GW		X	DGWC-17	3	1	1	1	1
12/8/16	1100				DGWC-21	3	1	1	1	2
12/8/16	1416				DGWC-22	3	1	1	1	3
12/8/16	0910				DGWC-40	3	1	1	1	4
12/8/16	1120				DGWC-42	3	1	1	1	5
12/8/16	1410				DGWC-47	3	1	1	1	6
12/8/16	1407				DGWC-48	3	1	1	1	7
12/8/16	—				EQ-3	3	1	1	1	8
12/8/16	1308	W			FB-3	3	1	1	1	9
12/8/16	1303	W			EB-3	4	1	1	2	10

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Kristen Jurinko, Field Lead
DATE/TIME: 12/8/16 - SEE ABOVE

RECEIVED BY: [signature]
DATE/TIME: 12/9/16 1118

RELINQUISHED BY: [signature]
DATE/TIME: 12/9/16 1118

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/AFFILIATION: [signature]
DATE/TIME: 12/9/16 1145

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

pH checked: Yes No NA
Ice: Yes No NA
Temperature: 1°C Min: 1°C Max:

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

FOR LAB USE ONLY
LAB #: AZL04437
Entered Into LIMS: MP
Tracking #:

Sample Condition Upon Receipt Pittsburgh 30205165

Pace Analytical

Client Name: Pace Georgia Project #

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

Tracking #: 6812 5101 0100

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: KK 12-12-16

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.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: WT	✓			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:	✓			10.
-Pace Containers Used:		✓		
Containers Intact:	✓			11.
Filtered volume received for Dissolved tests			✓	12.
All containers needing preservation have been checked.	✓			13. pHL2
All containers needing preservation are found to be in compliance with EPA recommendation.	✓			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed AMR 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: AMR Date: 12-13-16

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

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	JAL
Date:	1/11/2017
Worklist:	33369
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1208849
MB concentration:	0.754
M/B Counting Uncertainty:	0.429
MB MDC:	0.836
MB Numerical Performance Indicator:	3.45
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS33369	LCSD33369
Count Date:	1/22/2017	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	25.496	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.805	
Target Conc. (pCi/L, g, F):	6.333	
Uncertainty (Calculated):	0.456	
Result (pCi/L, g, F):	7.208	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.813	
Numerical Performance Indicator:	1.84	
Percent Recovery:	113.81%	
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:	
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		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30205165010	
Duplicate Sample I.D.	30205165010DUP	
Sample Result (pCi/L, g, F):	1.294	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.518	
Sample Duplicate Result (pCi/L, g, F):	2.243	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.546	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-2.471	30205165010
Duplicate RPD:	53.69%	30205165010DUP
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:	
(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:

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

1/23/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	1/12/2017
Worklist:	33368
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1208848
MB concentration:	0.064
M/B Counting Uncertainty:	0.136
MB MDC:	0.321
MB Numerical Performance Indicator:	0.92
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS33368	LCSD33368
Count Date:	1/16/2017	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.671	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.504	
Target Conc. (pCi/L, g, F):	8.856	
Uncertainty (Calculated):	0.417	
Result (pCi/L, g, F):	7.727	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.676	
Numerical Performance Indicator:	-2.79	
Percent Recovery:	87.25%	
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:	
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.:	30205165010
Duplicate Sample I.D.	30205165010DUP
Sample Result (pCi/L, g, F):	-0.030
Sample Result Counting Uncertainty (pCi/L, g, F):	0.079
Sample Duplicate Result (pCi/L, g, F):	0.183
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.132
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-2.717
Duplicate RPD:	277.85%
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.

30205165010
30205165010DUP

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:

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

1/23/17

LABORATORY ANALYTICAL DATA

March – April 2017

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: AAC0995
April 10, 2017
Project: CCR Event
Project #:Plant McDonough

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

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 10, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWA-53	AAC0995-01	Ground Water	03/28/17 14:05	03/29/17 11:30
DGWA-70	AAC0995-02	Ground Water	03/28/17 10:05	03/29/17 11:30
DGWA-71	AAC0995-03	Ground Water	03/28/17 17:40	03/29/17 11:30
FB-1	AAC0995-04	Water	03/28/17 16:45	03/29/17 11:30
DGWC-4	AAC0995-05	Ground Water	03/28/17 12:35	03/29/17 11:30
DGWC-5	AAC0995-06	Ground Water	03/28/17 14:45	03/29/17 11:30
DGWC-9	AAC0995-07	Ground Water	03/28/17 16:35	03/29/17 11:30

PACE ANALYTICAL SERVICES, LLC.

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Attention: Mr. Joju Abraham

April 10, 2017

Case Narrative

Plant McDonough Report AAC0995 4/10/2017
This revised report replaces the original report submitted on 4/7/2017.
Due to analyst error, the dilution factor for AAC0995-01 (DGWA-53) on sulfate was entered incorrectly. The following changes were made:
the dilution factor for sulfate on the affected sample was re-entered, and the report was revised to correct the previously errant data.
No other changes were made to this report.

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 10, 2017

Report No.: AAC0995
Client ID: DGWA-53
Date/Time Sampled: 3/28/2017 2:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0995-01
Date/Time Received: 3/29/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	202	25	10	mg/L	SM 2540 C		1	04/03/17 15:10	04/03/17 15:10	7030964	JPT
Inorganic Anions											
Chloride	3.7	0.25	0.01	mg/L	EPA 300.0		1	03/31/17 11:00	03/31/17 19:10	7030971	RLC
Fluoride	0.12	0.30	0.004	mg/L	EPA 300.0	J	1	03/31/17 11:00	03/31/17 19:10	7030971	RLC
Sulfate	49	5.0	0.46	mg/L	EPA 300.0		5	03/31/17 11:00	04/04/17 16:23	7030971	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:28	7030905	CSW
Arsenic	0.0005	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 16:28	7030905	CSW
Barium	0.134	0.0100	0.0003	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:28	7030905	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:28	7030905	CSW
Boron	0.0612	0.0400	0.0060	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:28	7030905	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:28	7030905	CSW
Calcium	30.8	25.0	0.522	mg/L	EPA 6020B		50	03/30/17 12:30	04/05/17 16:33	7030905	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:28	7030905	CSW
Cobalt	0.0250	0.0100	0.0005	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:28	7030905	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:28	7030905	CSW
Molybdenum	0.0242	0.0100	0.0006	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:28	7030905	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:28	7030905	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:28	7030905	CSW
Lithium	0.0108	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 16:28	7030905	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/04/17 11:00	04/04/17 16:07	7040040	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

April 10, 2017

Report No.: AAC0995
Client ID: DGWA-70
Date/Time Sampled: 3/28/2017 10:05:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0995-02
Date/Time Received: 3/29/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	39	25	10	mg/L	SM 2540 C		1	04/03/17 15:10	04/03/17 15:10	7030964	JPT
Inorganic Anions											
Chloride	3.8	0.25	0.01	mg/L	EPA 300.0		1	03/31/17 11:00	03/31/17 19:30	7030971	RLC
Fluoride	1.2	0.30	0.004	mg/L	EPA 300.0		1	03/31/17 11:00	03/31/17 19:30	7030971	RLC
Sulfate	2.7	1.0	0.09	mg/L	EPA 300.0		1	03/31/17 11:00	03/31/17 19:30	7030971	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:39	7030905	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:39	7030905	CSW
Barium	0.0166	0.0100	0.0003	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:39	7030905	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:39	7030905	CSW
Boron	0.0067	0.0400	0.0060	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 16:39	7030905	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:39	7030905	CSW
Calcium	5.14	0.500	0.0104	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:39	7030905	CSW
Chromium	0.0008	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 16:39	7030905	CSW
Cobalt	0.0034	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 16:39	7030905	CSW
Lead	0.00009	0.0050	0.00007	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 16:39	7030905	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:39	7030905	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:39	7030905	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 16:39	7030905	CSW
Lithium	0.0054	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 16:39	7030905	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/04/17 11:00	04/04/17 16:10	7040040	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

April 10, 2017

Report No.: AAC0995
Client ID: DGWA-71
Date/Time Sampled: 3/28/2017 5:40:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0995-03
Date/Time Received: 3/29/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	90	25	10	mg/L	SM 2540 C		1	04/03/17 15:10	04/03/17 15:10	7030964	JPT
Inorganic Anions											
Chloride	3.6	0.25	0.01	mg/L	EPA 300.0		1	03/31/17 11:00	03/31/17 19:51	7030971	RLC
Fluoride	0.06	0.30	0.004	mg/L	EPA 300.0	J	1	03/31/17 11:00	03/31/17 19:51	7030971	RLC
Sulfate	17	1.0	0.09	mg/L	EPA 300.0		1	03/31/17 11:00	03/31/17 19:51	7030971	RLC
Metals, Total											
Antimony	0.0007	0.0030	0.0003	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:18	7030905	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:18	7030905	CSW
Barium	0.0378	0.0100	0.0003	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:18	7030905	CSW
Beryllium	0.00009	0.0030	0.00007	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:18	7030905	CSW
Boron	0.0097	0.0400	0.0060	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:18	7030905	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:18	7030905	CSW
Calcium	8.31	0.500	0.0104	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:18	7030905	CSW
Chromium	0.0023	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:18	7030905	CSW
Cobalt	0.0033	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:18	7030905	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:18	7030905	CSW
Molybdenum	0.0009	0.0100	0.0006	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:18	7030905	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:18	7030905	CSW
Thallium	0.00006	0.0010	0.00005	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:18	7030905	CSW
Lithium	0.0025	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:18	7030905	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/04/17 11:00	04/04/17 16:12	7040040	MTC

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

April 10, 2017

Report No.: AAC0995
Client ID: FB-1
Date/Time Sampled: 3/28/2017 4:45:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAC0995-04
Date/Time Received: 3/29/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	04/03/17 15:10	04/03/17 15:10	7030964	JPT
Inorganic Anions											
Chloride	0.07	0.25	0.01	mg/L	EPA 300.0	J	1	03/31/17 11:00	03/31/17 20:11	7030971	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	03/31/17 11:00	03/31/17 20:11	7030971	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	03/31/17 11:00	03/31/17 20:11	7030971	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:24	7030905	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:24	7030905	CSW
Barium	0.0008	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:24	7030905	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:24	7030905	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:24	7030905	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:24	7030905	CSW
Calcium	ND	0.500	0.0104	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:24	7030905	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:24	7030905	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:24	7030905	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:24	7030905	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:24	7030905	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:24	7030905	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:24	7030905	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:24	7030905	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/04/17 11:00	04/04/17 16:14	7040040	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

April 10, 2017

Report No.: AAC0995
Client ID: DGWC-4
Date/Time Sampled: 3/28/2017 12:35:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0995-05
Date/Time Received: 3/29/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1160	25	10	mg/L	SM 2540 C		1	04/03/17 15:10	04/03/17 15:10	7030964	JPT
Inorganic Anions											
Chloride	29	0.25	0.01	mg/L	EPA 300.0		1	03/31/17 11:00	03/31/17 20:32	7030971	RLC
Fluoride	0.17	0.30	0.004	mg/L	EPA 300.0	J	1	03/31/17 11:00	03/31/17 20:32	7030971	RLC
Sulfate	680	50	4.6	mg/L	EPA 300.0		50	03/31/17 11:00	04/04/17 16:44	7030971	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:30	7030905	CSW
Arsenic	0.0005	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:30	7030905	CSW
Barium	0.0363	0.0100	0.0003	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:30	7030905	CSW
Beryllium	0.0002	0.0030	0.00007	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:30	7030905	CSW
Boron	4.01	2.00	0.302	mg/L	EPA 6020B		50	03/30/17 12:30	04/06/17 15:51	7030905	CSW
Cadmium	0.0006	0.0010	0.00006	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:30	7030905	CSW
Calcium	229	25.0	0.522	mg/L	EPA 6020B		50	03/30/17 12:30	04/05/17 18:36	7030905	CSW
Chromium	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:30	7030905	CSW
Cobalt	0.0018	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:30	7030905	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:30	7030905	CSW
Molybdenum	0.0080	0.0100	0.0006	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:30	7030905	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:30	7030905	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:30	7030905	CSW
Lithium	0.0031	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:30	7030905	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/04/17 11:00	04/04/17 16:17	7040040	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 10, 2017

Report No.: AAC0995
Client ID: DGWC-5
Date/Time Sampled: 3/28/2017 2:45:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0995-06
Date/Time Received: 3/29/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	545	25	10	mg/L	SM 2540 C		1	04/03/17 15:10	04/03/17 15:10	7030964	JPT
Inorganic Anions											
Chloride	9.5	0.25	0.01	mg/L	EPA 300.0		1	03/31/17 11:00	03/31/17 21:14	7030971	RLC
Fluoride	1.2	0.30	0.004	mg/L	EPA 300.0		1	03/31/17 11:00	03/31/17 21:14	7030971	RLC
Sulfate	380	50	4.6	mg/L	EPA 300.0		50	03/31/17 11:00	04/04/17 17:05	7030971	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:41	7030905	CSW
Arsenic	0.0385	0.0250	0.0021	mg/L	EPA 6020B		5	03/30/17 12:30	04/06/17 16:20	7030905	CSW
Barium	0.0187	0.0100	0.0003	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:41	7030905	CSW
Beryllium	0.0049	0.0030	0.00007	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:41	7030905	CSW
Boron	6.16	2.00	0.302	mg/L	EPA 6020B		50	03/30/17 12:30	04/06/17 15:57	7030905	CSW
Cadmium	0.0002	0.0010	0.00006	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:41	7030905	CSW
Calcium	89.1	25.0	0.522	mg/L	EPA 6020B		50	03/30/17 12:30	04/05/17 18:47	7030905	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:41	7030905	CSW
Cobalt	0.0400	0.0100	0.0005	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:41	7030905	CSW
Lead	ND	0.0050	0.0003	mg/L	EPA 6020B		5	03/30/17 12:30	04/06/17 16:20	7030905	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:41	7030905	CSW
Selenium	0.168	0.0500	0.0070	mg/L	EPA 6020B		5	03/30/17 12:30	04/06/17 16:20	7030905	CSW
Thallium	0.0002	0.0020	0.0002	mg/L	EPA 6020B	R-01, J	5	03/30/17 12:30	04/06/17 16:20	7030905	CSW
Lithium	0.0028	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:41	7030905	CSW
Mercury	0.00017	0.00050	0.000041	mg/L	EPA 7470A	J	1	04/04/17 11:00	04/04/17 16:24	7040040	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 10, 2017

Report No.: AAC0995
Client ID: DGWC-9
Date/Time Sampled: 3/28/2017 4:35:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0995-07
Date/Time Received: 3/29/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	404	25	10	mg/L	SM 2540 C		1	04/03/17 15:10	04/03/17 15:10	7030964	JPT
Inorganic Anions											
Chloride	6.6	0.25	0.01	mg/L	EPA 300.0		1	03/31/17 11:00	03/31/17 21:34	7030971	RLC
Fluoride	1.1	0.30	0.004	mg/L	EPA 300.0		1	03/31/17 11:00	03/31/17 21:34	7030971	RLC
Sulfate	300	50	4.6	mg/L	EPA 300.0		50	03/31/17 11:00	04/04/17 17:27	7030971	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:53	7030905	CSW
Arsenic	0.0243	0.0050	0.0004	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:53	7030905	CSW
Barium	0.0170	0.0100	0.0003	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:53	7030905	CSW
Beryllium	0.0052	0.0030	0.00007	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:53	7030905	CSW
Boron	2.01	2.00	0.302	mg/L	EPA 6020B		50	03/30/17 12:30	04/06/17 16:02	7030905	CSW
Cadmium	0.0005	0.0010	0.00006	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:53	7030905	CSW
Calcium	71.6	25.0	0.522	mg/L	EPA 6020B		50	03/30/17 12:30	04/05/17 18:59	7030905	CSW
Chromium	0.0010	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:53	7030905	CSW
Cobalt	0.124	0.0100	0.0005	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:53	7030905	CSW
Lead	ND	0.0050	0.0003	mg/L	EPA 6020B		5	03/30/17 12:30	04/05/17 19:04	7030905	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:53	7030905	CSW
Selenium	0.0954	0.0100	0.0014	mg/L	EPA 6020B		1	03/30/17 12:30	04/05/17 18:53	7030905	CSW
Thallium	0.0007	0.0020	0.0002	mg/L	EPA 6020B	R-01, J	5	03/30/17 12:30	04/05/17 19:04	7030905	CSW
Lithium	0.0249	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/30/17 12:30	04/05/17 18:53	7030905	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/04/17 11:00	04/04/17 16:26	7040040	MTC

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Attention: Mr. Joju Abraham

April 10, 2017

Report No.: AAC0995

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030964 - SM 2540 C											
Blank (7030964-BLK1)						Prepared & Analyzed: 04/03/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7030964-BS1)						Prepared & Analyzed: 04/03/17					
Total Dissolved Solids	382	25	10	mg/L	400.00		96	84-108			
Duplicate (7030964-DUP1)		**Source: AAC0993-02**				Prepared & Analyzed: 04/03/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7030964-DUP2)		**Source: AAC0995-01**				Prepared & Analyzed: 04/03/17					
Total Dissolved Solids	211	25	10	mg/L		202			4	10	

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Report No.: AAC0995

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030971 - EPA 300.0											
Blank (7030971-BLK1)						Prepared & Analyzed: 03/31/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7030971-BS1)						Prepared & Analyzed: 03/31/17					
Chloride	10.3	0.25	0.01	mg/L	10.010		103	90-110			
Fluoride	10.6	0.30	0.004	mg/L	10.020		106	90-110			
Sulfate	10.5	1.0	0.09	mg/L	10.020		104	90-110			
Matrix Spike (7030971-MS1)		**Source: AAC0993-05**				Prepared & Analyzed: 03/31/17					
Chloride	15.5	0.25	0.01	mg/L	10.010	5.68	98	90-110			
Fluoride	11.9	0.30	0.004	mg/L	10.020	0.04	119	90-110			QM-05
Sulfate	24.2	1.0	0.09	mg/L	10.020	16.2	80	90-110			QM-05
Matrix Spike (7030971-MS2)		**Source: AAC0995-05**				Prepared & Analyzed: 03/31/17					
Chloride	36.6	0.25	0.01	mg/L	10.010	29.0	76	90-110			QM-05
Fluoride	11.3	0.30	0.004	mg/L	10.020	0.17	111	90-110			QM-05
Sulfate	365	1.0	0.09	mg/L	10.020	386	NR	90-110			QM-02
Matrix Spike Dup (7030971-MSD1)		**Source: AAC0993-05**				Prepared & Analyzed: 03/31/17					
Chloride	15.5	0.25	0.01	mg/L	10.010	5.68	98	90-110	0.1	15	
Fluoride	12.2	0.30	0.004	mg/L	10.020	0.04	121	90-110	2	15	QM-05
Sulfate	24.8	1.0	0.09	mg/L	10.020	16.2	86	90-110	2	15	QM-05

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April 10, 2017

Report No.: AAC0995

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030905 - EPA 3005A											
Blank (7030905-BLK1)						Prepared: 03/30/17 Analyzed: 04/05/17					
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	0.0004	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	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0011	mg/L							
LCS (7030905-BS1)						Prepared: 03/30/17 Analyzed: 04/05/17					
Antimony	0.113	0.0030	0.0003	mg/L	0.10000		113	80-120			
Arsenic	0.103	0.0050	0.0004	mg/L	0.10000		103	80-120			
Barium	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Beryllium	0.104	0.0030	0.00007	mg/L	0.10000		104	80-120			
Boron	1.09	0.0400	0.0060	mg/L	1.0000		109	80-120			
Cadmium	0.102	0.0010	0.00006	mg/L	0.10000		102	80-120			
Calcium	1.01	0.500	0.0104	mg/L	1.0000		101	80-120			
Chromium	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000		100	80-120			
Copper	0.104	0.0250	0.0003	mg/L	0.10000		104	80-120			
Lead	0.103	0.0050	0.00007	mg/L	0.10000		103	80-120			
Molybdenum	0.108	0.0100	0.0006	mg/L	0.10000		108	80-120			
Nickel	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Selenium	0.102	0.0100	0.0014	mg/L	0.10000		102	80-120			
Silver	0.106	0.0100	0.0003	mg/L	0.10000		106	80-120			
Thallium	0.103	0.0010	0.00005	mg/L	0.10000		103	80-120			
Vanadium	0.104	0.0100	0.0014	mg/L	0.10000		104	80-120			
Zinc	0.102	0.0100	0.0013	mg/L	0.10000		102	80-120			
Lithium	0.108	0.0500	0.0011	mg/L	0.10000		108	80-120			

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April 10, 2017

Report No.: AAC0995

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030905 - EPA 3005A											
Matrix Spike (7030905-MS1)		**Source: AAC0993-05**			Prepared: 03/30/17 Analyzed: 04/05/17						
Antimony	0.110	0.0030	0.0003	mg/L	0.10000	ND	110	75-125			
Arsenic	0.104	0.0050	0.0004	mg/L	0.10000	0.0009	103	75-125			
Barium	0.146	0.0100	0.0003	mg/L	0.10000	0.0437	103	75-125			
Beryllium	0.105	0.0030	0.00007	mg/L	0.10000	0.00008	105	75-125			
Boron	1.10	0.0400	0.0060	mg/L	1.0000	0.0113	109	75-125			
Cadmium	0.105	0.0010	0.00006	mg/L	0.10000	ND	105	75-125			
Calcium	4.99	0.500	0.0104	mg/L	1.0000	4.23	76	75-125			
Chromium	0.107	0.0100	0.0003	mg/L	0.10000	ND	107	75-125			
Cobalt	0.108	0.0100	0.0005	mg/L	0.10000	0.0019	106	75-125			
Copper	0.109	0.0250	0.0003	mg/L	0.10000	0.0007	108	75-125			
Lead	0.103	0.0050	0.00007	mg/L	0.10000	0.0005	102	75-125			
Molybdenum	0.107	0.0100	0.0006	mg/L	0.10000	ND	107	75-125			
Nickel	0.107	0.0100	0.0003	mg/L	0.10000	0.0008	106	75-125			
Selenium	0.104	0.0100	0.0014	mg/L	0.10000	0.0033	101	75-125			
Silver	0.105	0.0100	0.0003	mg/L	0.10000	ND	105	75-125			
Thallium	0.103	0.0010	0.00005	mg/L	0.10000	0.00005	103	75-125			
Vanadium	0.106	0.0100	0.0014	mg/L	0.10000	ND	106	75-125			
Zinc	0.106	0.0100	0.0013	mg/L	0.10000	0.0046	102	75-125			
Lithium	0.105	0.0500	0.0011	mg/L	0.10000	ND	105	75-125			
Matrix Spike Dup (7030905-MSD1)		**Source: AAC0993-05**			Prepared: 03/30/17 Analyzed: 04/05/17						
Antimony	0.114	0.0030	0.0003	mg/L	0.10000	ND	114	75-125	4	20	
Arsenic	0.103	0.0050	0.0004	mg/L	0.10000	0.0009	102	75-125	0.8	20	
Barium	0.150	0.0100	0.0003	mg/L	0.10000	0.0437	106	75-125	3	20	
Beryllium	0.110	0.0030	0.00007	mg/L	0.10000	0.00008	110	75-125	4	20	
Boron	1.12	0.0400	0.0060	mg/L	1.0000	0.0113	110	75-125	1	20	
Cadmium	0.102	0.0010	0.00006	mg/L	0.10000	ND	102	75-125	4	20	
Calcium	5.28	0.500	0.0104	mg/L	1.0000	4.23	106	75-125	6	20	
Chromium	0.106	0.0100	0.0003	mg/L	0.10000	ND	106	75-125	2	20	
Cobalt	0.104	0.0100	0.0005	mg/L	0.10000	0.0019	102	75-125	3	20	
Copper	0.107	0.0250	0.0003	mg/L	0.10000	0.0007	106	75-125	2	20	
Lead	0.104	0.0050	0.00007	mg/L	0.10000	0.0005	103	75-125	1	20	
Molybdenum	0.108	0.0100	0.0006	mg/L	0.10000	ND	108	75-125	1	20	
Nickel	0.109	0.0100	0.0003	mg/L	0.10000	0.0008	108	75-125	2	20	
Selenium	0.101	0.0100	0.0014	mg/L	0.10000	0.0033	98	75-125	3	20	
Silver	0.105	0.0100	0.0003	mg/L	0.10000	ND	105	75-125	0.9	20	
Thallium	0.104	0.0010	0.00005	mg/L	0.10000	0.00005	104	75-125	1	20	
Vanadium	0.108	0.0100	0.0014	mg/L	0.10000	ND	108	75-125	2	20	
Zinc	0.106	0.0100	0.0013	mg/L	0.10000	0.0046	101	75-125	0.4	20	
Lithium	0.109	0.0500	0.0011	mg/L	0.10000	ND	109	75-125	4	20	

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Attention: Mr. Joju Abraham

April 10, 2017

Report No.: AAC0995

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030905 - EPA 3005A											
Post Spike (7030905-PS1)			**Source: AAC0993-05**			Prepared: 03/30/17 Analyzed: 04/05/17					
Antimony	108			ug/L	100.00	0.272	108	80-120			
Arsenic	101			ug/L	100.00	0.933	100	80-120			
Barium	143			ug/L	100.00	43.7	100	80-120			
Beryllium	103			ug/L	100.00	0.0752	103	80-120			
Boron	1070			ug/L	1000.0	11.3	105	80-120			
Cadmium	101			ug/L	100.00	-0.0070	101	80-120			
Calcium	5020			ug/L	1000.0	4230	79	80-120			QM-02
Chromium	104			ug/L	100.00	0.183	104	80-120			
Cobalt	106			ug/L	100.00	1.94	104	80-120			
Copper	106			ug/L	100.00	0.655	105	80-120			
Lead	101			ug/L	100.00	0.499	101	80-120			
Molybdenum	109			ug/L	100.00	0.0432	109	80-120			
Nickel	108			ug/L	100.00	0.815	107	80-120			
Selenium	104			ug/L	100.00	3.26	100	80-120			
Silver	103			ug/L	100.00	0.0132	103	80-120			
Thallium	102			ug/L	100.00	0.0502	102	80-120			
Vanadium	106			ug/L	100.00	0.766	105	80-120			
Zinc	105			ug/L	100.00	4.59	100	80-120			
Lithium	105			ug/L	100.00	0.701	105	80-120			
Batch 7040040 - EPA 7470A											
Blank (7040040-BLK1)						Prepared & Analyzed: 04/04/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7040040-BS1)						Prepared & Analyzed: 04/04/17					
Mercury	0.00247	0.00050	0.000041	mg/L	2.5000E-3		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

April 10, 2017

Report No.: AAC0995

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040040 - EPA 7470A											
Matrix Spike (7040040-MS1)		**Source: AAC0993-01**				Prepared & Analyzed: 04/04/17					
Mercury	0.00240	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125			
Matrix Spike Dup (7040040-MSD1)		**Source: AAC0993-01**				Prepared & Analyzed: 04/04/17					
Mercury	0.00245	0.00050	0.000041	mg/L	2.5000E-3	ND	98	75-125	2	20	
Post Spike (7040040-PS1)		**Source: AAC0993-01**				Prepared & Analyzed: 04/04/17					
Mercury	1.68			ug/L	1.6667	0.00028	101	80-120			

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 10, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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-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, 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

Attention: Mr. Joju Abraham

April 10, 2017

Report Notes

There were 2 containers present instead of 1 as listed on the COC for Radium. MMR

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com

CC: Maria Padilla

REQUESTED COMPLETION DATE:

PO #:

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P							
PRESERVATION:								3	7	3							
03/28/17	1405	GW		x	DGWA-53	3		1	1	1						1	
03/28/17	1005	GW		x	DGWA-70	3		1	1	1						2	
03/28/17	1740	GW		x	DGWA-71	3		1	1	1						3	
03/28/17	1645	W		x	FB-1	3		1	1	1						4	
03/28/17	1235	GW		x	DGWC-4	3		1	1	1						5	
03/28/17	1445	GW		x	DGWC-5	3		1	1	1						6	
03/28/17	1635	GW		x	DGWC-9	3		1	1	1						7	

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead

DATE/TIME: 3/28/17 0950

RELINQUISHED BY: [signature]

DATE/TIME: 3/28/17 0950

RECEIVED BY: Mike Nguyen

DATE/TIME: 3/29/17 0950

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY LAB: [signature]

DATE/TIME: 03/29/17 1130

Shipped by: Pace Courier

pH checked: (Yes) No NA

Ice: (Yes) No NA

Ice Present, T-2°C

Seal - N/A

FOR LAB USE ONLY

LAB #: AAC 0995

Entered Into LIMS: MR

Tracking #:

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: 3/30/2017 12:05:36PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 03/29/17 11:30

Work Order: AAC0995
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 7 **#Containers:** 28

Minimum Temp(C): 2.0 **Maximum Temp(C):** 2.0 **Custody Seal(s) Used:** N/A

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	NO
Custody seal Intact	NO
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:

There were 2 containers present instead of 1 as listed on the COC for Radium. MMR

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

April 21, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAC0995 Plant McDonough
Pace Project No.: 30214647

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on March 30, 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

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

CERTIFICATIONS

Project: AAC0995 Plant McDonough
Pace Project No.: 30214647

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

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

SAMPLE SUMMARY

Project: AAC0995 Plant McDonough
Pace Project No.: 30214647

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30214647001	**DGWA-53**	Water	03/28/17 14:05	03/30/17 10:50
30214647002	**DGWA-70**	Water	03/28/17 10:05	03/30/17 10:50
30214647003	**DGWA-71**	Water	03/28/17 17:40	03/30/17 10:50
30214647004	**FB-1**	Water	03/28/17 16:45	03/30/17 10:50
30214647005	**DGWC-4**	Water	03/28/17 12:35	03/30/17 10:50
30214647006	**DGWC-5**	Water	03/28/17 14:45	03/30/17 10:50
30214647007	**DGWC-9**	Water	03/28/17 16:35	03/30/17 10:50

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(724)850-5600

SAMPLE ANALYTE COUNT

Project: AAC0995 Plant McDonough
Pace Project No.: 30214647

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30214647001	**DGWA-53**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214647002	**DGWA-70**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214647003	**DGWA-71**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214647004	**FB-1**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214647005	**DGWC-4**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214647006	**DGWC-5**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214647007	**DGWC-9**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC0995 Plant McDonough
Pace Project No.: 30214647

Sample: DGWA-53 **Lab ID: 30214647001** Collected: 03/28/17 14:05 Received: 03/30/17 10:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**2.86 ± 0.615 (0.232) C:81% T:NA**	pCi/L	04/07/17 10:19	13982-63-3	
Radium-228	EPA 9320	**3.50 ± 0.848 (0.711) C:74% T:82%**	pCi/L	04/14/17 15:08	15262-20-1	
Total Radium	Total Radium Calculation	**6.36 ± 1.46 (0.943)**	pCi/L	04/21/17 15:25	7440-14-4	

Sample: DGWA-70 **Lab ID: 30214647002** Collected: 03/28/17 10:05 Received: 03/30/17 10:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.263 ± 0.161 (0.234) C:97% T:NA**	pCi/L	04/10/17 08:47	13982-63-3	
Radium-228	EPA 9320	**0.603 ± 0.388 (0.736) C:79% T:80%**	pCi/L	04/19/17 11:54	15262-20-1	
Total Radium	Total Radium Calculation	**0.866 ± 0.549 (0.970)**	pCi/L	04/21/17 15:25	7440-14-4	

Sample: DGWA-71 **Lab ID: 30214647003** Collected: 03/28/17 17:40 Received: 03/30/17 10:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0695 ± 0.107 (0.234) C:90% T:NA**	pCi/L	04/10/17 08:47	13982-63-3	
Radium-228	EPA 9320	**0.187 ± 0.332 (0.727) C:78% T:77%**	pCi/L	04/19/17 11:54	15262-20-1	
Total Radium	Total Radium Calculation	**0.257 ± 0.439 (0.961)**	pCi/L	04/21/17 15:25	7440-14-4	

Sample: FB-1 **Lab ID: 30214647004** Collected: 03/28/17 16:45 Received: 03/30/17 10:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0723 ± 0.121 (0.272) C:90% T:NA**	pCi/L	04/10/17 08:47	13982-63-3	
Radium-228	EPA 9320	**0.603 ± 0.426 (0.827) C:77% T:74%**	pCi/L	04/19/17 11:54	15262-20-1	
Total Radium	Total Radium Calculation	**0.675 ± 0.547 (1.10)**	pCi/L	04/21/17 15:25	7440-14-4	

Sample: DGWC-4 **Lab ID: 30214647005** Collected: 03/28/17 12:35 Received: 03/30/17 10:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.598 ± 0.238 (0.297) C:103% T:NA**	pCi/L	04/10/17 08:47	13982-63-3	
Radium-228	EPA 9320	**0.764 ± 0.464 (0.869) C:77% T:80%**	pCi/L	04/19/17 12:44	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC0995 Plant McDonough
Pace Project No.: 30214647

Sample: DGWC-4 **Lab ID: 30214647005** Collected: 03/28/17 12:35 Received: 03/30/17 10:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**1.36 ± 0.702 (1.17)**	pCi/L	04/21/17 15:25	7440-14-4	

Sample: DGWC-5 **Lab ID: 30214647006** Collected: 03/28/17 14:45 Received: 03/30/17 10:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.415 ± 0.199 (0.258) C:93% T:NA**	pCi/L	04/10/17 08:47	13982-63-3	
Radium-228	EPA 9320	**0.278 ± 0.336 (0.711) C:78% T:88%**	pCi/L	04/19/17 11:54	15262-20-1	
Total Radium	Total Radium Calculation	**0.693 ± 0.535 (0.969)**	pCi/L	04/21/17 15:25	7440-14-4	

Sample: DGWC-9 **Lab ID: 30214647007** Collected: 03/28/17 16:35 Received: 03/30/17 10:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.468 ± 0.202 (0.235) C:97% T:NA**	pCi/L	04/10/17 08:47	13982-63-3	
Radium-228	EPA 9320	**0.594 ± 0.372 (0.695) C:77% T:83%**	pCi/L	04/19/17 11:54	15262-20-1	
Total Radium	Total Radium Calculation	**1.06 ± 0.574 (0.930)**	pCi/L	04/21/17 15:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC0995 Plant McDonough
Pace Project No.: 30214647

QC Batch: 253968 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30214647001

METHOD BLANK: 1250174 Matrix: Water
Associated Lab Samples: 30214647001

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

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC0995 Plant McDonough
Pace Project No.: 30214647

QC Batch: 254213 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30214647002, 30214647003, 30214647004, 30214647005, 30214647006, 30214647007

METHOD BLANK: 1251795 Matrix: Water
Associated Lab Samples: 30214647002, 30214647003, 30214647004, 30214647005, 30214647006, 30214647007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0693 ± 0.120 (0.269) C:90% T:NA	pCi/L	04/10/17 08:46	

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

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC0995 Plant McDonough
Pace Project No.: 30214647

QC Batch: 254544 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30214647001

METHOD BLANK: 1253321 Matrix: Water
Associated Lab Samples: 30214647001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.191 ± 0.253 (0.655) C:76% T:78%	pCi/L	04/14/17 11:42	

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

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC0995 Plant McDonough
Pace Project No.: 30214647

QC Batch: 254545 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30214647002, 30214647003, 30214647004, 30214647005, 30214647006, 30214647007

METHOD BLANK: 1253322 Matrix: Water
Associated Lab Samples: 30214647002, 30214647003, 30214647004, 30214647005, 30214647006, 30214647007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.712 ± 0.380 (0.669) C:81% T:76%	pCi/L	04/19/17 11:55	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: AAC0995 Plant McDonough
Pace Project No.: 30214647

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.

WO#:30214647

30214647

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAC0995 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 4/21/2017

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 HNO3	Requested Analysis Radium 226, 228, Total	LAB USE ONLY
1	DGWA-53	G	3/28/2017 14:05	AAC0995-01	GW	2	X	001
2	DGWA-70	G	3/28/2017 10:05	AAC0995-02	GW	2	X	002
3	DGWA-71	G	3/28/2017 17:40	AAC0995-03	GW	2	X	003
4	FB-1	G	3/28/2017 16:45	AAC0995-04	W	2	X	004
5	DGWC-4	G	3/28/2017 12:35	AAC0995-05	GW	2	X	005
6	DGWC-5	G	3/28/2017 14:45	AAC0995-06	GW	2	X	006
7	DGWC-9	G	3/28/2017 16:35	AAC0995-07	GW	2	X	007
8								
9								
10								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	MAdamson	03/29/17	Karen Hill	3/30/17 1050	
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.

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla

REQUESTED COMPLETION DATE:
PO #:

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4, & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P								
PRESERVATION:								3	7	3								
03/28/17	1405	GW		x	DGWA-53	3		1	1	1							1	
03/28/17	1005	GW		x	DGWA-70	3		1	1	1							2	
03/28/17	1740	GW		x	DGWA-71	3		1	1	1							3	
03/28/17	1645	W		x	FB-1	3		1	1	1							4	
03/28/17	1235	GW		x	DGWC-4	3		1	1	1							5	
03/28/17	1445	GW		x	DGWC-5	3		1	1	1							6	
03/28/17	1635	GW		x	DGWC-9	3		1	1	1							7	

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 3/28/17 0950
RELINQUISHED BY:
DATE/TIME: 3/29/17 0950

RECEIVED BY: Mike Nguyen
DATE/TIME: 3/29/17 0950
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB:
DATE/TIME: 03/29/17 1130
Shipped by: Pace Courier

pH checked: Yes No NA
Ice: Yes No NA
Ice Present, T-2°c
Seal - N/A

FOR LAB USE ONLY
LAB #: AAC 0995
Entered into LIMS: MR
Tracking #:

KEH

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace Atlanta Project # 30214647

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

Tracking #: 6812 5103 3215

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 3/30/17

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 Matrix: WT	✓			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.
Orthophosphate field filtered				12.
Organic Samples checked for dechlorination:			✓	13.
Filtered volume received for Dissolved tests			✓	14.
All containers have been checked for preservation. All containers needing preservation are found to be in compliance with EPA recommendation.	✓ ✓			15. pH<2
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed KH; Date/time of preservation; Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	16.
Trip Blank Present: Trip Blank Custody Seals Present		✓	✓	17.
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: KH Date: 3/30/17

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

Pace Analytical™
www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	4/11/2017
Worklist:	34999
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1253321
MB concentration:	-0.191
M/B Counting Uncertainty:	0.251
MB MDC:	0.655
MB Numerical Performance Indicator:	-1.49
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS34999	LCSD34999
Count Date:	4/14/2017	4/14/2017
Spike I.D.:	17-005	17-005
Spike Concentration (pCi/mL):	24.787	24.787
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.801	0.802
Target Conc. (pCi/L, g, F):	6.187	6.181
Uncertainty (Calculated):	0.445	0.445
Result (pCi/L, g, F):	6.482	7.063
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.766	0.792
Numerical Performance Indicator:	0.65	1.90
Percent Recovery:	104.78%	114.27%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	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:	

Duplicate Sample Assessment		
Sample I.D.:	LCS34999	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD34999	
Sample Result (pCi/L, g, F):	6.482	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.766	
Sample Duplicate Result (pCi/L, g, F):	7.063	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.792	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-1.033	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	8.66%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JJY
Date:	4/13/2017
Worklist:	35000
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1253322
MB concentration:	0.712
M/B Counting Uncertainty:	0.359
MB MDC:	0.669
MB Numerical Performance Indicator:	3.89
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS35000	LCSD35000
Count Date:	4/19/2017	4/19/2017
Spike I.D.:	17-005	17-005
Spike Concentration (pCi/mL):	24.746	24.746
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.805	0.801
Target Conc. (pCi/L, g, F):	6.146	6.182
Uncertainty (Calculated):	0.442	0.445
Result (pCi/L, g, F):	5.745	5.992
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.700	0.741
Numerical Performance Indicator:	-0.95	-0.43
Percent Recovery:	93.48%	96.92%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	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:	

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS35000	
Duplicate Sample I.D.	LCSD35000	
Sample Result (pCi/L, g, F):	5.745	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.700	
Sample Duplicate Result (pCi/L, g, F):	5.992	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.741	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-0.474	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	3.61%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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.

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	JC2
Date:	4/6/2017
Worklist:	34953
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1251795
MB concentration:	0.069
M/B Counting Uncertainty:	0.119
MB MDC:	0.269
MB Numerical Performance Indicator:	1.14
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS34953	LCSD34953
Count Date:	4/10/2017	
Spike I.D.:	17-003	
Spike Concentration (pCi/mL):	38.229	
Volume Used (mL):	0.25	
Aliquot Volume (L, g, F):	0.502	
Target Conc. (pCi/L, g, F):	19.020	
Uncertainty (Calculated):	0.895	
Result (pCi/L, g, F):	16.218	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.025	
Numerical Performance Indicator:	-4.04	
Percent Recovery:	85.27%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Duplicate Sample Assessment		
Sample I.D.:	30214650005	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30214650005DUP	
Sample Result (pCi/L, g, F):	1.656	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.386	
Sample Duplicate Result (pCi/L, g, F):	1.983	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.369	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-1.201	30214650005
Duplicate RPD:	17.99%	30214650005DUP
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:

4/21/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	JC2
Date:	4/4/2017
Worklist:	34921
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1250174
MB concentration:	0.035
M/B 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	LCSD (Y or N)?	Y
	LCS34921	LCSD34921
Count Date:	4/7/2017	4/7/2017
Spike I.D.:	17-003	17-003
Spike Concentration (pCi/mL):	38.230	38.230
Volume Used (mL):	0.25	0.25
Aliquot Volume (L, g, F):	0.510	0.511
Target Conc. (pCi/L, g, F):	18.736	18.715
Uncertainty (Calculated):	0.881	0.880
Result (pCi/L, g, F):	15.468	15.332
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.007	1.026
Numerical Performance Indicator:	-4.79	-4.90
Percent Recovery:	82.56%	81.92%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	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:	

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS34921	
Duplicate Sample I.D.	LCSD34921	
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	

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:

4/21/17

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: AAC1051
April 12, 2017
Project: CCR Event
Project #:Plant McDonough

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

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 12, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWC-10	AAC1051-01	Ground Water	03/29/17 10:00	03/30/17 11:03
DGWC-11	AAC1051-02	Ground Water	03/29/17 14:14	03/30/17 11:03
DGWC-14	AAC1051-03	Ground Water	03/29/17 11:40	03/30/17 11:03
FD-1	AAC1051-04	Ground Water	03/29/17 00:00	03/30/17 11:03
DGWC-8	AAC1051-05	Ground Water	03/29/17 11:05	03/30/17 11:03
EB-1	AAC1051-06	Water	03/29/17 09:35	03/30/17 11:03
DGWC-22	AAC1051-07	Ground Water	03/29/17 14:25	03/30/17 11:03
FB-2	AAC1051-08	Water	03/29/17 14:10	03/30/17 11:03
DGWC-20	AAC1051-09	Ground Water	03/29/17 15:45	03/30/17 11:03
DGWC-19	AAC1051-10	Ground Water	03/29/17 14:10	03/30/17 11:03
DGWC-12	AAC1051-11	Ground Water	03/29/17 15:41	03/30/17 11:03

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 12, 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.

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 12, 2017

Report No.: AAC1051
Client ID: DGWC-10
Date/Time Sampled: 3/29/2017 10:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1051-01
Date/Time Received: 3/30/2017 11:03:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	525	25	10	mg/L	SM 2540 C		1	04/03/17 15:42	04/03/17 15:42	7040021	JPT
Inorganic Anions											
Chloride	11	0.25	0.01	mg/L	EPA 300.0		1	04/04/17 10:43	04/04/17 22:47	7040052	RLC
Fluoride	1.5	0.30	0.004	mg/L	EPA 300.0		1	04/04/17 10:43	04/04/17 22:47	7040052	RLC
Sulfate	360	50	4.6	mg/L	EPA 300.0		50	04/04/17 10:43	04/05/17 16:02	7040052	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 18:49	7030951	CSW
Arsenic	0.0055	0.0050	0.0004	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 18:49	7030951	CSW
Barium	0.0335	0.0100	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 18:49	7030951	CSW
Beryllium	0.0048	0.0030	0.00007	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 18:49	7030951	CSW
Boron	4.30	2.00	0.302	mg/L	EPA 6020B		50	03/31/17 14:25	04/05/17 18:55	7030951	CSW
Cadmium	0.0013	0.0010	0.00006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 18:49	7030951	CSW
Calcium	79.5	25.0	0.522	mg/L	EPA 6020B		50	03/31/17 14:25	04/05/17 18:55	7030951	CSW
Chromium	0.0008	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 18:49	7030951	CSW
Cobalt	0.184	0.0100	0.0005	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 18:49	7030951	CSW
Lead	ND	0.0050	0.0003	mg/L	EPA 6020B		5	03/31/17 14:25	04/10/17 17:18	7030951	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 18:49	7030951	CSW
Selenium	0.0286	0.0100	0.0014	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 18:49	7030951	CSW
Thallium	0.0006	0.0020	0.0002	mg/L	EPA 6020B	R-01, J	5	03/31/17 14:25	04/10/17 17:18	7030951	CSW
Lithium	0.0020	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 18:49	7030951	CSW
Mercury	0.00008	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 16:06	7040086	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1051
Client ID: DGWC-11
Date/Time Sampled: 3/29/2017 2:14:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1051-02
Date/Time Received: 3/30/2017 11:03:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	300	25	10	mg/L	SM 2540 C		1	04/03/17 15:42	04/03/17 15:42	7040021	JPT
Inorganic Anions											
Chloride	12	0.25	0.01	mg/L	EPA 300.0		1	04/04/17 10:43	04/05/17 00:36	7040052	RLC
Fluoride	0.04	0.30	0.004	mg/L	EPA 300.0	J	1	04/04/17 10:43	04/05/17 00:36	7040052	RLC
Sulfate	200	50	4.6	mg/L	EPA 300.0		50	04/04/17 10:43	04/05/17 16:23	7040052	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:00	7030951	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:00	7030951	CSW
Barium	0.0565	0.0100	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:00	7030951	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:00	7030951	CSW
Boron	1.07	0.0400	0.0060	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:00	7030951	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:00	7030951	CSW
Calcium	50.5	25.0	0.522	mg/L	EPA 6020B		50	03/31/17 14:25	04/05/17 19:06	7030951	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:00	7030951	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:00	7030951	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:00	7030951	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:00	7030951	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:00	7030951	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:00	7030951	CSW
Lithium	0.0021	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 19:00	7030951	CSW
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 16:08	7040086	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1051
Client ID: DGWC-14
Date/Time Sampled: 3/29/2017 11:40:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1051-03
Date/Time Received: 3/30/2017 11:03:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	102	25	10	mg/L	SM 2540 C		1	04/03/17 15:42	04/03/17 15:42	7040021	JPT
Inorganic Anions											
Chloride	3.8	0.25	0.01	mg/L	EPA 300.0		1	04/04/17 10:43	04/05/17 00:58	7040052	RLC
Fluoride	0.02	0.30	0.004	mg/L	EPA 300.0	J	1	04/04/17 10:43	04/05/17 00:58	7040052	RLC
Sulfate	81	5.0	0.46	mg/L	EPA 300.0		5	04/04/17 10:43	04/05/17 13:38	7040052	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:12	7030951	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:12	7030951	CSW
Barium	0.0693	0.0100	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:12	7030951	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:12	7030951	CSW
Boron	0.103	0.0400	0.0060	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:12	7030951	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:12	7030951	CSW
Calcium	14.4	5.00	0.522	mg/L	EPA 6020B		50	03/31/17 14:25	04/05/17 19:18	7030951	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:12	7030951	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:12	7030951	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:12	7030951	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:12	7030951	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:12	7030951	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:12	7030951	CSW
Lithium	0.0041	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 19:12	7030951	CSW
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 16:10	7040086	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1051
Client ID: FD-1
Date/Time Sampled: 3/29/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1051-04
Date/Time Received: 3/30/2017 11:03:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	539	25	10	mg/L	SM 2540 C		1	04/03/17 15:42	04/03/17 15:42	7040021	JPT
Inorganic Anions											
Chloride	11	0.25	0.01	mg/L	EPA 300.0		1	04/04/17 10:43	04/05/17 01:20	7040052	RLC
Fluoride	1.4	0.30	0.004	mg/L	EPA 300.0		1	04/04/17 10:43	04/05/17 01:20	7040052	RLC
Sulfate	390	50	4.6	mg/L	EPA 300.0		50	04/04/17 10:43	04/06/17 04:07	7040052	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:23	7030951	CSW
Arsenic	0.0056	0.0050	0.0004	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:23	7030951	CSW
Barium	0.0334	0.0100	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:23	7030951	CSW
Beryllium	0.0047	0.0030	0.00007	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:23	7030951	CSW
Boron	3.68	2.00	0.302	mg/L	EPA 6020B		50	03/31/17 14:25	04/11/17 14:39	7030951	CSW
Cadmium	0.0013	0.0010	0.00006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:23	7030951	CSW
Calcium	80.0	25.0	0.522	mg/L	EPA 6020B		50	03/31/17 14:25	04/11/17 14:39	7030951	CSW
Chromium	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 19:23	7030951	CSW
Cobalt	0.185	0.0100	0.0005	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:23	7030951	CSW
Lead	ND	0.0050	0.0003	mg/L	EPA 6020B		5	03/31/17 14:25	04/10/17 17:29	7030951	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:23	7030951	CSW
Selenium	0.0283	0.0100	0.0014	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:23	7030951	CSW
Thallium	0.0005	0.0020	0.0002	mg/L	EPA 6020B	R-01, J	5	03/31/17 14:25	04/10/17 17:29	7030951	CSW
Lithium	0.0021	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 19:23	7030951	CSW
Mercury	0.00008	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 16:13	7040086	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1051
Client ID: DGWC-8
Date/Time Sampled: 3/29/2017 11:05:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1051-05
Date/Time Received: 3/30/2017 11:03:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	654	25	10	mg/L	SM 2540 C		1	04/03/17 15:42	04/03/17 15:42	7040021	JPT
Inorganic Anions											
Chloride	9.9	0.25	0.01	mg/L	EPA 300.0		1	04/04/17 10:43	04/05/17 01:41	7040052	RLC
Fluoride	0.51	0.30	0.004	mg/L	EPA 300.0		1	04/04/17 10:43	04/05/17 01:41	7040052	RLC
Sulfate	660	50	4.6	mg/L	EPA 300.0		50	04/04/17 10:43	04/05/17 14:19	7040052	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:29	7030951	CSW
Arsenic	0.0010	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 19:29	7030951	CSW
Barium	0.0440	0.0100	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:29	7030951	CSW
Beryllium	0.0031	0.0030	0.00007	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:29	7030951	CSW
Boron	3.04	2.00	0.302	mg/L	EPA 6020B		50	03/31/17 14:25	04/05/17 19:46	7030951	CSW
Cadmium	0.0024	0.0010	0.00006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:29	7030951	CSW
Calcium	90.5	25.0	0.522	mg/L	EPA 6020B		50	03/31/17 14:25	04/05/17 19:46	7030951	CSW
Chromium	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 19:29	7030951	CSW
Cobalt	0.0902	0.0100	0.0005	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:29	7030951	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 19:29	7030951	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:29	7030951	CSW
Selenium	0.0048	0.0100	0.0014	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 19:29	7030951	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 19:29	7030951	CSW
Lithium	0.0059	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 19:29	7030951	CSW
Mercury	0.00012	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 16:15	7040086	MTC

PACE ANALYTICAL SERVICES, LLC.

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2480 Maner Road
Atlanta GA, 30339

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April 12, 2017

Report No.: AAC1051
Client ID: EB-1
Date/Time Sampled: 3/29/2017 9:35:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAC1051-06
Date/Time Received: 3/30/2017 11:03:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	04/03/17 15:42	04/03/17 15:42	7040021	JPT
Inorganic Anions											
Chloride	0.08	0.25	0.01	mg/L	EPA 300.0	J	1	04/04/17 10:43	04/05/17 02:03	7040052	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/04/17 10:43	04/05/17 02:03	7040052	RLC
Sulfate	0.18	1.0	0.09	mg/L	EPA 300.0	J	1	04/04/17 10:43	04/05/17 02:03	7040052	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:52	7030951	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:52	7030951	CSW
Barium	0.0012	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 19:52	7030951	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:52	7030951	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:52	7030951	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:52	7030951	CSW
Calcium	0.0182	0.500	0.0104	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 19:52	7030951	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:52	7030951	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:52	7030951	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/31/17 14:25	04/10/17 17:35	7030951	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:52	7030951	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:52	7030951	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:52	7030951	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:52	7030951	CSW
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 16:18	7040086	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1051
Client ID: DGWC-22
Date/Time Sampled: 3/29/2017 2:25:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1051-07
Date/Time Received: 3/30/2017 11:03:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	462	25	10	mg/L	SM 2540 C		1	04/03/17 15:42	04/03/17 15:42	7040021	JPT
Inorganic Anions											
Chloride	30	0.25	0.01	mg/L	EPA 300.0		1	04/04/17 10:43	04/05/17 02:24	7040052	RLC
Fluoride	0.11	0.30	0.004	mg/L	EPA 300.0	J	1	04/04/17 10:43	04/05/17 02:24	7040052	RLC
Sulfate	290	50	4.6	mg/L	EPA 300.0		50	04/04/17 10:43	04/05/17 14:40	7040052	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:58	7030951	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:58	7030951	CSW
Barium	0.0417	0.0100	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:58	7030951	CSW
Beryllium	0.0002	0.0030	0.00007	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 19:58	7030951	CSW
Boron	4.85	2.00	0.302	mg/L	EPA 6020B		50	03/31/17 14:25	04/05/17 20:03	7030951	CSW
Cadmium	0.0004	0.0010	0.00006	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 19:58	7030951	CSW
Calcium	64.7	25.0	0.522	mg/L	EPA 6020B		50	03/31/17 14:25	04/05/17 20:03	7030951	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:58	7030951	CSW
Cobalt	0.0097	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 19:58	7030951	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/31/17 14:25	04/10/17 17:40	7030951	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:58	7030951	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 19:58	7030951	CSW
Thallium	0.00006	0.0010	0.00005	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 19:58	7030951	CSW
Lithium	0.0043	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 19:58	7030951	CSW
Mercury	0.00010	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 16:20	7040086	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

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1051
Client ID: FB-2
Date/Time Sampled: 3/29/2017 2:10:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAC1051-08
Date/Time Received: 3/30/2017 11:03:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	04/03/17 15:42	04/03/17 15:42	7040021	JPT
Inorganic Anions											
Chloride	0.08	0.25	0.01	mg/L	EPA 300.0	J	1	04/04/17 10:43	04/05/17 02:46	7040052	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/04/17 10:43	04/05/17 02:46	7040052	RLC
Sulfate	0.11	1.0	0.09	mg/L	EPA 300.0	J	1	04/04/17 10:43	04/05/17 02:46	7040052	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:09	7030951	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:09	7030951	CSW
Barium	0.0012	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 20:09	7030951	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:09	7030951	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:09	7030951	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:09	7030951	CSW
Calcium	ND	0.500	0.0104	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:09	7030951	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:09	7030951	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:09	7030951	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/31/17 14:25	04/10/17 18:17	7030951	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:09	7030951	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:09	7030951	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:09	7030951	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:09	7030951	CSW
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 16:34	7040086	MTC

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1051
Client ID: DGWC-20
Date/Time Sampled: 3/29/2017 3:45:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1051-09
Date/Time Received: 3/30/2017 11:03:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	923	25	10	mg/L	SM 2540 C		1	04/03/17 15:42	04/03/17 15:42	7040021	JPT
Inorganic Anions											
Chloride	17	0.25	0.01	mg/L	EPA 300.0		1	04/04/17 10:43	04/05/17 03:08	7040052	RLC
Fluoride	0.34	0.30	0.004	mg/L	EPA 300.0		1	04/04/17 10:43	04/05/17 03:08	7040052	RLC
Sulfate	640	50	4.6	mg/L	EPA 300.0		50	04/04/17 10:43	04/05/17 15:00	7040052	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:15	7030951	CSW
Arsenic	0.0150	0.0050	0.0004	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:15	7030951	CSW
Barium	0.0094	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 20:15	7030951	CSW
Beryllium	0.0026	0.0030	0.00007	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 20:15	7030951	CSW
Boron	8.23	2.00	0.302	mg/L	EPA 6020B		50	03/31/17 14:25	04/05/17 20:20	7030951	CSW
Cadmium	0.0021	0.0010	0.00006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:15	7030951	CSW
Calcium	95.7	25.0	0.522	mg/L	EPA 6020B		50	03/31/17 14:25	04/05/17 20:20	7030951	CSW
Chromium	0.0016	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 20:15	7030951	CSW
Cobalt	0.443	0.0100	0.0005	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:15	7030951	CSW
Lead	ND	0.0050	0.0003	mg/L	EPA 6020B		5	03/31/17 14:25	04/10/17 18:23	7030951	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:15	7030951	CSW
Selenium	0.0521	0.0100	0.0014	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:15	7030951	CSW
Thallium	0.0006	0.0020	0.0002	mg/L	EPA 6020B	R-01, J	5	03/31/17 14:25	04/10/17 18:23	7030951	CSW
Lithium	0.0021	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 20:15	7030951	CSW
Mercury	0.00008	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 16:37	7040086	MTC

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1051
Client ID: DGWC-19
Date/Time Sampled: 3/29/2017 2:10:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1051-10
Date/Time Received: 3/30/2017 11:03:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	390	25	10	mg/L	SM 2540 C		1	04/03/17 15:42	04/03/17 15:42	7040021	JPT
Inorganic Anions											
Chloride	42	0.25	0.01	mg/L	EPA 300.0		1	04/04/17 10:43	04/05/17 03:30	7040052	RLC
Fluoride	0.35	0.30	0.004	mg/L	EPA 300.0		1	04/04/17 10:43	04/05/17 03:30	7040052	RLC
Sulfate	250	20	1.8	mg/L	EPA 300.0		20	04/04/17 10:43	04/05/17 15:21	7040052	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:26	7030951	CSW
Arsenic	0.0020	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 20:26	7030951	CSW
Barium	0.0209	0.0100	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:26	7030951	CSW
Beryllium	0.0017	0.0030	0.00007	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 20:26	7030951	CSW
Boron	3.96	2.00	0.302	mg/L	EPA 6020B		50	03/31/17 14:25	04/05/17 20:32	7030951	CSW
Cadmium	0.0004	0.0010	0.00006	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 20:26	7030951	CSW
Calcium	68.0	25.0	0.522	mg/L	EPA 6020B		50	03/31/17 14:25	04/05/17 20:32	7030951	CSW
Chromium	0.0025	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 20:26	7030951	CSW
Cobalt	0.0534	0.0100	0.0005	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:26	7030951	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/31/17 14:25	04/10/17 18:35	7030951	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:26	7030951	CSW
Selenium	0.0071	0.0100	0.0014	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 20:26	7030951	CSW
Thallium	0.0004	0.0010	0.00005	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 20:26	7030951	CSW
Lithium	0.0031	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 20:26	7030951	CSW
Mercury	0.00009	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 16:39	7040086	MTC

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1051
Client ID: DGWC-12
Date/Time Sampled: 3/29/2017 3:41:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1051-11
Date/Time Received: 3/30/2017 11:03:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	550	25	10	mg/L	SM 2540 C		1	04/03/17 15:42	04/03/17 15:42	7040021	JPT
Inorganic Anions											
Chloride	13	0.25	0.01	mg/L	EPA 300.0		1	04/04/17 10:43	04/05/17 03:51	7040052	RLC
Fluoride	0.10	0.30	0.004	mg/L	EPA 300.0	J	1	04/04/17 10:43	04/05/17 03:51	7040052	RLC
Sulfate	150	20	1.8	mg/L	EPA 300.0		20	04/04/17 10:43	04/05/17 15:42	7040052	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:38	7030951	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:38	7030951	CSW
Barium	0.0268	0.0100	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:38	7030951	CSW
Beryllium	0.0002	0.0030	0.00007	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 20:38	7030951	CSW
Boron	8.46	2.00	0.302	mg/L	EPA 6020B		50	03/31/17 14:25	04/05/17 20:55	7030951	CSW
Cadmium	0.0003	0.0010	0.00006	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 20:38	7030951	CSW
Calcium	88.3	25.0	0.522	mg/L	EPA 6020B		50	03/31/17 14:25	04/05/17 20:55	7030951	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:38	7030951	CSW
Cobalt	0.0026	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 20:38	7030951	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/31/17 14:25	04/10/17 18:40	7030951	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:38	7030951	CSW
Selenium	0.0017	0.0100	0.0014	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 20:38	7030951	CSW
Thallium	0.00008	0.0010	0.00005	mg/L	EPA 6020B	J	1	03/31/17 14:25	04/05/17 20:38	7030951	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/31/17 14:25	04/05/17 20:38	7030951	CSW
Mercury	0.00014	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 16:41	7040086	MTC

PACE ANALYTICAL SERVICES, LLC.

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Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1051

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040021 - SM 2540 C											
Blank (7040021-BLK1)						Prepared & Analyzed: 04/03/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7040021-BS1)						Prepared & Analyzed: 04/03/17					
Total Dissolved Solids	363	25	10	mg/L	400.00		91	84-108			
Duplicate (7040021-DUP1)		**Source: AAC1025-02**				Prepared & Analyzed: 04/03/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7040021-DUP2)		**Source: AAC1051-10**				Prepared & Analyzed: 04/03/17					
Total Dissolved Solids	405	25	10	mg/L		390			4	10	

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April 12, 2017

Report No.: AAC1051

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040052 - EPA 300.0											
Blank (7040052-BLK1)						Prepared & Analyzed: 04/04/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7040052-BS1)						Prepared & Analyzed: 04/04/17					
Chloride	9.93	0.25	0.01	mg/L	10.010		99	90-110			
Fluoride	10.4	0.30	0.004	mg/L	10.020		104	90-110			
Sulfate	10.1	1.0	0.09	mg/L	10.020		101	90-110			
Duplicate (7040052-DUP1)		**Source: AAC1051-04RE2**				Prepared: 04/04/17 Analyzed: 04/06/17					
Chloride	21.0	12	0.65	mg/L		13.4			44	15	QM-05
Fluoride	ND	15	0.20	mg/L		ND				15	
Sulfate	385	50	4.6	mg/L		387			0.5	15	
Matrix Spike (7040052-MS1)		**Source: AAC1025-07**				Prepared & Analyzed: 04/04/17					
Chloride	12.5	0.25	0.01	mg/L	10.010	2.28	102	90-110			
Fluoride	10.7	0.30	0.004	mg/L	10.020	ND	107	90-110			
Sulfate	15.9	1.0	0.09	mg/L	10.020	6.16	97	90-110			
Matrix Spike (7040052-MS2)		**Source: AAC1051-11**				Prepared: 04/04/17 Analyzed: 04/05/17					
Chloride	22.1	0.25	0.01	mg/L	10.010	12.7	94	90-110			
Fluoride	11.1	0.30	0.004	mg/L	10.020	0.10	110	90-110			
Sulfate	244	1.0	0.09	mg/L	10.020	255	NR	90-110			QM-02
Matrix Spike Dup (7040052-MSD1)		**Source: AAC1025-07**				Prepared & Analyzed: 04/04/17					
Chloride	12.5	0.25	0.01	mg/L	10.010	2.28	102	90-110	0.2	15	
Fluoride	10.7	0.30	0.004	mg/L	10.020	ND	106	90-110	0.06	15	
Sulfate	15.9	1.0	0.09	mg/L	10.020	6.16	97	90-110	0.2	15	

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April 12, 2017

Report No.: AAC1051

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030951 - EPA 3005A											
Blank (7030951-BLK1)						Prepared: 03/31/17 Analyzed: 04/05/17					
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	ND	0.0250	0.0003	mg/L							
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	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0011	mg/L							
LCS (7030951-BS1)						Prepared: 03/31/17 Analyzed: 04/05/17					
Antimony	0.0998	0.0030	0.0003	mg/L	0.10000		100	80-120			
Arsenic	0.102	0.0050	0.0004	mg/L	0.10000		102	80-120			
Barium	0.101	0.0100	0.0003	mg/L	0.10000		101	80-120			
Beryllium	0.101	0.0030	0.00007	mg/L	0.10000		101	80-120			
Boron	1.05	0.0400	0.0060	mg/L	1.0000		105	80-120			
Cadmium	0.101	0.0010	0.00006	mg/L	0.10000		101	80-120			
Calcium	1.03	0.500	0.0104	mg/L	1.0000		103	80-120			
Chromium	0.108	0.0100	0.0003	mg/L	0.10000		108	80-120			
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000		100	80-120			
Copper	0.101	0.0250	0.0003	mg/L	0.10000		101	80-120			
Lead	0.0947	0.0050	0.00007	mg/L	0.10000		95	80-120			
Molybdenum	0.102	0.0100	0.0006	mg/L	0.10000		102	80-120			
Nickel	0.102	0.0100	0.0003	mg/L	0.10000		102	80-120			
Selenium	0.103	0.0100	0.0014	mg/L	0.10000		103	80-120			
Silver	0.0982	0.0100	0.0003	mg/L	0.10000		98	80-120			
Thallium	0.0968	0.0010	0.00005	mg/L	0.10000		97	80-120			
Vanadium	0.107	0.0100	0.0014	mg/L	0.10000		107	80-120			
Zinc	0.103	0.0100	0.0013	mg/L	0.10000		103	80-120			
Lithium	0.104	0.0500	0.0011	mg/L	0.10000		104	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 12, 2017

Report No.: AAC1051

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030951 - EPA 3005A											
Matrix Spike (7030951-MS1)		**Source: AAC1025-03**			Prepared: 03/31/17 Analyzed: 04/05/17						
Antimony	0.101	0.0030	0.0003	mg/L	0.10000	0.0018	99	75-125			
Arsenic	0.101	0.0050	0.0004	mg/L	0.10000	ND	101	75-125			
Barium	0.109	0.0100	0.0003	mg/L	0.10000	0.0058	103	75-125			
Beryllium	0.0935	0.0030	0.00007	mg/L	0.10000	ND	93	75-125			
Boron	1.02	0.0400	0.0060	mg/L	1.0000	ND	102	75-125			
Cadmium	0.101	0.0010	0.00006	mg/L	0.10000	ND	101	75-125			
Calcium	1.74	0.500	0.0104	mg/L	1.0000	0.756	99	75-125			
Chromium	0.112	0.0100	0.0003	mg/L	0.10000	ND	112	75-125			
Cobalt	0.107	0.0100	0.0005	mg/L	0.10000	0.0013	106	75-125			
Copper	0.105	0.0250	0.0003	mg/L	0.10000	0.0005	104	75-125			
Lead	0.0955	0.0050	0.00007	mg/L	0.10000	0.0001	95	75-125			
Molybdenum	0.104	0.0100	0.0006	mg/L	0.10000	ND	104	75-125			
Nickel	0.106	0.0100	0.0003	mg/L	0.10000	0.0012	105	75-125			
Selenium	0.102	0.0100	0.0014	mg/L	0.10000	ND	102	75-125			
Silver	0.0990	0.0100	0.0003	mg/L	0.10000	ND	99	75-125			
Thallium	0.0978	0.0010	0.00005	mg/L	0.10000	ND	98	75-125			
Vanadium	0.116	0.0100	0.0014	mg/L	0.10000	ND	116	75-125			
Zinc	0.106	0.0100	0.0013	mg/L	0.10000	0.0023	104	75-125			
Lithium	0.0997	0.0500	0.0011	mg/L	0.10000	ND	100	75-125			
Matrix Spike Dup (7030951-MSD1)		**Source: AAC1025-03**			Prepared: 03/31/17 Analyzed: 04/05/17						
Antimony	0.103	0.0030	0.0003	mg/L	0.10000	0.0018	101	75-125	3	20	
Arsenic	0.0992	0.0050	0.0004	mg/L	0.10000	ND	99	75-125	2	20	
Barium	0.110	0.0100	0.0003	mg/L	0.10000	0.0058	104	75-125	1	20	
Beryllium	0.100	0.0030	0.00007	mg/L	0.10000	ND	100	75-125	7	20	
Boron	1.03	0.0400	0.0060	mg/L	1.0000	ND	103	75-125	0.6	20	
Cadmium	0.102	0.0010	0.00006	mg/L	0.10000	ND	102	75-125	0.09	20	
Calcium	1.77	0.500	0.0104	mg/L	1.0000	0.756	101	75-125	2	20	
Chromium	0.109	0.0100	0.0003	mg/L	0.10000	ND	109	75-125	3	20	
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000	0.0013	103	75-125	2	20	
Copper	0.104	0.0250	0.0003	mg/L	0.10000	0.0005	103	75-125	0.6	20	
Lead	0.0952	0.0050	0.00007	mg/L	0.10000	0.0001	95	75-125	0.4	20	
Molybdenum	0.105	0.0100	0.0006	mg/L	0.10000	ND	105	75-125	1	20	
Nickel	0.106	0.0100	0.0003	mg/L	0.10000	0.0012	104	75-125	0.4	20	
Selenium	0.101	0.0100	0.0014	mg/L	0.10000	ND	101	75-125	1	20	
Silver	0.101	0.0100	0.0003	mg/L	0.10000	ND	101	75-125	2	20	
Thallium	0.0968	0.0010	0.00005	mg/L	0.10000	ND	97	75-125	1	20	
Vanadium	0.108	0.0100	0.0014	mg/L	0.10000	ND	108	75-125	7	20	
Zinc	0.105	0.0100	0.0013	mg/L	0.10000	0.0023	103	75-125	0.8	20	
Lithium	0.102	0.0500	0.0011	mg/L	0.10000	ND	102	75-125	3	20	

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1051

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030951 - EPA 3005A											
Post Spike (7030951-PS1)		**Source: AAC1025-03**			Prepared: 03/31/17 Analyzed: 04/05/17						
Antimony	102			ug/L	100.00	1.76	100	80-120			
Arsenic	101			ug/L	100.00	-0.0532	101	80-120			
Barium	107			ug/L	100.00	5.80	101	80-120			
Beryllium	99.7			ug/L	100.00	0.0279	100	80-120			
Boron	1210			ug/L	1000.0	2.45	121	80-120			QM-02
Cadmium	101			ug/L	100.00	0.0072	101	80-120			
Calcium	1690			ug/L	1000.0	756	94	80-120			
Chromium	112			ug/L	100.00	0.143	112	80-120			
Cobalt	107			ug/L	100.00	1.35	106	80-120			
Copper	103			ug/L	100.00	0.515	102	80-120			
Lead	95.4			ug/L	100.00	0.140	95	80-120			
Molybdenum	104			ug/L	100.00	0.0124	104	80-120			
Nickel	108			ug/L	100.00	1.19	106	80-120			
Selenium	101			ug/L	100.00	-0.152	101	80-120			
Silver	100			ug/L	100.00	0.0023	100	80-120			
Thallium	97.6			ug/L	100.00	0.0152	98	80-120			
Vanadium	110			ug/L	100.00	0.978	109	80-120			
Zinc	101			ug/L	100.00	2.34	99	80-120			
Lithium	104			ug/L	100.00	0.444	104	80-120			
Batch 7040086 - EPA 7470A											
Blank (7040086-BLK1)					Prepared & Analyzed: 04/05/17						
Mercury	0.00006	0.00050	0.000041	mg/L							J
LCS (7040086-BS1)					Prepared & Analyzed: 04/05/17						
Mercury	0.00254	0.00050	0.000041	mg/L	2.5000E-3		101	80-120			

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1051

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040086 - EPA 7470A											
Matrix Spike (7040086-MS1)		**Source: AAC1025-04**				Prepared & Analyzed: 04/05/17					
Mercury	0.00256	0.00050	0.000041	mg/L	2.5000E-3	0.00007	100	75-125			
Matrix Spike Dup (7040086-MSD1)		**Source: AAC1025-04**				Prepared & Analyzed: 04/05/17					
Mercury	0.00259	0.00050	0.000041	mg/L	2.5000E-3	0.00007	101	75-125	1	20	
Post Spike (7040086-PS1)		**Source: AAC1025-04**				Prepared & Analyzed: 04/05/17					
Mercury	1.80			ug/L	1.6667	0.0441	106	80-120			

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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-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.

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com

CC: Maria Padilla kjurinko@golder.com

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P								
PRESERVATION:								3	7	3								
03/29/17	1000	GW		x	DGWC-10	4		1	1	2							1	
03/29/17	1414	GW		x	DGWC-11	4		1	1	2							2	
03/29/17	1140	GW		x	DGWC-14	6		1	1	4							3	Extra Radium
03/29/17	--	GW		x	FD-1	4		1	1	2							4	
03/29/17	1105	GW		x	DGWC-8	4		1	1	2							5	
03/29/17	0935	W		x	EB-1	4		1	1	2							6	
03/29/17	1425	GW		x	DGWC-22	4		1	1	2							7	
03/29/17	1410	W		x	FB-2	4		1	1	2							8	
03/29/17	1545	GW		x	DGWC-20	4		1	1	2							9	
03/29/17	1410	GW		x	DGWC-19	4		1	1	2							10	
03/29/17	1541	GW		x	DGWC-12	4		1	1	2							11	

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead — DATE/TIME: 3/30/17 10:30

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY: — DATE/TIME: 3/30/17 11:03

RELINQUISHED BY: Mike Nguyen — DATE/TIME: 3/30/17 1103

RECEIVED BY LAB: — DATE/TIME: 03/30/17 1103

Shipped by: Pace Courier

pH checked: Yes No NA

Ice: Yes No NA

Temp - 1°C, Seal - N/A

FOR LAB USE ONLY

LAB #: AAC1051

Entered into LIMS: MR

Tracking #:

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: 3/31/2017 1:40:14PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 03/30/17 11:03

Work Order: AAC1051
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 11 **#Containers:** 46

Minimum Temp(C): 1.0 **Maximum Temp(C):** 1.0 **Custody Seal(s) Used:** N/A

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	NO
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

April 25, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAC1051 Plant McDonough
Pace Project No.: 30214947

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on April 03, 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

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

CERTIFICATIONS

Project: AAC1051 Plant McDonough
Pace Project No.: 30214947

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

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: AAC1051 Plant McDonough
Pace Project No.: 30214947

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30214947001	**DGWC-10**	Water	03/29/17 10:00	04/03/17 09:15
30214947002	**DGWC-11**	Water	03/29/17 14:14	04/03/17 09:15
30214947003	**DGWC-14**	Water	03/29/17 11:40	04/03/17 09:15
30214947004	**FD-1**	Water	03/29/17 00:00	04/03/17 09:15
30214947005	**DGWC-8**	Water	03/29/17 11:05	04/03/17 09:15
30214947006	**EB-1**	Water	03/29/17 09:35	04/03/17 09:15
30214947007	**DGWC-22**	Water	03/29/17 14:25	04/03/17 09:15
30214947008	**FB-2**	Water	03/29/17 14:10	04/03/17 09:15
30214947009	**DGWC-20**	Water	03/29/17 15:45	04/03/17 09:15
30214947010	**DGWC-19**	Water	03/29/17 14:10	04/03/17 09:15
30214947011	**DGWC-12**	Water	03/29/17 15:41	04/03/17 09:15

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: AAC1051 Plant McDonough
Pace Project No.: 30214947

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30214947001	**DGWC-10**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214947002	**DGWC-11**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214947003	**DGWC-14**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214947004	**FD-1**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214947005	**DGWC-8**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214947006	**EB-1**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214947007	**DGWC-22**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214947008	**FB-2**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214947009	**DGWC-20**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214947010	**DGWC-19**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214947011	**DGWC-12**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

Pace Analytical Services, LLC
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Greensburg, PA 15601
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC1051 Plant McDonough
Pace Project No.: 30214947

Sample: DGWC-10 **Lab ID: 30214947001** Collected: 03/29/17 10:00 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.279 ± 0.115 (0.140) C:93% T:NA**	pCi/L	04/10/17 12:09	13982-63-3	
Radium-228	EPA 9320	**0.957 ± 0.391 (0.597) C:76% T:86%**	pCi/L	04/19/17 11:04	15262-20-1	
Total Radium	Total Radium Calculation	**1.24 ± 0.506 (0.737)**	pCi/L	04/25/17 11:29	7440-14-4	

Sample: DGWC-11 **Lab ID: 30214947002** Collected: 03/29/17 14:14 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0526 ± 0.0668 (0.137) C:99% T:NA**	pCi/L	04/10/17 12:09	13982-63-3	
Radium-228	EPA 9320	**0.674 ± 0.317 (0.524) C:85% T:90%**	pCi/L	04/19/17 11:04	15262-20-1	
Total Radium	Total Radium Calculation	**0.727 ± 0.384 (0.661)**	pCi/L	04/25/17 11:29	7440-14-4	

Sample: DGWC-14 **Lab ID: 30214947003** Collected: 03/29/17 11:40 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0588 ± 0.0696 (0.140) C:91% T:NA**	pCi/L	04/10/17 12:09	13982-63-3	
Radium-228	EPA 9320	**0.254 ± 0.321 (0.679) C:80% T:75%**	pCi/L	04/19/17 11:55	15262-20-1	
Total Radium	Total Radium Calculation	**0.313 ± 0.391 (0.819)**	pCi/L	04/25/17 11:29	7440-14-4	

Sample: FD-1 **Lab ID: 30214947004** Collected: 03/29/17 00:00 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.350 ± 0.157 (0.163) C:96% T:NA**	pCi/L	04/11/17 13:16	13982-63-3	
Radium-228	EPA 9320	**0.692 ± 0.403 (0.738) C:76% T:86%**	pCi/L	04/19/17 16:57	15262-20-1	
Total Radium	Total Radium Calculation	**1.04 ± 0.560 (0.901)**	pCi/L	04/25/17 11:29	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC1051 Plant McDonough
Pace Project No.: 30214947

Sample: DGWC-8 **Lab ID: 30214947005** Collected: 03/29/17 11:05 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.125 ± 0.0989 (0.155) C:94% T:NA**	pCi/L	04/11/17 13:16	13982-63-3	
Radium-228	EPA 9320	**0.155 ± 0.314 (0.691) C:81% T:92%**	pCi/L	04/19/17 16:57	15262-20-1	
Total Radium	Total Radium Calculation	**0.280 ± 0.413 (0.846)**	pCi/L	04/25/17 11:29	7440-14-4	

Sample: EB-1 **Lab ID: 30214947006** Collected: 03/29/17 09:35 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0724 ± 0.0456 (0.211) C:96% T:NA**	pCi/L	04/11/17 13:16	13982-63-3	
Radium-228	EPA 9320	**0.406 ± 0.408 (0.846) C:81% T:78%**	pCi/L	04/19/17 16:57	15262-20-1	
Total Radium	Total Radium Calculation	**0.406 ± 0.454 (1.06)**	pCi/L	04/25/17 11:29	7440-14-4	

Sample: DGWC-22 **Lab ID: 30214947007** Collected: 03/29/17 14:25 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.220 ± 0.134 (0.188) C:88% T:NA**	pCi/L	04/11/17 13:16	13982-63-3	
Radium-228	EPA 9320	**0.495 ± 0.416 (0.838) C:77% T:83%**	pCi/L	04/19/17 16:58	15262-20-1	
Total Radium	Total Radium Calculation	**0.715 ± 0.550 (1.03)**	pCi/L	04/25/17 11:29	7440-14-4	

Sample: FB-2 **Lab ID: 30214947008** Collected: 03/29/17 14:10 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0190 ± 0.0518 (0.177) C:94% T:NA**	pCi/L	04/11/17 13:16	13982-63-3	
Radium-228	EPA 9320	**-0.0551 ± 0.300 (0.717) C:83% T:82%**	pCi/L	04/19/17 16:58	15262-20-1	
Total Radium	Total Radium Calculation	**0.000 ± 0.352 (0.894)**	pCi/L	04/25/17 11:29	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC1051 Plant McDonough
Pace Project No.: 30214947

Sample: DGWC-20 **Lab ID: 30214947009** Collected: 03/29/17 15:45 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.186 ± 0.118 (0.175) C:99% T:NA**	pCi/L	04/11/17 13:16	13982-63-3	
Radium-228	EPA 9320	**0.187 ± 0.488 (1.08) C:83% T:83%**	pCi/L	04/19/17 17:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.373 ± 0.606 (1.26)**	pCi/L	04/25/17 11:29	7440-14-4	

Sample: DGWC-19 **Lab ID: 30214947010** Collected: 03/29/17 14:10 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0639 ± 0.104 (0.232) C:99% T:NA**	pCi/L	04/11/17 13:16	13982-63-3	
Radium-228	EPA 9320	**0.238 ± 0.388 (0.843) C:83% T:86%**	pCi/L	04/19/17 17:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.302 ± 0.492 (1.08)**	pCi/L	04/25/17 11:29	7440-14-4	

Sample: DGWC-12 **Lab ID: 30214947011** Collected: 03/29/17 15:41 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0726 ± 0.0854 (0.168) C:96% T:NA**	pCi/L	04/11/17 13:16	13982-63-3	
Radium-228	EPA 9320	**-0.00566 ± 0.437 (1.01) C:78% T:85%**	pCi/L	04/19/17 17:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.0726 ± 0.522 (1.18)**	pCi/L	04/25/17 11:29	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC1051 Plant McDonough
Pace Project No.: 30214947

QC Batch: 254546 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30214947001, 30214947002, 30214947003, 30214947004, 30214947005, 30214947006, 30214947007, 30214947008, 30214947009, 30214947010, 30214947011

METHOD BLANK: 1253323 Matrix: Water
Associated Lab Samples: 30214947001, 30214947002, 30214947003, 30214947004, 30214947005, 30214947006, 30214947007, 30214947008, 30214947009, 30214947010, 30214947011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.0149 ± 0.292 (0.687) C:78% T:81%	pCi/L	04/19/17 11:55	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC1051 Plant McDonough
Pace Project No.: 30214947

QC Batch: 254214 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30214947001, 30214947002, 30214947003, 30214947004, 30214947005, 30214947006, 30214947007, 30214947008, 30214947009, 30214947010, 30214947011

METHOD BLANK: 1251796 Matrix: Water
Associated Lab Samples: 30214947001, 30214947002, 30214947003, 30214947004, 30214947005, 30214947006, 30214947007, 30214947008, 30214947009, 30214947010, 30214947011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.00148 ± 0.0758 (0.218) C:94% T:NA	pCi/L	04/10/17 08:55	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: AAC1051 Plant McDonough
Pace Project No.: 30214947

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.

WO# : 30214947

30214947

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAC1051 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 4/24/2017

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 HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	DGWC-10	G	3/29/2017 10:00	AAC1051-01	GW	2	X	001
2	DGWC-11	G	3/29/2017 14:14	AAC1051-02	GW	2	X	002
3	DGWC-14	G	3/29/2017 11:40	AAC1051-03	GW	4	X	003
4	FD-1	G	3/29/2017 0:00	AAC1051-04	GW	2	X	004
5	DGWC-8	G	3/29/2017 11:05	AAC1051-05	GW	2	X	005
6	EB-1	G	3/29/2017 9:35	AAC1051-06	W	2	X	006
7	DGWC-22	G	3/29/2017 14:25	AAC1051-07	GW	2	X	007
8	FB-2	G	3/29/2017 14:10	AAC1051-08	W	2	X	008
9	DGWC-20	G	3/29/2017 15:45	AAC1051-09	GW	2	X	009
10	DGWC-19	G	3/29/2017 14:10	AAC1051-10	GW	2	X	010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	MDahlman	03/30/17	RBig Pace	4/3/17 0915	
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.

30214947

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAC1051 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 4/24/2017

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 HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
11	DGWC-12	G	3/29/2017 15:41	AAC1051-11	GW	2	X	
12								
13								
14								
15								
16								
17								
18								
19								
20								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Pace	4/3/17 0915	
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.

30214947

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4, & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P		
PRESERVATION:								3	7	3		
03/29/17	1000	GW		x	DGWC-10	4		1	1	2	1	
03/29/17	1414	GW		x	DGWC-11	4		1	1	2	2	
03/29/17	1140	GW		x	DGWC-14	6		1	1	4	3	Extra Radium
03/29/17	--	GW		x	FD-1	4		1	1	2	4	
03/29/17	1105	GW		x	DGWC-8	4		1	1	2	5	
03/29/17	0935	W		x	EB-1	4		1	1	2	6	
03/29/17	1425	GW		x	DGWC-22	4		1	1	2	7	
03/29/17	1410	W		x	FB-2	4		1	1	2	8	
03/29/17	1545	GW		x	DGWC-20	4		1	1	2	9	
03/29/17	1410	GW		x	DGWC-19	4		1	1	2	10	
03/29/17	1541	GW		x	DGWC-12	4		1	1	2	11	

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

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead	DATE/TIME: 3/30/17 10:30	RELINQUISHED BY:	DATE/TIME:
RECEIVED BY:	DATE/TIME: 3/30/17 11:03	RELINQUISHED BY: Mike Nguyen	DATE/TIME: 3/30/17 1103
RECEIVED BY/LAB:	DATE/TIME: 03/30/17 1103	SHIPPED BY: Pace Courier	
pH checked: Yes No NA	Ice: Yes No NA	Ice: Present	Temp - 1°C. Seal - N/A

FOR LAB USE ONLY
LAB #: AAC1051
Entered into LIMS: MR
Tracking #:

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace GA Project # 30214947 RTB

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

Tracking #: 6812 5103 3498 6812 5103 3447

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 4/3/17

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: -Includes date/time/ID Matrix: WT	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:	X			10.
-Pace Containers Used:	X			
Containers Intact:	X			11.
Orthophosphate field filtered				12.
Organic Samples checked for dechlorination:			X	13.
Filtered volume received for Dissolved tests			X	14.
All containers have been checked for preservation. All containers needing preservation are found to be in compliance with EPA recommendation.	X / X			15. pH<2
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed 4/3/17 RTB; 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: RTB 4/3/17; Date: 4/3/17

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: 4/6/2017
Worklist: 34954
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1251796
MB concentration:	-0.001
M/B Counting Uncertainty:	0.076
MB MDC:	0.218
MB Numerical Performance Indicator:	-0.04
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS34954	LCSD34954
Count Date:	4/11/2017	
Spike I.D.:	17-003	
Spike Concentration (pCi/mL):	38.229	
Volume Used (mL):	0.25	
Aliquot Volume (L, g, F):	0.503	
Target Conc. (pCi/L, g, F):	18.999	
Uncertainty (Calculated):	0.894	
Result (pCi/L, g, F):	17.455	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.015	
Numerical Performance Indicator:	-2.24	
Percent Recovery:	91.87%	
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:	
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.:	30214951001
Duplicate Sample I.D.	30214951001DUP
Sample Result (pCi/L, g, F):	0.013
Sample Result Counting Uncertainty (pCi/L, g, F):	0.072
Sample Duplicate Result (pCi/L, g, F):	0.080
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.092
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-1.136
Duplicate RPD:	145.90%
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.

30214951001
30214951001DUP

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:

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

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	4/13/2017
Worklist:	35001
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1253323
MB concentration:	-0.015
M/B Counting Uncertainty:	0.292
MB MDC:	0.687
MB Numerical Performance Indicator:	-0.10
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS35001	LCSD35001
Count Date:	4/19/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	24.746	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.800	
Target Conc. (pCi/L, g, F):	6.184	
Uncertainty (Calculated):	0.445	
Result (pCi/L, g, F):	5.666	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.668	
Numerical Performance Indicator:	-1.27	
Percent Recovery:	91.62%	
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:	
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		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30214947003	
Duplicate Sample I.D.	30214947003DUP	
Sample Result (pCi/L, g, F):	0.254	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.318	
Sample Duplicate Result (pCi/L, g, F):	0.731	
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:	-2.001	30214947003
Duplicate RPD:	96.87%	30214947003DUP
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:	
(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:

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

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: AAC1096
April 12, 2017
Project: CCR Event
Project #:Plant McDonough

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

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWC-39	AAC1096-01	Ground Water	03/30/17 15:59	03/31/17 11:45
DGWC-38	AAC1096-02	Ground Water	03/30/17 11:36	03/31/17 11:45
DGWC-37	AAC1096-03	Ground Water	03/30/17 09:44	03/31/17 11:45
DGWA-2	AAC1096-04	Ground Water	03/30/17 11:05	03/31/17 11:45
FB-3	AAC1096-05	Water	03/30/17 09:30	03/31/17 11:45
DGWC-13	AAC1096-06	Ground Water	03/30/17 12:20	03/31/17 11:45
DGWC-15	AAC1096-07	Ground Water	03/30/17 14:15	03/31/17 11:45
EB-2	AAC1096-08	Water	03/30/17 13:55	03/31/17 11:45
DGWC-17	AAC1096-09	Ground Water	03/30/17 16:05	03/31/17 11:45
DGWC-21	AAC1096-10	Ground Water	03/30/17 10:20	03/31/17 11:45
DGWC-40	AAC1096-11	Ground Water	03/30/17 12:40	03/31/17 11:45
FD-3	AAC1096-12	Ground Water	03/30/17 00:00	03/31/17 11:45
DGWC-23	AAC1096-13	Ground Water	03/30/17 16:30	03/31/17 11:45
DGWC-48	AAC1096-14	Ground Water	03/30/17 14:45	03/31/17 11:45

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Attention: Mr. Joju Abraham

April 12, 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

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1096
Client ID: DGWC-39
Date/Time Sampled: 3/30/2017 3:59:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1096-01
Date/Time Received: 3/31/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	496	25	10	mg/L	SM 2540 C		1	04/04/17 17:10	04/04/17 17:10	7040045	JPT
Inorganic Anions											
Chloride	8.7		0.01	mg/L	EPA 300.0		1	04/05/17 17:28	04/06/17 08:43	7040126	RLC
Fluoride	0.17	0.30	0.004	mg/L	EPA 300.0	J	1	04/05/17 17:28	04/06/17 08:43	7040126	RLC
Sulfate	310	10	0.92	mg/L	EPA 300.0		10	04/05/17 17:28	04/07/17 13:26	7040126	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 19:29	7040019	CSW
Arsenic	0.0007	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 19:29	7040019	CSW
Barium	0.0858	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 19:29	7040019	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 19:29	7040019	CSW
Boron	3.57	2.00	0.302	mg/L	EPA 6020B		50	04/04/17 12:30	04/06/17 19:35	7040019	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 19:29	7040019	CSW
Calcium	98.9	25.0	0.522	mg/L	EPA 6020B		50	04/04/17 12:30	04/06/17 19:35	7040019	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 19:29	7040019	CSW
Cobalt	0.0060	0.0100	0.0005	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 19:29	7040019	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 19:29	7040019	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 19:29	7040019	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 19:29	7040019	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 19:29	7040019	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 19:29	7040019	CSW
Mercury	0.000059	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 17:14	7040087	MTC

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Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1096
Client ID: DGWC-38
Date/Time Sampled: 3/30/2017 11:36:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1096-02
Date/Time Received: 3/31/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	448	25	10	mg/L	SM 2540 C		1	04/04/17 17:10	04/04/17 17:10	7040045	JPT
Inorganic Anions											
Chloride	7.7	0.25	0.01	mg/L	EPA 300.0		1	04/05/17 17:28	04/06/17 09:04	7040126	RLC
Fluoride	0.12	0.30	0.004	mg/L	EPA 300.0	J	1	04/05/17 17:28	04/06/17 09:04	7040126	RLC
Sulfate	290	20	1.8	mg/L	EPA 300.0		20	04/05/17 17:28	04/07/17 13:48	7040126	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 19:52	7040019	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 19:52	7040019	CSW
Barium	0.0325	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 19:52	7040019	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 19:52	7040019	CSW
Boron	3.19	2.00	0.302	mg/L	EPA 6020B		50	04/04/17 12:30	04/06/17 19:58	7040019	CSW
Cadmium	0.0002	0.0010	0.00006	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 19:52	7040019	CSW
Calcium	80.3	25.0	0.522	mg/L	EPA 6020B		50	04/04/17 12:30	04/06/17 19:58	7040019	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 19:52	7040019	CSW
Cobalt	0.0016	0.0100	0.0005	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 19:52	7040019	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 19:52	7040019	CSW
Molybdenum	0.0011	0.0100	0.0006	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 19:52	7040019	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 19:52	7040019	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 19:52	7040019	CSW
Lithium	0.0035	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 19:52	7040019	CSW
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 17:17	7040087	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1096
Client ID: DGWC-37
Date/Time Sampled: 3/30/2017 9:44:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1096-03
Date/Time Received: 3/31/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	273	25	10	mg/L	SM 2540 C		1	04/04/17 17:10	04/04/17 17:10	7040045	JPT
Inorganic Anions											
Chloride	6.3	0.25	0.01	mg/L	EPA 300.0		1	04/05/17 17:28	04/06/17 09:25	7040126	RLC
Fluoride	0.05	0.30	0.004	mg/L	EPA 300.0	J	1	04/05/17 17:28	04/06/17 09:25	7040126	RLC
Sulfate	110	10	0.92	mg/L	EPA 300.0		10	04/05/17 17:28	04/07/17 14:10	7040126	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:03	7040019	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:03	7040019	CSW
Barium	0.110	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:03	7040019	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:03	7040019	CSW
Boron	1.47	0.0400	0.0060	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:03	7040019	CSW
Cadmium	0.0001	0.0010	0.00006	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:03	7040019	CSW
Calcium	62.6	25.0	0.522	mg/L	EPA 6020B		50	04/04/17 12:30	04/06/17 20:09	7040019	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:03	7040019	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:03	7040019	CSW
Lead	0.0014	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:03	7040019	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:03	7040019	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:03	7040019	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:03	7040019	CSW
Lithium	0.0029	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:03	7040019	CSW
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 17:24	7040087	MTC

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1096
Client ID: DGWA-2
Date/Time Sampled: 3/30/2017 11:05:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1096-04
Date/Time Received: 3/31/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	580	25	10	mg/L	SM 2540 C		1	04/04/17 17:10	04/04/17 17:10	7040045	JPT
Inorganic Anions											
Chloride	4.8	0.25	0.01	mg/L	EPA 300.0		1	04/05/17 17:28	04/06/17 09:46	7040126	RLC
Fluoride	0.06	0.30	0.004	mg/L	EPA 300.0	J	1	04/05/17 17:28	04/06/17 09:46	7040126	RLC
Sulfate	360	20	1.8	mg/L	EPA 300.0		20	04/05/17 17:28	04/07/17 16:00	7040126	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:15	7040019	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:15	7040019	CSW
Barium	0.0232	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:15	7040019	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:15	7040019	CSW
Boron	1.56	0.0400	0.0060	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:15	7040019	CSW
Cadmium	0.0005	0.0010	0.00006	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:15	7040019	CSW
Calcium	103	25.0	0.522	mg/L	EPA 6020B		50	04/04/17 12:30	04/06/17 20:20	7040019	CSW
Chromium	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:15	7040019	CSW
Cobalt	0.0255	0.0100	0.0005	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:15	7040019	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:15	7040019	CSW
Molybdenum	0.0009	0.0100	0.0006	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:15	7040019	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:15	7040019	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:15	7040019	CSW
Lithium	0.0807	0.0500	0.0011	mg/L	EPA 6020B		1	04/04/17 12:30	04/10/17 15:16	7040019	CSW
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 17:26	7040087	MTC

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Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1096
Client ID: FB-3
Date/Time Sampled: 3/30/2017 9:30:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAC1096-05
Date/Time Received: 3/31/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	04/04/17 17:10	04/04/17 17:10	7040045	JPT
Inorganic Anions											
Chloride	0.09	0.25	0.01	mg/L	EPA 300.0	J	1	04/05/17 17:28	04/06/17 10:08	7040126	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/05/17 17:28	04/06/17 10:08	7040126	RLC
Sulfate	0.13	1.0	0.09	mg/L	EPA 300.0	J	1	04/05/17 17:28	04/06/17 10:08	7040126	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:26	7040019	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:26	7040019	CSW
Barium	0.0012	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:26	7040019	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:26	7040019	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:26	7040019	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:26	7040019	CSW
Calcium	0.0140	0.500	0.0104	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:26	7040019	CSW
Chromium	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:26	7040019	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:26	7040019	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:26	7040019	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:26	7040019	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:26	7040019	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:26	7040019	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:26	7040019	CSW
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 17:28	7040087	MTC

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April 12, 2017

Report No.: AAC1096
Client ID: DGWC-13
Date/Time Sampled: 3/30/2017 12:20:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1096-06
Date/Time Received: 3/31/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	287	25	10	mg/L	SM 2540 C		1	04/04/17 17:10	04/04/17 17:10	7040045	JPT
Inorganic Anions											
Chloride	16	0.25	0.01	mg/L	EPA 300.0		1	04/05/17 17:28	04/06/17 10:29	7040126	RLC
Fluoride	0.12	0.30	0.004	mg/L	EPA 300.0	J	1	04/05/17 17:28	04/06/17 10:29	7040126	RLC
Sulfate	180	10	0.92	mg/L	EPA 300.0		10	04/05/17 17:28	04/07/17 16:22	7040126	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:32	7040019	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:32	7040019	CSW
Barium	0.0308	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:32	7040019	CSW
Beryllium	0.00007	0.0030	0.00007	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:32	7040019	CSW
Boron	0.898	0.0400	0.0060	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:32	7040019	CSW
Cadmium	0.00008	0.0010	0.00006	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:32	7040019	CSW
Calcium	46.3	25.0	0.522	mg/L	EPA 6020B		50	04/04/17 12:30	04/06/17 20:38	7040019	CSW
Chromium	0.0009	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:32	7040019	CSW
Cobalt	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:32	7040019	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:32	7040019	CSW
Molybdenum	0.0300	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:32	7040019	CSW
Selenium	0.0015	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:32	7040019	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:32	7040019	CSW
Lithium	0.0035	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:32	7040019	CSW
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 17:31	7040087	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

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1096
Client ID: DGWC-15
Date/Time Sampled: 3/30/2017 2:15:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1096-07
Date/Time Received: 3/31/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	312	25	10	mg/L	SM 2540 C		1	04/04/17 17:10	04/04/17 17:10	7040045	JPT
Inorganic Anions											
Chloride	21	0.25	0.01	mg/L	EPA 300.0		1	04/05/17 17:28	04/06/17 10:50	7040126	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/05/17 17:28	04/06/17 10:50	7040126	RLC
Sulfate	210	5.0	0.46	mg/L	EPA 300.0		5	04/05/17 17:28	04/07/17 16:45	7040126	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:55	7040019	CSW
Arsenic	0.0006	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:55	7040019	CSW
Barium	0.0495	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:55	7040019	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:55	7040019	CSW
Boron	1.50	0.0400	0.0060	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:55	7040019	CSW
Cadmium	0.00009	0.0010	0.00006	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:55	7040019	CSW
Calcium	36.9	25.0	0.522	mg/L	EPA 6020B		50	04/04/17 12:30	04/06/17 21:01	7040019	CSW
Chromium	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:55	7040019	CSW
Cobalt	0.0024	0.0100	0.0005	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:55	7040019	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:55	7040019	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:55	7040019	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:55	7040019	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 20:55	7040019	CSW
Lithium	0.0061	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 20:55	7040019	CSW
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 17:33	7040087	MTC

PACE ANALYTICAL SERVICES, LLC.

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1096
Client ID: EB-2
Date/Time Sampled: 3/30/2017 1:55:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAC1096-08
Date/Time Received: 3/31/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	04/04/17 17:10	04/04/17 17:10	7040045	JPT
Inorganic Anions											
Chloride	0.09	0.25	0.01	mg/L	EPA 300.0	J	1	04/05/17 17:28	04/06/17 11:11	7040126	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/05/17 17:28	04/06/17 11:11	7040126	RLC
Sulfate	0.09	1.0	0.09	mg/L	EPA 300.0	J	1	04/05/17 17:28	04/06/17 11:11	7040126	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:06	7040019	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:06	7040019	CSW
Barium	0.0013	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:06	7040019	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:06	7040019	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:06	7040019	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:06	7040019	CSW
Calcium	0.0232	0.500	0.0104	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:06	7040019	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:06	7040019	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:06	7040019	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:06	7040019	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:06	7040019	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:06	7040019	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:06	7040019	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:06	7040019	CSW
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 17:36	7040087	MTC

PACE ANALYTICAL SERVICES, LLC.

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1096
Client ID: DGWC-17
Date/Time Sampled: 3/30/2017 4:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1096-09
Date/Time Received: 3/31/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	338	25	10	mg/L	SM 2540 C		1	04/04/17 17:10	04/04/17 17:10	7040045	JPT
Inorganic Anions											
Chloride	20	0.25	0.01	mg/L	EPA 300.0		1	04/05/17 17:28	04/06/17 11:33	7040126	RLC
Fluoride	0.10	0.30	0.004	mg/L	EPA 300.0	J	1	04/05/17 17:28	04/06/17 11:33	7040126	RLC
Sulfate	260	10	0.92	mg/L	EPA 300.0		10	04/05/17 17:28	04/07/17 17:07	7040126	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:12	7040019	CSW
Arsenic	0.0008	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:12	7040019	CSW
Barium	0.0615	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:12	7040019	CSW
Beryllium	0.0006	0.0030	0.00007	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:12	7040019	CSW
Boron	0.743	0.0400	0.0060	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:12	7040019	CSW
Cadmium	0.0003	0.0010	0.00006	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:12	7040019	CSW
Calcium	9.56	0.500	0.0104	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:12	7040019	CSW
Chromium	0.0026	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:12	7040019	CSW
Cobalt	0.0283	0.0100	0.0005	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:12	7040019	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:12	7040019	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:12	7040019	CSW
Selenium	0.0099	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:12	7040019	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:12	7040019	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:12	7040019	CSW
Mercury	0.00012	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 17:38	7040087	MTC

PACE ANALYTICAL SERVICES, LLC.

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1096
Client ID: DGWC-21
Date/Time Sampled: 3/30/2017 10:20:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1096-10
Date/Time Received: 3/31/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	436	25	10	mg/L	SM 2540 C		1	04/04/17 17:10	04/04/17 17:10	7040045	JPT
Inorganic Anions											
Chloride	24	0.25	0.01	mg/L	EPA 300.0		1	04/05/17 17:28	04/06/17 11:54	7040126	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/05/17 17:28	04/06/17 11:54	7040126	RLC
Sulfate	270	20	1.8	mg/L	EPA 300.0		20	04/05/17 17:28	04/07/17 17:29	7040126	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:23	7040019	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:23	7040019	CSW
Barium	0.0272	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:23	7040019	CSW
Beryllium	0.0002	0.0030	0.00007	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:23	7040019	CSW
Boron	5.68	2.00	0.302	mg/L	EPA 6020B		50	04/04/17 12:30	04/06/17 21:29	7040019	CSW
Cadmium	0.0008	0.0010	0.00006	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:23	7040019	CSW
Calcium	72.5	25.0	0.522	mg/L	EPA 6020B		50	04/04/17 12:30	04/06/17 21:29	7040019	CSW
Chromium	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:23	7040019	CSW
Cobalt	0.0076	0.0100	0.0005	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:23	7040019	CSW
Lead	0.0004	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:23	7040019	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:23	7040019	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:23	7040019	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:23	7040019	CSW
Lithium	0.0065	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:23	7040019	CSW
Mercury	0.00008	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 17:43	7040087	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1096
Client ID: DGWC-40
Date/Time Sampled: 3/30/2017 12:40:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1096-11
Date/Time Received: 3/31/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	344	25	10	mg/L	SM 2540 C		1	04/04/17 17:10	04/04/17 17:10	7040045	JPT
Inorganic Anions											
Chloride	20	0.25	0.01	mg/L	EPA 300.0		1	04/05/17 17:28	04/06/17 13:19	7040126	RLC
Fluoride	0.21	0.30	0.004	mg/L	EPA 300.0	J	1	04/05/17 17:28	04/06/17 13:19	7040126	RLC
Sulfate	240	10	0.92	mg/L	EPA 300.0		10	04/05/17 17:28	04/07/17 17:52	7040126	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:35	7040019	CSW
Arsenic	0.0006	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:35	7040019	CSW
Barium	0.0177	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:35	7040019	CSW
Beryllium	0.0030	0.0030	0.00007	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:35	7040019	CSW
Boron	0.937	0.0400	0.0060	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:35	7040019	CSW
Cadmium	0.0007	0.0010	0.00006	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:35	7040019	CSW
Calcium	43.9	25.0	0.522	mg/L	EPA 6020B		50	04/04/17 12:30	04/06/17 21:41	7040019	CSW
Chromium	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:35	7040019	CSW
Cobalt	0.0364	0.0100	0.0005	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:35	7040019	CSW
Lead	0.00007	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:35	7040019	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:35	7040019	CSW
Selenium	0.0023	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:35	7040019	CSW
Thallium	0.00006	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:35	7040019	CSW
Lithium	0.0023	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:35	7040019	CSW
Mercury	0.00009	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 17:45	7040087	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1096
Client ID: FD-3
Date/Time Sampled: 3/30/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1096-12
Date/Time Received: 3/31/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	362	25	10	mg/L	SM 2540 C		1	04/04/17 17:10	04/04/17 17:10	7040045	JPT
Inorganic Anions											
Chloride	20	0.25	0.01	mg/L	EPA 300.0		1	04/05/17 17:28	04/06/17 14:22	7040126	RLC
Fluoride	0.25	0.30	0.004	mg/L	EPA 300.0	J	1	04/05/17 17:28	04/06/17 14:22	7040126	RLC
Sulfate	240	10	0.92	mg/L	EPA 300.0		10	04/05/17 17:28	04/07/17 18:14	7040126	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:58	7040019	CSW
Arsenic	0.0005	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:58	7040019	CSW
Barium	0.0170	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:58	7040019	CSW
Beryllium	0.0031	0.0030	0.00007	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:58	7040019	CSW
Boron	0.921	0.0400	0.0060	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:58	7040019	CSW
Cadmium	0.0008	0.0010	0.00006	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:58	7040019	CSW
Calcium	43.6	25.0	0.522	mg/L	EPA 6020B		50	04/04/17 12:30	04/06/17 22:04	7040019	CSW
Chromium	0.0006	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/10/17 15:22	7040019	CSW
Cobalt	0.0393	0.0100	0.0005	mg/L	EPA 6020B		1	04/04/17 12:30	04/10/17 15:22	7040019	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:58	7040019	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 21:58	7040019	CSW
Selenium	0.0030	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:58	7040019	CSW
Thallium	0.00007	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:58	7040019	CSW
Lithium	0.0025	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 21:58	7040019	CSW
Mercury	0.000093	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 17:47	7040087	MTC

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1096
Client ID: DGWC-23
Date/Time Sampled: 3/30/2017 4:30:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1096-13
Date/Time Received: 3/31/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	380	25	10	mg/L	SM 2540 C		1	04/04/17 17:10	04/04/17 17:10	7040045	JPT
Inorganic Anions											
Chloride	17	0.25	0.01	mg/L	EPA 300.0		1	04/05/17 17:28	04/06/17 14:43	7040126	RLC
Fluoride	0.12	0.30	0.004	mg/L	EPA 300.0	J	1	04/05/17 17:28	04/06/17 14:43	7040126	RLC
Sulfate	220	10	0.92	mg/L	EPA 300.0		10	04/05/17 17:28	04/07/17 18:36	7040126	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 22:09	7040019	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 22:09	7040019	CSW
Barium	0.0184	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 22:09	7040019	CSW
Beryllium	0.0004	0.0030	0.00007	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 22:09	7040019	CSW
Boron	4.68	2.00	0.302	mg/L	EPA 6020B		50	04/04/17 12:30	04/06/17 22:15	7040019	CSW
Cadmium	0.0002	0.0010	0.00006	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 22:09	7040019	CSW
Calcium	68.1	25.0	0.522	mg/L	EPA 6020B		50	04/04/17 12:30	04/06/17 22:15	7040019	CSW
Chromium	0.0012	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/10/17 15:28	7040019	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/04/17 12:30	04/10/17 15:28	7040019	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 22:09	7040019	CSW
Molybdenum	0.0084	0.0100	0.0006	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 22:09	7040019	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 22:09	7040019	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 22:09	7040019	CSW
Lithium	0.0162	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 22:09	7040019	CSW
Mercury	0.00020	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 17:55	7040087	MTC

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Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAC1096
Client ID: DGWC-48
Date/Time Sampled: 3/30/2017 2:45:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1096-14
Date/Time Received: 3/31/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	775	25	10	mg/L	SM 2540 C		1	04/04/17 17:10	04/04/17 17:10	7040045	JPT
Inorganic Anions											
Chloride	16	0.25	0.01	mg/L	EPA 300.0		1	04/05/17 17:28	04/06/17 15:05	7040126	RLC
Fluoride	0.86	0.30	0.004	mg/L	EPA 300.0		1	04/05/17 17:28	04/06/17 15:05	7040126	RLC
Sulfate	550	50	4.6	mg/L	EPA 300.0		50	04/05/17 17:28	04/07/17 18:59	7040126	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 22:21	7040019	CSW
Arsenic	0.0015	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 22:21	7040019	CSW
Barium	0.0131	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 22:21	7040019	CSW
Beryllium	0.0106	0.0030	0.00007	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 22:21	7040019	CSW
Boron	0.925	0.0400	0.0060	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 22:21	7040019	CSW
Cadmium	0.0089	0.0010	0.00006	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 22:21	7040019	CSW
Calcium	98.6	25.0	0.522	mg/L	EPA 6020B		50	04/04/17 12:30	04/06/17 22:21	7040019	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 12:30	04/10/17 15:34	7040019	CSW
Cobalt	0.573	0.0100	0.0005	mg/L	EPA 6020B		1	04/04/17 12:30	04/10/17 15:34	7040019	CSW
Lead	0.0035	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 22:21	7040019	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 22:21	7040019	CSW
Selenium	0.0079	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 22:21	7040019	CSW
Thallium	0.00009	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/04/17 12:30	04/06/17 22:21	7040019	CSW
Lithium	0.144	0.0500	0.0011	mg/L	EPA 6020B		1	04/04/17 12:30	04/06/17 22:21	7040019	CSW
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	04/05/17 09:30	04/05/17 17:57	7040087	MTC

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Report No.: AAC1096

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040045 - SM 2540 C											
Blank (7040045-BLK1)						Prepared & Analyzed: 04/04/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7040045-BS1)						Prepared & Analyzed: 04/04/17					
Total Dissolved Solids	376	25	10	mg/L	400.00		94	84-108			
Duplicate (7040045-DUP1)		**Source: AAC1096-01**				Prepared & Analyzed: 04/04/17					
Total Dissolved Solids	468	25	10	mg/L		496			6	10	
Duplicate (7040045-DUP2)		**Source: AAC1096-08**				Prepared & Analyzed: 04/04/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	

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Report No.: AAC1096

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040126 - EPA 300.0											
Blank (7040126-BLK1)						Prepared: 04/05/17 Analyzed: 04/06/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7040126-BS1)						Prepared: 04/05/17 Analyzed: 04/06/17					
Chloride	10.3	0.25	0.01	mg/L	10.010		103	90-110			
Fluoride	10.5	0.30	0.004	mg/L	10.020		105	90-110			
Sulfate	10.3	1.0	0.09	mg/L	10.020		103	90-110			
Matrix Spike (7040126-MS1)		**Source: AAC1096-11**				Prepared: 04/05/17 Analyzed: 04/06/17					
Chloride	29.3	0.25	0.01	mg/L	10.010	20.3	89	90-110			QM-02
Fluoride	11.2	0.30	0.004	mg/L	10.020	0.21	110	90-110			
Sulfate	176	1.0	0.09	mg/L	10.020	186	NR	90-110			QM-02
Matrix Spike (7040126-MS2)		**Source: AAC1108-01**				Prepared: 04/05/17 Analyzed: 04/06/17					
Chloride	11.9	0.25	0.01	mg/L	10.010	1.78	101	90-110			
Fluoride	10.7	0.30	0.004	mg/L	10.020	0.01	107	90-110			
Sulfate	11.9	1.0	0.09	mg/L	10.020	1.62	103	90-110			
Matrix Spike Dup (7040126-MSD1)		**Source: AAC1096-11**				Prepared: 04/05/17 Analyzed: 04/06/17					
Chloride	29.3	0.25	0.01	mg/L	10.010	20.3	89	90-110	0.2	15	QM-02
Fluoride	11.0	0.30	0.004	mg/L	10.020	0.21	108	90-110	2	15	
Sulfate	175	1.0	0.09	mg/L	10.020	186	NR	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
Batch 7040019 - EPA 3005A											
Blank (7040019-BLK1)						Prepared: 04/04/17 Analyzed: 04/06/17					
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	ND	0.0250	0.0003	mg/L							
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	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0011	mg/L							
LCS (7040019-BS1)						Prepared: 04/04/17 Analyzed: 04/06/17					
Antimony	0.111	0.0030	0.0003	mg/L	0.10000		111	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	0.109	0.0030	0.00007	mg/L	0.10000		109	80-120			
Boron	1.05	0.0400	0.0060	mg/L	1.0000		105	80-120			
Cadmium	0.104	0.0010	0.00006	mg/L	0.10000		104	80-120			
Calcium	1.05	0.500	0.0104	mg/L	1.0000		105	80-120			
Chromium	0.106	0.0100	0.0003	mg/L	0.10000		106	80-120			
Cobalt	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			
Copper	0.102	0.0250	0.0003	mg/L	0.10000		102	80-120			
Lead	0.106	0.0050	0.00007	mg/L	0.10000		106	80-120			
Molybdenum	0.103	0.0100	0.0006	mg/L	0.10000		103	80-120			
Nickel	0.102	0.0100	0.0003	mg/L	0.10000		102	80-120			
Selenium	0.106	0.0100	0.0014	mg/L	0.10000		106	80-120			
Silver	0.107	0.0100	0.0003	mg/L	0.10000		107	80-120			
Thallium	0.106	0.0010	0.00005	mg/L	0.10000		106	80-120			
Vanadium	0.104	0.0100	0.0014	mg/L	0.10000		104	80-120			
Zinc	0.106	0.0100	0.0013	mg/L	0.10000		106	80-120			
Lithium	0.115	0.0500	0.0011	mg/L	0.10000		115	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
Batch 7040019 - EPA 3005A											
Matrix Spike (7040019-MS1)		**Source: AAC1096-04**			Prepared: 04/04/17 Analyzed: 04/06/17						
Antimony	0.110	0.0030	0.0003	mg/L	0.10000	ND	110	75-125			
Arsenic	0.106	0.0050	0.0004	mg/L	0.10000	ND	106	75-125			
Barium	0.124	0.0100	0.0003	mg/L	0.10000	0.0232	101	75-125			
Beryllium	0.105	0.0030	0.00007	mg/L	0.10000	ND	105	75-125			
Boron	2.32	0.0400	0.0060	mg/L	1.0000	1.56	76	75-125			
Cadmium	0.102	0.0010	0.00006	mg/L	0.10000	0.0005	102	75-125			
Calcium	106	25.0	0.522	mg/L	1.0000	103	250	75-125			QM-02
Chromium	0.102	0.0100	0.0003	mg/L	0.10000	0.0005	101	75-125			
Cobalt	0.125	0.0100	0.0005	mg/L	0.10000	0.0255	99	75-125			
Copper	0.0985	0.0250	0.0003	mg/L	0.10000	0.0023	96	75-125			
Lead	0.0982	0.0050	0.00007	mg/L	0.10000	0.0001	98	75-125			
Molybdenum	0.104	0.0100	0.0006	mg/L	0.10000	0.0009	103	75-125			
Nickel	0.126	0.0100	0.0003	mg/L	0.10000	0.0261	100	75-125			
Selenium	0.106	0.0100	0.0014	mg/L	0.10000	ND	106	75-125			
Silver	0.0995	0.0100	0.0003	mg/L	0.10000	ND	99	75-125			
Thallium	0.101	0.0010	0.00005	mg/L	0.10000	ND	101	75-125			
Vanadium	0.103	0.0100	0.0014	mg/L	0.10000	ND	103	75-125			
Zinc	0.109	0.0100	0.0013	mg/L	0.10000	0.0063	103	75-125			
Lithium	0.198	0.0500	0.0011	mg/L	0.10000	0.0807	117	75-125			
Matrix Spike Dup (7040019-MSD1)		**Source: AAC1096-04**			Prepared: 04/04/17 Analyzed: 04/06/17						
Antimony	0.112	0.0030	0.0003	mg/L	0.10000	ND	112	75-125	2	20	
Arsenic	0.104	0.0050	0.0004	mg/L	0.10000	ND	104	75-125	2	20	
Barium	0.124	0.0100	0.0003	mg/L	0.10000	0.0232	101	75-125	0.03	20	
Beryllium	0.101	0.0030	0.00007	mg/L	0.10000	ND	101	75-125	3	20	
Boron	2.28	0.0400	0.0060	mg/L	1.0000	1.56	72	75-125	2	20	QM-02
Cadmium	0.0999	0.0010	0.00006	mg/L	0.10000	0.0005	99	75-125	2	20	
Calcium	107	25.0	0.522	mg/L	1.0000	103	380	75-125	1	20	QM-02
Chromium	0.101	0.0100	0.0003	mg/L	0.10000	0.0005	101	75-125	0.5	20	
Cobalt	0.125	0.0100	0.0005	mg/L	0.10000	0.0255	100	75-125	0.2	20	
Copper	0.0995	0.0250	0.0003	mg/L	0.10000	0.0023	97	75-125	1	20	
Lead	0.0992	0.0050	0.00007	mg/L	0.10000	0.0001	99	75-125	1	20	
Molybdenum	0.104	0.0100	0.0006	mg/L	0.10000	0.0009	103	75-125	0.2	20	
Nickel	0.123	0.0100	0.0003	mg/L	0.10000	0.0261	97	75-125	2	20	
Selenium	0.105	0.0100	0.0014	mg/L	0.10000	ND	105	75-125	2	20	
Silver	0.100	0.0100	0.0003	mg/L	0.10000	ND	100	75-125	0.5	20	
Thallium	0.101	0.0010	0.00005	mg/L	0.10000	ND	101	75-125	0.9	20	
Vanadium	0.103	0.0100	0.0014	mg/L	0.10000	ND	103	75-125	0.3	20	
Zinc	0.112	0.0100	0.0013	mg/L	0.10000	0.0063	105	75-125	2	20	
Lithium	0.198	0.0500	0.0011	mg/L	0.10000	0.0807	117	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
Batch 7040019 - EPA 3005A											
Post Spike (7040019-PS1)			**Source: AAC1096-04**			Prepared: 04/04/17 Analyzed: 04/06/17					
Antimony	101			ug/L	100.00	0.0681	101	80-120			
Arsenic	102			ug/L	100.00	0.243	102	80-120			
Barium	124			ug/L	100.00	23.2	100	80-120			
Beryllium	98.0			ug/L	100.00	0.0576	98	80-120			
Boron	2170			ug/L	1000.0	1560	62	80-120			QM-02
Cadmium	103			ug/L	100.00	0.492	102	80-120			
Calcium	102000			ug/L	1000.0	103000	NR	80-120			QM-02
Chromium	99.7			ug/L	100.00	0.503	99	80-120			
Cobalt	120			ug/L	100.00	25.5	95	80-120			
Copper	96.6			ug/L	100.00	2.32	94	80-120			
Lead	97.7			ug/L	100.00	0.143	98	80-120			
Molybdenum	105			ug/L	100.00	0.856	105	80-120			
Nickel	120			ug/L	100.00	26.1	94	80-120			
Selenium	104			ug/L	100.00	0.832	103	80-120			
Silver	100			ug/L	100.00	0.0306	100	80-120			
Thallium	100			ug/L	100.00	0.0216	100	80-120			
Vanadium	99.5			ug/L	100.00	0.468	99	80-120			
Zinc	110			ug/L	100.00	6.32	103	80-120			
Lithium	183			ug/L	100.00	80.7	102	80-120			
Batch 7040087 - EPA 7470A											
Blank (7040087-BLK1)						Prepared & Analyzed: 04/05/17					
Mercury	0.00006	0.00050	0.000041	mg/L							J
LCS (7040087-BS1)						Prepared & Analyzed: 04/05/17					
Mercury	0.00251	0.00050	0.000041	mg/L	2.5000E-3		100	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

April 12, 2017

Report No.: AAC1096

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040087 - EPA 7470A											
Matrix Spike (7040087-MS1)			**Source: AAC1096-02**			Prepared & Analyzed: 04/05/17					
Mercury	0.00248	0.00050	0.000041	mg/L	2.5000E-3	0.00007	96	75-125			
Matrix Spike Dup (7040087-MSD1)			**Source: AAC1096-02**			Prepared & Analyzed: 04/05/17					
Mercury	0.00251	0.00050	0.000041	mg/L	2.5000E-3	0.00007	98	75-125	1	20	
Post Spike (7040087-PS1)			**Source: AAC1096-02**			Prepared & Analyzed: 04/05/17					
Mercury	1.75			ug/L	1.6667	0.0448	102	80-120			

PACE ANALYTICAL SERVICES, LLC.

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

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Attention: Mr. Joju Abraham

April 12, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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).

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.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report Notes

There were 3 Radium containers present instead of 4 as listed on the COC for DGWC-37. The FD-3 sample listed on the COC was labeled FD-2 on the containers. The COC was used for login purposes. MMR

CHAIN OF CUSTODY RECORD

Pace Analytical
www.pacelabs.com

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell/Dawn-prell@golder.com CC: kjwinkle@golder.com

REQUESTED COMPLETION DATE: PO #: jaburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App III/IV (EPA 6020/7470)	Cl, F, SO4, TDS (EPA 300.0 + SM2540C)	Radium 226/228 (SW-846 9315/9320)	LAB ID NUMBER
					CONTAINER TYPE:		P	P	P	
					PRESERVATION:		3	7	5	
3/30/17	1559	GW		X	DGWC-39	4	1	1	2	1
	1136	GW			DGWC-38	4	1	1	2	2
	0944	GW			DGWC-37	6	1	1	4	3
	1105	GW			DGWA-2	4	1	1	2	4
	0930	W			FB-3	4	1	1	2	5
	1220	GW			DGWC-13	4	1	1	2	6
	1415	GW			DGWC-15	4	1	1	2	7
	1355	W			EB-2	4	1	1	2	8
	1605	GW			DGWC-17	4	1	1	2	9
	1020	GW			DGWC-21	4	1	1	2	10
	1240	GW			DGWC-40	4	1	1	2	11
	—	GW			FD-3	4	1	1	2	12

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

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

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

REMARKS/ADDITIONAL INFORMATION

1
2
3 Extra Radium
4 DGWC-37, 3 containers present for Radium. MR 3/31/17
5
6
7
8
9
10
11 MR 3/31/17
12 FD-2 per labels.

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 3/30/17 1800

RECEIVED BY: Mike Nolan
DATE/TIME: 3/31/17 0913

RECEIVED BY LAB: Kalman
DATE/TIME: 03/31/17 1145

RELINQUISHED BY:
DATE/TIME: 3/31/17 0913

RELINQUISHED BY:
DATE/TIME:

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

Custody Seal: Intact Broken Not Present N/A

FOR LAB USE ONLY
LAB #: AAC1096
Entered into LIMS: MR
Tracking #:

Samples checked: Yes No NA
Ice: Yes No NA
Temperature: 1° Min: 1° Max:
Ice Coolers
Cooler ID:

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com

CC: Maria Padilla kjurinko@golder.com

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB ID NUMBER
CONTAINER TYPE:								P	P	P						
PRESERVATION:								3	7	3						
03/30/17	1630	GW		x	DGWC-23	4		1	1	2						13
03/30/17	1445	GW		x	DGWC-48	4		1	1	2						14

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Ben Hodges Field Lead — DATE/TIME: 3/30/17 1800

RELINQUISHED BY: — DATE/TIME: 3/31/17 0913

RECEIVED BY: Mike Nguyen — DATE/TIME: 3/31/17 0913

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: Malinan — DATE/TIME: 03/31/17 1145

Shipped by: Pace Courier

pH checked: Yes No NA

Ice: Yes No NA — Ice Present

Temp - 1°C

Seal - N/A

FOR LAB USE ONLY

LAB #: AAC1096

Entered into LIMS: MK

Tracking #:

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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LOG-IN CHECKLIST **Printed: 4/3/2017 9:45:58AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 03/31/17 11:45

Work Order: AAC1096
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 14 **#Containers:** 57

Minimum Temp(C): 1.0 **Maximum Temp(C):** 1.0 **Custody Seal(s) Used:** N/A

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	NO
Custody seal Intact	NO
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:

There were 3 Radium containers present instead of 4 as listed on the COC for DGWC-37. The FD-3 sample listed on the COC was labeled FD-2 on the containers. The COC was used for login purposes. MMR

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

April 25, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAC1096 Plant McDonough
Pace Project No.: 30214952

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on April 03, 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

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

CERTIFICATIONS

Project: AAC1096 Plant McDonough
Pace Project No.: 30214952

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

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: AAC1096 Plant McDonough
Pace Project No.: 30214952

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30214952001	**DGWC-39**	Water	03/30/17 15:59	04/03/17 09:15
30214952002	**DGWC-38**	Water	03/30/17 11:36	04/03/17 09:15
30214952003	**DGWC-37**	Water	03/30/17 09:44	04/03/17 09:15
30214952004	**DGWA-2**	Water	03/30/17 11:05	04/03/17 09:15
30214952005	**FB-3**	Water	03/30/17 09:30	04/03/17 09:15
30214952006	**DGWC-13**	Water	03/30/17 12:20	04/03/17 09:15
30214952007	**DGWC-15**	Water	03/30/17 14:15	04/03/17 09:15
30214952008	**EB-2**	Water	03/30/17 13:55	04/03/17 09:15
30214952009	**DGWC-17**	Water	03/30/17 16:05	04/03/17 09:15
30214952010	**DGWC-21**	Water	03/30/17 10:20	04/03/17 09:15
30214952011	**DGWC-40**	Water	03/30/17 12:40	04/03/17 09:15
30214952012	**FD-2**	Water	03/30/17 00:00	04/03/17 09:15
30214952013	**DGWC-23**	Water	03/30/17 16:30	04/03/17 09:15
30214952014	**DGWC-48**	Water	03/30/17 14:45	04/03/17 09:15

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: AAC1096 Plant McDonough
Pace Project No.: 30214952

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30214952001	**DGWC-39**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214952002	**DGWC-38**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214952003	**DGWC-37**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214952004	**DGWA-2**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214952005	**FB-3**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214952006	**DGWC-13**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214952007	**DGWC-15**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214952008	**EB-2**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214952009	**DGWC-17**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214952010	**DGWC-21**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214952011	**DGWC-40**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214952012	**FD-2**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214952013	**DGWC-23**	EPA 9315	JC2	1

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: AAC1096 Plant McDonough
Pace Project No.: 30214952

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214952014	**DGWC-48**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC1096 Plant McDonough
Pace Project No.: 30214952

Sample: DGWC-39 **Lab ID: 30214952001** Collected: 03/30/17 15:59 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.264 ± 0.153 (0.220) C:79% T:NA**	pCi/L	04/18/17 08:18	13982-63-3	
Radium-228	EPA 9320	**-0.437 ± 0.369 (0.993) C:79% T:76%**	pCi/L	04/19/17 20:01	15262-20-1	
Total Radium	Total Radium Calculation	**0.264 ± 0.522 (1.21)**	pCi/L	04/25/17 11:31	7440-14-4	

Sample: DGWC-38 **Lab ID: 30214952002** Collected: 03/30/17 11:36 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0740 ± 0.0844 (0.165) C:91% T:NA**	pCi/L	04/18/17 08:18	13982-63-3	
Radium-228	EPA 9320	**0.445 ± 0.317 (0.600) C:82% T:82%**	pCi/L	04/19/17 16:59	15262-20-1	
Total Radium	Total Radium Calculation	**0.519 ± 0.401 (0.765)**	pCi/L	04/25/17 11:31	7440-14-4	

Sample: DGWC-37 **Lab ID: 30214952003** Collected: 03/30/17 09:44 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.170 ± 0.148 (0.276) C:71% T:NA**	pCi/L	04/18/17 08:18	13982-63-3	
Radium-228	EPA 9320	**0.132 ± 0.316 (0.705) C:79% T:80%**	pCi/L	04/19/17 16:58	15262-20-1	
Total Radium	Total Radium Calculation	**0.302 ± 0.464 (0.981)**	pCi/L	04/25/17 11:31	7440-14-4	

Sample: DGWA-2 **Lab ID: 30214952004** Collected: 03/30/17 11:05 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.105 ± 0.103 (0.191) C:83% T:NA**	pCi/L	04/18/17 08:18	13982-63-3	
Radium-228	EPA 9320	**0.632 ± 0.403 (0.756) C:83% T:78%**	pCi/L	04/19/17 16:59	15262-20-1	
Total Radium	Total Radium Calculation	**0.737 ± 0.506 (0.947)**	pCi/L	04/25/17 11:31	7440-14-4	

Sample: FB-3 **Lab ID: 30214952005** Collected: 03/30/17 09:30 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0253 ± 0.0544 (0.183) C:94% T:NA**	pCi/L	04/18/17 08:18	13982-63-3	
Radium-228	EPA 9320	**-0.0345 ± 0.475 (1.12) C:79% T:74%**	pCi/L	04/19/17 20:01	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC1096 Plant McDonough
Pace Project No.: 30214952

Sample: FB-3 **Lab ID: 30214952005** Collected: 03/30/17 09:30 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.000 ± 0.529 (1.30)**	pCi/L	04/25/17 11:31	7440-14-4	

Sample: DGWC-13 **Lab ID: 30214952006** Collected: 03/30/17 12:20 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.387 ± 0.159 (0.152) C:96% T:NA**	pCi/L	04/18/17 08:18	13982-63-3	
Radium-228	EPA 9320	**1.20 ± 0.557 (0.895) C:78% T:81%**	pCi/L	04/19/17 20:01	15262-20-1	
Total Radium	Total Radium Calculation	**1.59 ± 0.716 (1.05)**	pCi/L	04/25/17 11:31	7440-14-4	

Sample: DGWC-15 **Lab ID: 30214952007** Collected: 03/30/17 14:15 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.163 ± 0.0932 (0.128) C:82% T:NA**	pCi/L	04/18/17 09:59	13982-63-3	
Radium-228	EPA 9320	**0.113 ± 0.383 (0.869) C:86% T:84%**	pCi/L	04/19/17 20:01	15262-20-1	
Total Radium	Total Radium Calculation	**0.276 ± 0.476 (0.997)**	pCi/L	04/25/17 11:31	7440-14-4	

Sample: EB-2 **Lab ID: 30214952008** Collected: 03/30/17 13:55 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0207 ± 0.0585 (0.140) C:96% T:NA**	pCi/L	04/18/17 09:59	13982-63-3	
Radium-228	EPA 9320	**0.164 ± 0.447 (1.00) C:81% T:79%**	pCi/L	04/19/17 20:01	15262-20-1	
Total Radium	Total Radium Calculation	**0.185 ± 0.506 (1.14)**	pCi/L	04/25/17 11:31	7440-14-4	

Sample: DGWC-17 **Lab ID: 30214952009** Collected: 03/30/17 16:05 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0393 ± 0.0723 (0.162) C:83% T:NA**	pCi/L	04/18/17 09:59	13982-63-3	
Radium-228	EPA 9320	**0.826 ± 0.499 (0.908) C:83% T:81%**	pCi/L	04/19/17 20:01	15262-20-1	
Total Radium	Total Radium Calculation	**0.865 ± 0.571 (1.07)**	pCi/L	04/25/17 11:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC1096 Plant McDonough
Pace Project No.: 30214952

Sample: DGWC-21 **Lab ID: 30214952010** Collected: 03/30/17 10:20 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0767 ± 0.0720 (0.133) C:88% T:NA**	pCi/L	04/18/17 09:59	13982-63-3	
Radium-228	EPA 9320	**0.807 ± 0.577 (1.12) C:81% T:79%**	pCi/L	04/19/17 20:01	15262-20-1	
Total Radium	Total Radium Calculation	**0.884 ± 0.649 (1.25)**	pCi/L	04/25/17 11:31	7440-14-4	

Sample: DGWC-40 **Lab ID: 30214952011** Collected: 03/30/17 12:40 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0844 ± 0.0843 (0.167) C:97% T:NA**	pCi/L	04/18/17 09:59	13982-63-3	
Radium-228	EPA 9320	**-0.160 ± 0.405 (0.995) C:81% T:81%**	pCi/L	04/19/17 20:01	15262-20-1	
Total Radium	Total Radium Calculation	**0.0844 ± 0.489 (1.16)**	pCi/L	04/25/17 11:31	7440-14-4	

Sample: FD-2 **Lab ID: 30214952012** Collected: 03/30/17 00:00 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0269 ± 0.0631 (0.148) C:85% T:NA**	pCi/L	04/18/17 09:59	13982-63-3	
Radium-228	EPA 9320	**0.846 ± 0.532 (0.985) C:81% T:81%**	pCi/L	04/19/17 20:01	15262-20-1	
Total Radium	Total Radium Calculation	**0.873 ± 0.595 (1.13)**	pCi/L	04/25/17 11:31	7440-14-4	

Sample: DGWC-23 **Lab ID: 30214952013** Collected: 03/30/17 16:30 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0393 ± 0.0700 (0.156) C:87% T:NA**	pCi/L	04/18/17 09:59	13982-63-3	
Radium-228	EPA 9320	**0.258 ± 0.492 (1.08) C:83% T:82%**	pCi/L	04/19/17 20:02	15262-20-1	
Total Radium	Total Radium Calculation	**0.297 ± 0.562 (1.24)**	pCi/L	04/25/17 11:31	7440-14-4	

Sample: DGWC-48 **Lab ID: 30214952014** Collected: 03/30/17 14:45 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.236 ± 0.105 (0.119) C:95% T:NA**	pCi/L	04/18/17 09:59	13982-63-3	
Radium-228	EPA 9320	**1.47 ± 0.657 (1.06) C:79% T:75%**	pCi/L	04/19/17 20:02	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC1096 Plant McDonough
Pace Project No.: 30214952

Sample: DGWC-48 **Lab ID: 30214952014** Collected: 03/30/17 14:45 Received: 04/03/17 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**1.71 ± 0.762 (1.18)**	pCi/L	04/25/17 11:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC1096 Plant McDonough
Pace Project No.: 30214952

QC Batch: 254961 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30214952001, 30214952002, 30214952003, 30214952004, 30214952005, 30214952006, 30214952007, 30214952008, 30214952009, 30214952010, 30214952011, 30214952012, 30214952013, 30214952014

METHOD BLANK: 1255466 Matrix: Water
Associated Lab Samples: 30214952001, 30214952002, 30214952003, 30214952004, 30214952005, 30214952006, 30214952007, 30214952008, 30214952009, 30214952010, 30214952011, 30214952012, 30214952013, 30214952014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0349 ± 0.0656 (0.149) C:86% T:NA	pCi/L	04/18/17 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

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC1096 Plant McDonough
Pace Project No.: 30214952

QC Batch: 254547 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30214952001, 30214952002, 30214952003, 30214952004, 30214952005, 30214952006, 30214952007, 30214952008, 30214952009, 30214952010, 30214952011, 30214952012, 30214952013, 30214952014

METHOD BLANK: 1253324 Matrix: Water
Associated Lab Samples: 30214952001, 30214952002, 30214952003, 30214952004, 30214952005, 30214952006, 30214952007, 30214952008, 30214952009, 30214952010, 30214952011, 30214952012, 30214952013, 30214952014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0181 ± 0.282 (0.654) C:80% T:93%	pCi/L	04/19/17 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

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

QUALIFIERS

Project: AAC1096 Plant McDonough
Pace Project No.: 30214952

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.

WO# : 30214952

30214952

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAC1096 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 4/25/2017

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 HNO3					Requested Analysis Radium 226, 228, Total												LAB USE ONLY
1	DGWC-39	G	3/30/2017 15:59	AAC1096-01	GW	2					X												001
2	DGWC-38	G	3/30/2017 11:36	AAC1096-02	GW	2					X												002
3	DGWC-37	G	3/30/2017 9:44	AAC1096-03	GW	3					X												003
4	DGWA-2	G	3/30/2017 11:05	AAC1096-04	GW	2					X												004
5	FB-3	G	3/30/2017 9:30	AAC1096-05	W	2					X												005
6	DGWC-13	G	3/30/2017 12:20	AAC1096-06	GW	2					X												006
7	DGWC-15	G	3/30/2017 14:15	AAC1096-07	GW	2					X												007
8	EB-2	G	3/30/2017 13:55	AAC1096-08	W	2					X												008
9	DGWC-17	G	3/30/2017 16:05	AAC1096-09	GW	2					X												009
10	DGWC-21	G	3/30/2017 10:20	AAC1096-10	GW	2					X												010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M Lahman	3/31/17	RBig Pace	4/3/17 0915	
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.

30214952

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAC1096 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 4/25/2017

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 HNO3					Requested Analysis Radium 226, 228, Total												LAB USE ONLY
11	DGWC-40	G	3/30/2017 12:40	AAC1096-11	GW	2					X												011
12	FD-2	G	3/30/2017 0:00	AAC1096-12	GW	2					X												012
13	DGWC-23	G	3/30/2017 16:30	AAC1096-13	GW	2					X												013
14	DGWC-48	G	3/30/2017 14:45	AAC1096-14	GW	2					X												014
15																							
16																							
17																							
18																							
19																							
20																							

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			RBy Pace	4/3/17 0915	
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.

30214952

CHAIN OF CUSTODY RECORD

Pace Analytical
www.pacelabs.com

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (dawn-prell@golder.com) CC: kjurinko@golder.com

REQUESTED COMPLETION DATE: PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App III/IV (EPA 6020/7470)	Cl, F, SO4, TDS (EPA 300.0 + SM2540C)	Radium 226/228 (SW-846 9315/9320)								LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:		P	P	P									
					PRESERVATION:		3	7	5									
3/30/17	1559	GW		X	DGWC-39	4	1	1	2								1	
	1136	GW			DGWC-38	4	1	1	2								2	
	0944	GW			DGWC-37	6	1	1	4								3	Extra Radium
	1105	GW			DGWA-2	4	1	1	2								4	DGWC-37, 3 containers
	0930	W			FB-3	4	1	1	2								5	Present for Radium,
	1220	GW			DGWC-13	4	1	1	2								6	MR 3/31/17
	1415	GW			DGWC-15	4	1	1	2								7	
	1355	W			EB-2	4	1	1	2								8	
	1605	GW			DGWC-17	4	1	1	2								9	
	1020	GW			DGWC-21	4	1	1	2								10	
	1240	GW			DGWC-40	4	1	1	2								11	MR 3/31/17
	—	GW			FD-3	4	1	1	2								12	FD-2 per labels.

ANALYSIS REQUESTED

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 3/30/17 1800

RECEIVED BY: Mike Nguyen
DATE/TIME: 3/31/17 0913

RELINQUISHED BY:
DATE/TIME: 3/31/17 0913

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB: M Rahman
DATE/TIME: 03/31/17 1145

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

pH Checked: Yes No NA
Ice: Yes No NA
Temperature: 1°C Min: 1°C Max:

Custody Seal: Intact Broken Not Present N/A
Ind.Coolers
Cooler ID:

FOR LAB USE ONLY
LAB #: AAC1096
Entered into LIMS: MR
Tracking #:

30214952

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com

CC: Maria Padilla kjunkin@golder.com

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P								
PRESERVATION:								3	7	3								
03/30/17	1630	GW		x	DGWC-23	4		1	1	2							13	
03/30/17	1445	GW		x	DGWC-48	4		1	1	2							14	

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 3/30/17 1800

RELINQUISHED BY:
DATE/TIME: 3/31/17 0913

RECEIVED BY: Mike Nguyen
DATE/TIME: 3/31/17 0913

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: M Zalman
DATE/TIME: 03/31/17 11645

Shipped by: Pace Courier

pH checked: Yes No NA

Ice: Yes No NA

Ice Present

Temp - 1°C

Seal - N/A

FOR LAB USE ONLY
LAB #: APC1096
Entered into LIMS: MZ
Tracking #:

March 30 Plant McDonough COC Phase II CCR.xlsx

Sample Condition Upon Receipt Pittsburgh

RTB

Pace Analytical

Client Name: Pace GA Project # 30214952

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

Tracking #: 6812 5103 3498 6812 5103 3947

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 4/3/17

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: -Includes date/time/ID Matrix: WT	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:	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. All containers needing preservation are found to be in compliance with EPA recommendation. exceptions: VOA, coliform, TOC, O&G, Phenolics	X			15. pH<2
	X			Initial when completed 4/3/17 RTB; 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: 4/3/17 RTB Date: 4/3/17

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

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	JC2
Date:	4/13/2017
Worklist:	35076
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1255466
MB concentration:	0.035
M/B Counting Uncertainty:	0.065
MB MDC:	0.149
MB Numerical Performance Indicator:	1.05
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS35076	LCSD35076
Count Date:	4/19/2017	
Spike I.D.:	17-003	
Spike Concentration (pCi/mL):	38.229	
Volume Used (mL):	0.25	
Aliquot Volume (L, g, F):	0.505	
Target Conc. (pCi/L, g, F):	18.933	
Uncertainty (Calculated):	0.891	
Result (pCi/L, g, F):	16.345	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.881	
Numerical Performance Indicator:	-4.05	
Percent Recovery:	86.33%	
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:	
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

		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30214951002	
Duplicate Sample I.D.	30214951002DUP	
Sample Result (pCi/L, g, F):	0.091	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.087	
Sample Duplicate Result (pCi/L, g, F):	0.054	
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:	0.595	30214951002
Duplicate RPD:	51.43%	30214951002DUP
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:

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

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JJY
Date:	4/17/2017
Worklist:	35002
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1253324
MB concentration:	0.018
M/B Counting Uncertainty:	0.281
MB MDC:	0.654
MB Numerical Performance Indicator:	0.13
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS35002	LCSD35002
Count Date:	4/19/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	24.744	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.806	
Target Conc. (pCi/L, g, F):	6.143	
Uncertainty (Calculated):	0.442	
Result (pCi/L, g, F):	6.786	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.792	
Numerical Performance Indicator:	1.39	
Percent Recovery:	110.47%	
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:	
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.:	30214952003	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30214952003DUP	
Sample Result (pCi/L, g, F):	0.132	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.315	
Sample Duplicate Result (pCi/L, g, F):	0.272	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.322	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.608	30214952003
Duplicate RPD:	69.25%	30214952003DUP
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:	
(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:

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

LMP 4/25/17

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: AAC1126
April 11, 2017
Project: CCR Event
Project #:Plant McDonough

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

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

April 11, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWC-67	AAC1126-01	Ground Water	03/31/17 10:50	03/31/17 17:25
DGWC-69	AAC1126-02	Ground Water	03/31/17 13:10	03/31/17 17:25
EB-3	AAC1126-03	Water	03/31/17 14:35	03/31/17 17:25
DGWC-68	AAC1126-04	Ground Water	03/31/17 13:00	03/31/17 17:25
DGWC-42	AAC1126-05	Ground Water	03/31/17 14:15	03/31/17 17:25
DGWC-47	AAC1126-06	Ground Water	03/31/17 12:20	03/31/17 17:25
FD-3	AAC1126-07	Ground Water	03/31/17 00:00	03/31/17 17:25

PACE ANALYTICAL SERVICES, LLC.

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April 11, 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.

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 11, 2017

Report No.: AAC1126
Client ID: DGWC-67
Date/Time Sampled: 3/31/2017 10:50:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1126-01
Date/Time Received: 3/31/2017 5:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	270	25	10	mg/L	SM 2540 C		1	04/05/17 16:45	04/05/17 16:45	7040108	JPT
Inorganic Anions											
Chloride	5.7	0.25	0.01	mg/L	EPA 300.0		1	04/05/17 19:04	04/07/17 06:11	7040128	RLC
Fluoride	0.02	0.30	0.004	mg/L	EPA 300.0	J	1	04/05/17 19:04	04/07/17 06:11	7040128	RLC
Sulfate	110	20	1.8	mg/L	EPA 300.0		20	04/05/17 19:04	04/08/17 17:51	7040128	RLC
Metals, Total											
Antimony	0.0004	0.0030	0.0003	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 19:20	7040031	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:20	7040031	CSW
Barium	0.111	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:20	7040031	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:20	7040031	CSW
Boron	2.91	0.0400	0.0060	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:20	7040031	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:20	7040031	CSW
Calcium	39.9	25.0	0.522	mg/L	EPA 6020B		50	04/04/17 09:00	04/07/17 19:26	7040031	CSW
Chromium	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 19:20	7040031	CSW
Cobalt	0.0064	0.0100	0.0005	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 19:20	7040031	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:20	7040031	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:20	7040031	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:20	7040031	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:20	7040031	CSW
Lithium	0.0052	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 19:20	7040031	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/05/17 12:35	04/05/17 19:11	7040088	MTC

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 11, 2017

Report No.: AAC1126
Client ID: DGWC-69
Date/Time Sampled: 3/31/2017 1:10:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1126-02
Date/Time Received: 3/31/2017 5:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	138	25	10	mg/L	SM 2540 C		1	04/05/17 16:45	04/05/17 16:45	7040108	JPT
Inorganic Anions											
Chloride	4.4	0.25	0.01	mg/L	EPA 300.0		1	04/05/17 19:04	04/07/17 06:33	7040128	RLC
Fluoride	0.16	0.30	0.004	mg/L	EPA 300.0	J	1	04/05/17 19:04	04/07/17 06:33	7040128	RLC
Sulfate	21	1.0	0.09	mg/L	EPA 300.0		1	04/05/17 19:04	04/07/17 06:33	7040128	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:31	7040031	CSW
Arsenic	0.0239	0.0050	0.0004	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:31	7040031	CSW
Barium	0.0872	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:31	7040031	CSW
Beryllium	0.00007	0.0030	0.00007	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 19:31	7040031	CSW
Boron	0.407	0.0400	0.0060	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:31	7040031	CSW
Cadmium	0.0001	0.0010	0.00006	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 19:31	7040031	CSW
Calcium	18.6	25.0	0.522	mg/L	EPA 6020B	J	50	04/04/17 09:00	04/07/17 19:37	7040031	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:31	7040031	CSW
Cobalt	0.0022	0.0100	0.0005	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 19:31	7040031	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:31	7040031	CSW
Molybdenum	0.0124	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:31	7040031	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:31	7040031	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:31	7040031	CSW
Lithium	0.0031	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 19:31	7040031	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/05/17 12:35	04/05/17 19:13	7040088	MTC

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 11, 2017

Report No.: AAC1126
Client ID: EB-3
Date/Time Sampled: 3/31/2017 2:35:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAC1126-03
Date/Time Received: 3/31/2017 5:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	04/05/17 16:45	04/05/17 16:45	7040108	JPT
Inorganic Anions											
Chloride	0.07	0.25	0.01	mg/L	EPA 300.0	J	1	04/05/17 19:04	04/07/17 06:54	7040128	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/05/17 19:04	04/07/17 06:54	7040128	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	04/05/17 19:04	04/07/17 06:54	7040128	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:54	7040031	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:54	7040031	CSW
Barium	0.0013	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 19:54	7040031	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:54	7040031	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:54	7040031	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:54	7040031	CSW
Calcium	ND	0.500	0.0104	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:54	7040031	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:54	7040031	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:54	7040031	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:54	7040031	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:54	7040031	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:54	7040031	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:54	7040031	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 19:54	7040031	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/05/17 12:35	04/05/17 19:15	7040088	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 11, 2017

Report No.: AAC1126
Client ID: DGWC-68
Date/Time Sampled: 3/31/2017 1:00:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1126-04
Date/Time Received: 3/31/2017 5:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	288	25	10	mg/L	SM 2540 C		1	04/05/17 16:45	04/05/17 16:45	7040108	JPT
Inorganic Anions											
Chloride	3.8	0.25	0.01	mg/L	EPA 300.0		1	04/05/17 19:04	04/07/17 07:16	7040128	RLC
Fluoride	0.54	0.30	0.004	mg/L	EPA 300.0		1	04/05/17 19:04	04/07/17 07:16	7040128	RLC
Sulfate	38	1.0	0.09	mg/L	EPA 300.0		1	04/05/17 19:04	04/07/17 07:16	7040128	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:00	7040031	CSW
Arsenic	0.488	0.0050	0.0004	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:00	7040031	CSW
Barium	0.0796	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:00	7040031	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:00	7040031	CSW
Boron	1.25	0.0400	0.0060	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:00	7040031	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:00	7040031	CSW
Calcium	48.2	25.0	0.522	mg/L	EPA 6020B		50	04/04/17 09:00	04/07/17 15:13	7040031	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:00	7040031	CSW
Cobalt	0.0025	0.0100	0.0005	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:00	7040031	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:00	7040031	CSW
Molybdenum	0.175	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:00	7040031	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:00	7040031	CSW
Thallium	0.00008	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:00	7040031	CSW
Lithium	0.0016	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:00	7040031	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/05/17 12:35	04/05/17 19:18	7040088	MTC

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 11, 2017

Report No.: AAC1126
Client ID: DGWC-42
Date/Time Sampled: 3/31/2017 2:15:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1126-05
Date/Time Received: 3/31/2017 5:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	661	25	10	mg/L	SM 2540 C		1	04/05/17 16:45	04/05/17 16:45	7040108	JPT
Inorganic Anions											
Chloride	33	0.25	0.01	mg/L	EPA 300.0		1	04/05/17 19:04	04/07/17 07:38	7040128	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/05/17 19:04	04/07/17 07:38	7040128	RLC
Sulfate	380	10	0.92	mg/L	EPA 300.0		10	04/05/17 19:04	04/08/17 18:11	7040128	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:06	7040031	CSW
Arsenic	0.0007	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:06	7040031	CSW
Barium	0.0194	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:06	7040031	CSW
Beryllium	0.0025	0.0030	0.00007	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:06	7040031	CSW
Boron	0.989	0.0400	0.0060	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:06	7040031	CSW
Cadmium	0.0009	0.0010	0.00006	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:06	7040031	CSW
Calcium	48.3	25.0	0.522	mg/L	EPA 6020B		50	04/04/17 09:00	04/07/17 20:11	7040031	CSW
Chromium	0.0010	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:06	7040031	CSW
Cobalt	0.0524	0.0100	0.0005	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:06	7040031	CSW
Lead	0.0004	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:06	7040031	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:06	7040031	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:06	7040031	CSW
Thallium	0.00009	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:06	7040031	CSW
Lithium	0.0119	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:06	7040031	CSW
Mercury	0.00004	0.00050	0.000041	mg/L	EPA 7470A	J	1	04/05/17 12:35	04/05/17 19:20	7040088	MTC

PACE ANALYTICAL SERVICES, LLC.

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Attention: Mr. Joju Abraham

April 11, 2017

Report No.: AAC1126
Client ID: DGWC-47
Date/Time Sampled: 3/31/2017 12:20:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1126-06
Date/Time Received: 3/31/2017 5:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	545	25	10	mg/L	SM 2540 C		1	04/05/17 16:45	04/05/17 16:45	7040108	JPT
Inorganic Anions											
Chloride	9.1	0.25	0.01	mg/L	EPA 300.0		1	04/05/17 19:04	04/07/17 08:43	7040128	RLC
Fluoride	0.88	0.30	0.004	mg/L	EPA 300.0		1	04/05/17 19:04	04/07/17 08:43	7040128	RLC
Sulfate	350	10	0.92	mg/L	EPA 300.0		10	04/05/17 19:04	04/08/17 18:32	7040128	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:17	7040031	CSW
Arsenic	0.0031	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:17	7040031	CSW
Barium	0.0189	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:17	7040031	CSW
Beryllium	0.0112	0.0030	0.00007	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:17	7040031	CSW
Boron	0.312	0.0400	0.0060	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:17	7040031	CSW
Cadmium	0.0020	0.0010	0.00006	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:17	7040031	CSW
Calcium	62.6	25.0	0.522	mg/L	EPA 6020B		50	04/04/17 09:00	04/07/17 20:23	7040031	CSW
Chromium	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:17	7040031	CSW
Cobalt	0.354	0.0100	0.0005	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:17	7040031	CSW
Lead	0.0009	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:17	7040031	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:17	7040031	CSW
Selenium	0.0133	0.0100	0.0014	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:17	7040031	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:17	7040031	CSW
Lithium	0.0767	0.0500	0.0011	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:17	7040031	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/05/17 12:35	04/05/17 19:23	7040088	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

Attention: Mr. Joju Abraham

April 11, 2017

Report No.: AAC1126
Client ID: FD-3
Date/Time Sampled: 3/31/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC1126-07
Date/Time Received: 3/31/2017 5:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	543	25	10	mg/L	SM 2540 C		1	04/05/17 16:45	04/05/17 16:45	7040108	JPT
Inorganic Anions											
Chloride	9.1	0.25	0.01	mg/L	EPA 300.0		1	04/05/17 19:04	04/07/17 09:05	7040128	RLC
Fluoride	0.85	0.30	0.004	mg/L	EPA 300.0		1	04/05/17 19:04	04/07/17 09:05	7040128	RLC
Sulfate	440	10	0.92	mg/L	EPA 300.0		10	04/05/17 19:04	04/08/17 18:52	7040128	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:29	7040031	CSW
Arsenic	0.0027	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:29	7040031	CSW
Barium	0.0186	0.0100	0.0003	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:29	7040031	CSW
Beryllium	0.0108	0.0030	0.00007	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:29	7040031	CSW
Boron	0.292	0.0400	0.0060	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:29	7040031	CSW
Cadmium	0.0019	0.0010	0.00006	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:29	7040031	CSW
Calcium	60.3	25.0	0.522	mg/L	EPA 6020B		50	04/04/17 09:00	04/07/17 20:34	7040031	CSW
Chromium	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:29	7040031	CSW
Cobalt	0.358	0.0100	0.0005	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:29	7040031	CSW
Lead	0.0009	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:29	7040031	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:29	7040031	CSW
Selenium	0.0156	0.0100	0.0014	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:29	7040031	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/04/17 09:00	04/07/17 20:29	7040031	CSW
Lithium	0.0716	0.0500	0.0011	mg/L	EPA 6020B		1	04/04/17 09:00	04/07/17 20:29	7040031	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/05/17 12:35	04/05/17 19:25	7040088	MTC

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April 11, 2017

Report No.: AAC1126

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040108 - SM 2540 C											
Blank (7040108-BLK1)						Prepared & Analyzed: 04/05/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7040108-BS1)						Prepared & Analyzed: 04/05/17					
Total Dissolved Solids	373	25	10	mg/L	400.00		93	84-108			
Duplicate (7040108-DUP1)		**Source: AAC1126-02**				Prepared & Analyzed: 04/05/17					
Total Dissolved Solids	141	25	10	mg/L		138			2	10	

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Report No.: AAC1126

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040128 - EPA 300.0											
Blank (7040128-BLK1)						Prepared: 04/05/17 Analyzed: 04/07/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7040128-BS1)						Prepared: 04/05/17 Analyzed: 04/07/17					
Chloride	10.5	0.25	0.01	mg/L	10.010		105	90-110			
Fluoride	10.8	0.30	0.004	mg/L	10.020		108	90-110			
Sulfate	10.6	1.0	0.09	mg/L	10.020		105	90-110			
Matrix Spike (7040128-MS1)		**Source: AAC1126-05**				Prepared: 04/05/17 Analyzed: 04/07/17					
Chloride	39.6	0.25	0.01	mg/L	10.010	32.9	67	90-110			QM-02
Fluoride	10.8	0.30	0.004	mg/L	10.020	ND	108	90-110			
Sulfate	247	1.0	0.09	mg/L	10.020	261	NR	90-110			QM-02
Matrix Spike (7040128-MS2)		**Source: AAD0072-05**				Prepared: 04/05/17 Analyzed: 04/07/17					
Chloride	11.2	0.25	0.01	mg/L	10.010	0.93	103	90-110			
Fluoride	10.7	0.30	0.004	mg/L	10.020	ND	107	90-110			
Sulfate	11.7	1.0	0.09	mg/L	10.020	1.47	102	90-110			
Matrix Spike Dup (7040128-MSD1)		**Source: AAC1126-05**				Prepared: 04/05/17 Analyzed: 04/07/17					
Chloride	39.1	0.25	0.01	mg/L	10.010	32.9	62	90-110	1	15	QM-02
Fluoride	10.6	0.30	0.004	mg/L	10.020	ND	106	90-110	2	15	
Sulfate	245	1.0	0.09	mg/L	10.020	261	NR	90-110	1	15	QM-02

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Report No.: AAC1126

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040031 - EPA 3005A											
Blank (7040031-BLK1)						Prepared: 04/04/17 Analyzed: 04/07/17					
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	ND	0.0250	0.0003	mg/L							
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	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0011	mg/L							
LCS (7040031-BS1)						Prepared: 04/04/17 Analyzed: 04/07/17					
Antimony	0.108	0.0030	0.0003	mg/L	0.10000		108	80-120			
Arsenic	0.105	0.0050	0.0004	mg/L	0.10000		105	80-120			
Barium	0.0992	0.0100	0.0003	mg/L	0.10000		99	80-120			
Beryllium	0.105	0.0030	0.00007	mg/L	0.10000		105	80-120			
Boron	1.03	0.0400	0.0060	mg/L	1.0000		103	80-120			
Cadmium	0.102	0.0010	0.00006	mg/L	0.10000		102	80-120			
Calcium	0.979	0.500	0.0104	mg/L	1.0000		98	80-120			
Chromium	0.113	0.0100	0.0003	mg/L	0.10000		113	80-120			
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000		105	80-120			
Copper	0.105	0.0250	0.0003	mg/L	0.10000		105	80-120			
Lead	0.104	0.0050	0.00007	mg/L	0.10000		104	80-120			
Molybdenum	0.103	0.0100	0.0006	mg/L	0.10000		103	80-120			
Nickel	0.111	0.0100	0.0003	mg/L	0.10000		111	80-120			
Selenium	0.106	0.0100	0.0014	mg/L	0.10000		106	80-120			
Silver	0.101	0.0100	0.0003	mg/L	0.10000		101	80-120			
Thallium	0.106	0.0010	0.00005	mg/L	0.10000		106	80-120			
Vanadium	0.107	0.0100	0.0014	mg/L	0.10000		107	80-120			
Zinc	0.103	0.0100	0.0013	mg/L	0.10000		103	80-120			
Lithium	0.104	0.0500	0.0011	mg/L	0.10000		104	80-120			

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Report No.: AAC1126

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040031 - EPA 3005A											
Matrix Spike (7040031-MS1)		**Source: AAC1126-04**				Prepared: 04/04/17 Analyzed: 04/07/17					
Antimony	0.102	0.0030	0.0003	mg/L	0.10000	ND	102	75-125			
Arsenic	0.604	0.0050	0.0004	mg/L	0.10000	0.488	116	75-125			
Barium	0.181	0.0100	0.0003	mg/L	0.10000	0.0796	101	75-125			
Beryllium	0.0926	0.0030	0.00007	mg/L	0.10000	ND	93	75-125			
Boron	2.72	2.00	0.302	mg/L	1.0000	1.25	147	75-125			QM-02
Cadmium	0.102	0.0010	0.00006	mg/L	0.10000	ND	102	75-125			
Calcium	48.8	25.0	0.522	mg/L	1.0000	48.2	52	75-125			QM-02
Chromium	0.106	0.0100	0.0003	mg/L	0.10000	ND	106	75-125			
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000	0.0025	98	75-125			
Copper	0.101	0.0250	0.0003	mg/L	0.10000	0.0003	101	75-125			
Lead	0.0973	0.0050	0.00007	mg/L	0.10000	ND	97	75-125			
Molybdenum	0.270	0.0100	0.0006	mg/L	0.10000	0.175	94	75-125			
Nickel	0.102	0.0100	0.0003	mg/L	0.10000	0.0013	100	75-125			
Selenium	0.102	0.0100	0.0014	mg/L	0.10000	ND	102	75-125			
Silver	0.0981	0.0100	0.0003	mg/L	0.10000	ND	98	75-125			
Thallium	0.101	0.0010	0.00005	mg/L	0.10000	0.00008	101	75-125			
Vanadium	0.107	0.0100	0.0014	mg/L	0.10000	ND	107	75-125			
Zinc	0.103	0.0100	0.0013	mg/L	0.10000	0.0019	101	75-125			
Lithium	0.0940	0.0500	0.0011	mg/L	0.10000	0.0016	92	75-125			
Matrix Spike Dup (7040031-MSD1)		**Source: AAC1126-04**				Prepared: 04/04/17 Analyzed: 04/07/17					
Antimony	0.110	0.0030	0.0003	mg/L	0.10000	ND	110	75-125	8	20	
Arsenic	0.593	0.0050	0.0004	mg/L	0.10000	0.488	104	75-125	2	20	
Barium	0.201	0.0100	0.0003	mg/L	0.10000	0.0796	122	75-125	11	20	
Beryllium	0.0948	0.0030	0.00007	mg/L	0.10000	ND	95	75-125	2	20	
Boron	2.67	2.00	0.302	mg/L	1.0000	1.25	142	75-125	2	20	QM-02
Cadmium	0.103	0.0010	0.00006	mg/L	0.10000	ND	103	75-125	1	20	
Calcium	45.8	25.0	0.522	mg/L	1.0000	48.2	NR	75-125	6	20	QM-02
Chromium	0.109	0.0100	0.0003	mg/L	0.10000	ND	109	75-125	2	20	
Cobalt	0.109	0.0100	0.0005	mg/L	0.10000	0.0025	107	75-125	8	20	
Copper	0.102	0.0250	0.0003	mg/L	0.10000	0.0003	102	75-125	1	20	
Lead	0.0984	0.0050	0.00007	mg/L	0.10000	ND	98	75-125	1	20	
Molybdenum	0.277	0.0100	0.0006	mg/L	0.10000	0.175	102	75-125	3	20	
Nickel	0.109	0.0100	0.0003	mg/L	0.10000	0.0013	108	75-125	7	20	
Selenium	0.103	0.0100	0.0014	mg/L	0.10000	ND	103	75-125	1	20	
Silver	0.100	0.0100	0.0003	mg/L	0.10000	ND	100	75-125	2	20	
Thallium	0.103	0.0010	0.00005	mg/L	0.10000	0.00008	103	75-125	2	20	
Vanadium	0.108	0.0100	0.0014	mg/L	0.10000	ND	108	75-125	1	20	
Zinc	0.102	0.0100	0.0013	mg/L	0.10000	0.0019	100	75-125	1	20	
Lithium	0.0967	0.0500	0.0011	mg/L	0.10000	0.0016	95	75-125	3	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
Batch 7040031 - EPA 3005A											
Post Spike (7040031-PS1)			**Source: AAC1126-04**			Prepared: 04/04/17 Analyzed: 04/07/17					
Antimony	98.0			ug/L	100.00	0.189	98	80-120			
Arsenic	597			ug/L	100.00	488	109	80-120			
Barium	177			ug/L	100.00	79.6	98	80-120			
Beryllium	85.9			ug/L	100.00	0.0481	86	80-120			
Boron	2540			ug/L	1000.0	1250	129	80-120			QM-02
Cadmium	105			ug/L	100.00	0.0466	105	80-120			
Calcium	47000			ug/L	1000.0	48200	NR	80-120			QM-02
Chromium	106			ug/L	100.00	0.313	106	80-120			
Cobalt	104			ug/L	100.00	2.51	102	80-120			
Copper	102			ug/L	100.00	0.299	101	80-120			
Lead	93.5			ug/L	100.00	0.0608	93	80-120			
Molybdenum	267			ug/L	100.00	175	92	80-120			
Nickel	104			ug/L	100.00	1.29	103	80-120			
Selenium	107			ug/L	100.00	-0.240	107	80-120			
Silver	92.1			ug/L	100.00	0.0070	92	80-120			
Thallium	96.9			ug/L	100.00	0.0796	97	80-120			
Vanadium	104			ug/L	100.00	0.0819	104	80-120			
Zinc	103			ug/L	100.00	1.90	101	80-120			
Lithium	86.7			ug/L	100.00	1.65	85	80-120			
Batch 7040088 - EPA 7470A											
Blank (7040088-BLK1)						Prepared & Analyzed: 04/05/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7040088-BS1)						Prepared & Analyzed: 04/05/17					
Mercury	0.00256	0.00050	0.000041	mg/L	2.5000E-3		102	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
Batch 7040088 - EPA 7470A											
Duplicate (7040088-DUP1)			**Source: AAC1108-03**			Prepared & Analyzed: 04/05/17					
Mercury	ND	0.00050	0.000041	mg/L		ND				20	
Matrix Spike (7040088-MS1)			**Source: AAC1126-01**			Prepared & Analyzed: 04/05/17					
Mercury	0.00249	0.00050	0.000041	mg/L	2.5000E-3	ND	99	75-125			
Matrix Spike Dup (7040088-MSD1)			**Source: AAC1126-01**			Prepared & Analyzed: 04/05/17					
Mercury	0.00251	0.00050	0.000041	mg/L	2.5000E-3	ND	101	75-125	1	20	
Post Spike (7040088-PS1)			**Source: AAC1126-01**			Prepared & Analyzed: 04/05/17					
Mercury	1.72			ug/L	1.6667	0.0220	102	80-120			

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April 11, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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.

CHAIN OF CUSTODY RECORD

Pace Analytical®

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P		
PRESERVATION:								3	7	3		
03/31/17	1050	GW		x	DGWC-67	6		1	1	4	1	Extra Radium
03/31/17	1310	GW		x	DGWC-69	4		1	1	2	2	
03/31/17	1435	W		x	EB-3	4		1	1	2	3	
03/31/17	1300	GW		x	DGWC-68	4		1	1	2	4	
03/31/17	1415	GW		x	DGWC-42	4		1	1	2	5	
03/31/17	1220	GW		x	DGWC-47	4		1	1	2	6	
03/31/17	--	GW		x	FD-3	4		1	1	2	7	

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

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

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 3/31/17 1700

RELINQUISHED BY:
DATE/TIME: 3/31/17 1725

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB:
DATE/TIME: 03/31/17 1725

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

pH checked: Yes No NA
Ice: Yes No NA
Temperature: 3.2 °C Min: 3.2 °C Max:
Custody Seal: Intact Broken Not Present N/A
# of Coolers
Cooler ID:

FOR LAB USE ONLY
LAB #: 40C1126
Entered into LIMS: MR
Tracking #:

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: 4/3/2017 10:16:05AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 03/31/17 17:25

Work Order: AAC1126
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 7 **#Containers:** 30

Minimum Temp(C): 3.0 **Maximum Temp(C):** 3.0 **Custody Seal(s) Used:** N/A

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	NO
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

April 26, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAC1126 Plant McDonough
Pace Project No.: 30215074

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on April 04, 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

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

CERTIFICATIONS

Project: AAC1126 Plant McDonough
Pace Project No.: 30215074

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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Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: AAC1126 Plant McDonough
Pace Project No.: 30215074

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30215074001	**DGWC-67**	Water	03/31/17 10:50	04/04/17 09:45
30215074002	**DGWC-69**	Water	03/31/17 13:10	04/04/17 09:45
30215074003	**EB-3**	Water	03/31/17 14:35	04/04/17 09:45
30215074004	**DGWC-68**	Water	03/31/17 13:00	04/04/17 09:45
30215074005	**DGWC-42**	Water	03/31/17 14:15	04/04/17 09:45
30215074006	**DGWC-47**	Water	03/31/17 12:20	04/04/17 09:45
30215074007	**FD-3**	Water	03/31/17 00:00	04/04/17 09:45

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Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: AAC1126 Plant McDonough
Pace Project No.: 30215074

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30215074001	**DGWC-67**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215074002	**DGWC-69**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215074003	**EB-3**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215074004	**DGWC-68**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215074005	**DGWC-42**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215074006	**DGWC-47**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215074007	**FD-3**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC1126 Plant McDonough
Pace Project No.: 30215074

Sample: DGWC-67 **Lab ID: 30215074001** Collected: 03/31/17 10:50 Received: 04/04/17 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0392 ± 0.112 (0.271) C:80% T:NA**	pCi/L	04/19/17 08:35	13982-63-3	
Radium-228	EPA 9320	**0.365 ± 0.329 (0.662) C:82% T:80%**	pCi/L	04/21/17 12:50	15262-20-1	
Total Radium	Total Radium Calculation	**0.404 ± 0.441 (0.933)**	pCi/L	04/26/17 12:10	7440-14-4	

Sample: DGWC-69 **Lab ID: 30215074002** Collected: 03/31/17 13:10 Received: 04/04/17 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.847 ± 0.264 (0.268) C:84% T:NA**	pCi/L	04/19/17 08:35	13982-63-3	
Radium-228	EPA 9320	**0.539 ± 0.443 (0.886) C:85% T:70%**	pCi/L	04/21/17 12:51	15262-20-1	
Total Radium	Total Radium Calculation	**1.39 ± 0.707 (1.15)**	pCi/L	04/26/17 12:10	7440-14-4	

Sample: EB-3 **Lab ID: 30215074003** Collected: 03/31/17 14:35 Received: 04/04/17 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0291 ± 0.0546 (0.124) C:89% T:NA**	pCi/L	04/20/17 10:43	13982-63-3	
Radium-228	EPA 9320	**0.273 ± 0.425 (0.919) C:81% T:73%**	pCi/L	04/21/17 12:51	15262-20-1	
Total Radium	Total Radium Calculation	**0.302 ± 0.480 (1.04)**	pCi/L	04/26/17 12:10	7440-14-4	

Sample: DGWC-68 **Lab ID: 30215074004** Collected: 03/31/17 13:00 Received: 04/04/17 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.342 ± 0.153 (0.158) C:74% T:NA**	pCi/L	04/20/17 10:43	13982-63-3	
Radium-228	EPA 9320	**0.0162 ± 0.296 (0.687) C:81% T:91%**	pCi/L	04/21/17 12:51	15262-20-1	
Total Radium	Total Radium Calculation	**0.358 ± 0.449 (0.845)**	pCi/L	04/26/17 12:10	7440-14-4	

Sample: DGWC-42 **Lab ID: 30215074005** Collected: 03/31/17 14:15 Received: 04/04/17 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.102 ± 0.0850 (0.147) C:94% T:NA**	pCi/L	04/20/17 10:43	13982-63-3	
Radium-228	EPA 9320	**-0.109 ± 0.329 (0.796) C:80% T:84%**	pCi/L	04/21/17 12:52	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC1126 Plant McDonough
Pace Project No.: 30215074

Sample: DGWC-42 **Lab ID: 30215074005** Collected: 03/31/17 14:15 Received: 04/04/17 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.102 ± 0.414 (0.943)**	pCi/L	04/26/17 12:10	7440-14-4	

Sample: DGWC-47 **Lab ID: 30215074006** Collected: 03/31/17 12:20 Received: 04/04/17 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.410 ± 0.159 (0.162) C:93% T:NA**	pCi/L	04/20/17 10:43	13982-63-3	
Radium-228	EPA 9320	**0.729 ± 0.408 (0.736) C:83% T:82%**	pCi/L	04/21/17 12:52	15262-20-1	
Total Radium	Total Radium Calculation	**1.14 ± 0.567 (0.898)**	pCi/L	04/26/17 12:10	7440-14-4	

Sample: FD-3 **Lab ID: 30215074007** Collected: 03/31/17 00:00 Received: 04/04/17 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.395 ± 0.161 (0.175) C:87% T:NA**	pCi/L	04/20/17 10:43	13982-63-3	
Radium-228	EPA 9320	**1.20 ± 0.509 (0.832) C:79% T:83%**	pCi/L	04/21/17 12:52	15262-20-1	
Total Radium	Total Radium Calculation	**1.60 ± 0.670 (1.01)**	pCi/L	04/26/17 12:10	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC1126 Plant McDonough
Pace Project No.: 30215074

QC Batch: 254962 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30215074001, 30215074002, 30215074003, 30215074004, 30215074005, 30215074006, 30215074007

METHOD BLANK: 1255467 Matrix: Water
Associated Lab Samples: 30215074001, 30215074002, 30215074003, 30215074004, 30215074005, 30215074006, 30215074007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0962 ± 0.0828 (0.137) C:98% T:NA	pCi/L	04/19/17 08:34	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC1126 Plant McDonough
Pace Project No.: 30215074

QC Batch: 255525 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30215074001, 30215074002, 30215074003, 30215074004, 30215074005, 30215074006, 30215074007

METHOD BLANK: 1258752 Matrix: Water
Associated Lab Samples: 30215074001, 30215074002, 30215074003, 30215074004, 30215074005, 30215074006, 30215074007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.596 ± 0.409 (0.776) C:74% T:75%	pCi/L	04/21/17 12:50	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: AAC1126 Plant McDonough
Pace Project No.: 30215074

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.

Chain of Custody

30215074

Pace Analytical
www.pacelabs.com

Workorder: AAC1126 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 4/26/2017

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 HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	DGWC-67	G	3/31/2017 10:50	AAC1126-01	GW	4	X	001
2	DGWC-69	G	3/31/2017 13:10	AAC1126-02	GW	2	X	002
3	EB-3	G	3/31/2017 14:35	AAC1126-03	W	2	X	003
4	DGWC-68	G	3/31/2017 13:00	AAC1126-04	GW	2	X	004
5	DGWC-42	G	3/31/2017 14:15	AAC1126-05	GW	2	X	005
6	DGWC-47	G	3/31/2017 12:20	AAC1126-06	GW	2	X	006
7	FD-3	G	3/31/2017 0:00	AAC1126-07	GW	2	X	007
8								
9								
10								

WO#:30215074

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	MLaliman	4/3/17	Karen Hill	4/4/17 0945	
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.

30215074 -

CHAIN OF CUSTODY RECORD

Pace Analytical®

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla kiurinko@golder.com
REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com
PROJECT NAME/STATE: Plant McDonough AP
PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4, & TDS (EPA 300.0 & SM 2540C)	Radium 228 & 228 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P		
PRESERVATION:								3	7	3		
03/31/17	1050	GW		x	DGWC-67	6		1	1	4	1	Extra Radium
03/31/17	1310	GW		x	DGWC-69	4		1	1	2	2	
03/31/17	1435	W		x	EB-3	4		1	1	2	3	
03/31/17	1300	GW		x	DGWC-68	4		1	1	2	4	
03/31/17	1415	GW		x	DGWC-42	4		1	1	2	5	
03/31/17	1220	GW		x	DGWC-47	4		1	1	2	6	
03/31/17	--	GW		x	FD-3	4		1	1	2	7	
											8	
											9	
											10	
											11	
											12	

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

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 3/31/17 1700
RELINQUISHED BY:
DATE/TIME: 3/31/17 1725

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

RECEIVED BY/LAB: M Laburnam
DATE/TIME: 3/31/17 1725

FOR LAB USE ONLY
LAB #: 30215074
Entered into LIMS: MB

SAMPLE SHIPPED VIA: UPS FEDEX USPS COURIER CLIENT OTHER FS
Tracking #:

pH checked: Yes No NA
Ice: Yes No NA
Temperature: 2.2 2.2 °C
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

30215074

Client Name: Pace Atlanta Project #

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

Tracking #: 6812 5103 4016

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: KH 4/4/17

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 Matrix: WT	✓			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.
Orthophosphate field filtered			✓	12.
Organic Samples checked for dechlorination:			✓	13.
Filtered volume received for Dissolved tests			✓	14.
All containers have been checked for preservation. All containers needing preservation are found to be in compliance with EPA recommendation.	✓ ✓			15. pH <2
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed KH Date/time of preservation; Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	16.
Trip Blank Present:		✓		17.
Trip Blank Custody Seals Present			✓	
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: KH Date: 4/4/17

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

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	JC2
Date:	4/13/2017
Worklist:	35077
Matrix:	DW

Method Blank Assessment

MB Sample ID	1255467
MB concentration:	0.096
M/B Counting Uncertainty:	0.082
MB MDC:	0.137
MB Numerical Performance Indicator:	2.31
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS35077	LCSD35077
Count Date:	4/20/2017	
Spike I.D.:	17-003	
Spike Concentration (pCi/mL):	38.229	
Volume Used (mL):	0.25	
Aliquot Volume (L, g, F):	0.502	
Target Conc. (pCi/L, g, F):	19.038	
Uncertainty (Calculated):	0.896	
Result (pCi/L, g, F):	15.492	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.839	
Numerical Performance Indicator:	-5.67	
Percent Recovery:	81.37%	
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:	
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.:	30214954002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30214954002DUP	
Sample Result (pCi/L, g, F):	0.318	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.144	
Sample Duplicate Result (pCi/L, g, F):	0.163	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.157	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	1.418	30214954002
Duplicate RPD:	64.24%	30214954002DUP
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:

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

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	4/19/2017
Worklist:	35139
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1258752
MB concentration:	0.596
M/B Counting Uncertainty:	0.395
MB MDC:	0.776
MB Numerical Performance Indicator:	2.95
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS35139	LCSD35139
Count Date:	4/21/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	24.729	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.804	
Target Conc. (pCi/L, g, F):	6.148	
Uncertainty (Calculated):	0.443	
Result (pCi/L, g, F):	6.590	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.804	
Numerical Performance Indicator:	0.94	
Percent Recovery:	107.18%	
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:	
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		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30215074001	
Duplicate Sample I.D.	30215074001DUP	
Sample Result (pCi/L, g, F):	0.365	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.322	
Sample Duplicate Result (pCi/L, g, F):	1.025	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.390	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-2.557	30215074001
Duplicate RPD:	94.91%	30215074001DUP
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:	
(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:

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

LABORATORY ANALYTICAL DATA

May 2017

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: AAE0439
May 23, 2017
Project: CCR Event
Project #:Plant McDonough

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

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

May 23, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWA-2	AAE0439-01	Ground Water	05/11/17 16:12	05/12/17 10:20
DGWA-53	AAE0439-02	Ground Water	05/11/17 16:03	05/12/17 10:20
FB-1	AAE0439-03	Water	05/11/17 15:00	05/12/17 10:20
EB-1	AAE0439-04	Water	05/12/17 07:30	05/12/17 10:20

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 23, 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.

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

May 23, 2017

Report No.: AAE0439
Client ID: DGWA-2
Date/Time Sampled: 5/11/2017 4:12:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAE0439-01
Date/Time Received: 5/12/2017 10:20:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	573	25	10	mg/L	SM 2540 C		1	05/16/17 15:15	05/16/17 15:15	7050534	JPT
Inorganic Anions											
Chloride	4.4	0.25	0.01	mg/L	EPA 300.0		1	05/15/17 09:58	05/15/17 19:00	7050484	RLC
Fluoride	0.06	0.30	0.004	mg/L	EPA 300.0	J	1	05/15/17 09:58	05/15/17 19:00	7050484	RLC
Sulfate	340	20	1.8	mg/L	EPA 300.0		20	05/15/17 09:58	05/18/17 23:19	7050484	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 10:57	7050544	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 10:57	7050544	CSW
Barium	0.0231	0.0100	0.0003	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 10:57	7050544	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 10:57	7050544	CSW
Boron	1.65	0.0400	0.0060	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 10:57	7050544	CSW
Cadmium	0.0004	0.0010	0.00006	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 10:57	7050544	CSW
Calcium	102	25.0	0.522	mg/L	EPA 6020B		50	05/16/17 14:25	05/19/17 11:03	7050544	CSW
Chromium	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 10:57	7050544	CSW
Cobalt	0.0284	0.0100	0.0005	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 10:57	7050544	CSW
Lead	0.00009	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 10:57	7050544	CSW
Molybdenum	0.0009	0.0100	0.0006	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 10:57	7050544	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 10:57	7050544	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 10:57	7050544	CSW
Lithium	0.0850	0.0500	0.0011	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 10:57	7050544	CSW
Mercury	0.000083	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	05/18/17 08:30	05/18/17 14:13	7050598	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

Attention: Mr. Joju Abraham

May 23, 2017

Report No.: AAE0439
Client ID: DGWA-53
Date/Time Sampled: 5/11/2017 4:03:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAE0439-02
Date/Time Received: 5/12/2017 10:20:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	241	25	10	mg/L	SM 2540 C		1	05/16/17 15:15	05/16/17 15:15	7050534	JPT
Inorganic Anions											
Chloride	2.3	0.25	0.01	mg/L	EPA 300.0		1	05/15/17 09:58	05/15/17 19:20	7050484	RLC
Fluoride	0.07	0.30	0.004	mg/L	EPA 300.0	J	1	05/15/17 09:58	05/15/17 19:20	7050484	RLC
Sulfate	21	1.0	0.09	mg/L	EPA 300.0		1	05/15/17 09:58	05/15/17 19:20	7050484	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:09	7050544	CSW
Arsenic	0.0005	0.0050	0.0004	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 11:09	7050544	CSW
Barium	0.126	0.0100	0.0003	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:09	7050544	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:09	7050544	CSW
Boron	0.0805	0.0400	0.0060	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:09	7050544	CSW
Cadmium	0.00008	0.0010	0.00006	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 11:09	7050544	CSW
Calcium	35.8	25.0	0.522	mg/L	EPA 6020B		50	05/16/17 14:25	05/19/17 11:15	7050544	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:09	7050544	CSW
Cobalt	0.0281	0.0100	0.0005	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:09	7050544	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:09	7050544	CSW
Molybdenum	0.0375	0.0100	0.0006	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:09	7050544	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:09	7050544	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:09	7050544	CSW
Lithium	0.0087	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 11:09	7050544	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/18/17 08:30	05/18/17 14:15	7050598	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 23, 2017

Report No.: AAE0439
Client ID: FB-1
Date/Time Sampled: 5/11/2017 3:00:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0439-03
Date/Time Received: 5/12/2017 10:20:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	05/16/17 15:15	05/16/17 15:15	7050534	JPT
Inorganic Anions											
Chloride	ND	0.25	0.01	mg/L	EPA 300.0		1	05/15/17 09:58	05/15/17 19:41	7050484	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	05/15/17 09:58	05/15/17 19:41	7050484	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	05/15/17 09:58	05/15/17 19:41	7050484	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:20	7050544	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:20	7050544	CSW
Barium	0.0027	0.0100	0.0003	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 11:20	7050544	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:20	7050544	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:20	7050544	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:20	7050544	CSW
Calcium	0.0966	0.500	0.0104	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 11:20	7050544	CSW
Chromium	0.0006	0.0100	0.0003	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 11:20	7050544	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:20	7050544	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:20	7050544	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:20	7050544	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:20	7050544	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:20	7050544	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:20	7050544	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/18/17 08:30	05/18/17 14:17	7050598	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 23, 2017

Report No.: AAE0439
Client ID: EB-1
Date/Time Sampled: 5/12/2017 7:30:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0439-04
Date/Time Received: 5/12/2017 10:20:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	05/16/17 15:15	05/16/17 15:15	7050534	JPT
Inorganic Anions											
Chloride	ND	0.25	0.01	mg/L	EPA 300.0		1	05/15/17 09:58	05/15/17 20:02	7050484	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	05/15/17 09:58	05/15/17 20:02	7050484	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	05/15/17 09:58	05/15/17 20:02	7050484	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:26	7050544	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:26	7050544	CSW
Barium	0.0021	0.0100	0.0003	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 11:26	7050544	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:26	7050544	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:26	7050544	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:26	7050544	CSW
Calcium	0.0164	0.500	0.0104	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 11:26	7050544	CSW
Chromium	0.0006	0.0100	0.0003	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 11:26	7050544	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:26	7050544	CSW
Lead	0.00009	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 11:26	7050544	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:26	7050544	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:26	7050544	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:26	7050544	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:26	7050544	CSW
Mercury	0.00004	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	05/18/17 08:30	05/18/17 14:20	7050598	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 23, 2017

Report No.: AAE0439

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050534 - SM 2540 C											
Blank (7050534-BLK1)						Prepared & Analyzed: 05/16/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7050534-BS1)						Prepared & Analyzed: 05/16/17					
Total Dissolved Solids	392	25	10	mg/L	400.00		98	84-108			
Duplicate (7050534-DUP1)		**Source: AAE0439-02**				Prepared & Analyzed: 05/16/17					
Total Dissolved Solids	237	25	10	mg/L		241			2	10	

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May 23, 2017

Report No.: AAE0439

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050484 - EPA 300.0											
Blank (7050484-BLK1)						Prepared & Analyzed: 05/15/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7050484-BS1)						Prepared & Analyzed: 05/15/17					
Chloride	9.82	0.25	0.01	mg/L	10.020		98	90-110			
Fluoride	9.76	0.30	0.004	mg/L	10.020		97	90-110			
Sulfate	10.0	1.0	0.09	mg/L	10.050		100	90-110			
Matrix Spike (7050484-MS1)			**Source: AAE0388-01**			Prepared & Analyzed: 05/15/17					
Chloride	13.9	0.25	0.01	mg/L	10.020	4.17	97	90-110			
Fluoride	10.1	0.30	0.004	mg/L	10.020	0.05	100	90-110			
Sulfate	60.9	1.0	0.09	mg/L	10.050	56.4	44	90-110			QM-02
Matrix Spike (7050484-MS2)			**Source: AAE0388-07**			Prepared & Analyzed: 05/15/17					
Chloride	16.2	0.25	0.01	mg/L	10.020	7.14	91	90-110			
Fluoride	10.2	0.30	0.004	mg/L	10.020	0.05	101	90-110			
Sulfate	80.2	1.0	0.09	mg/L	10.050	78.3	19	90-110			QM-02
Matrix Spike Dup (7050484-MSD1)			**Source: AAE0388-01**			Prepared & Analyzed: 05/15/17					
Chloride	13.9	0.25	0.01	mg/L	10.020	4.17	97	90-110	0.2	15	
Fluoride	9.97	0.30	0.004	mg/L	10.020	0.05	99	90-110	1	15	
Sulfate	60.6	1.0	0.09	mg/L	10.050	56.4	41	90-110	0.5	15	QM-02

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May 23, 2017

Report No.: AAE0439

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050544 - EPA 3005A											
Blank (7050544-BLK1)						Prepared: 05/16/17 Analyzed: 05/19/17					
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	ND	0.0250	0.0003	mg/L							
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	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0011	mg/L							
LCS (7050544-BS1)						Prepared: 05/16/17 Analyzed: 05/19/17					
Antimony	0.118	0.0030	0.0003	mg/L	0.10000		118	80-120			
Arsenic	0.104	0.0050	0.0004	mg/L	0.10000		104	80-120			
Barium	0.112	0.0100	0.0003	mg/L	0.10000		112	80-120			
Beryllium	0.107	0.0030	0.00007	mg/L	0.10000		107	80-120			
Boron	1.06	0.0400	0.0060	mg/L	1.0000		106	80-120			
Cadmium	0.112	0.0010	0.00006	mg/L	0.10000		112	80-120			
Calcium	1.02	0.500	0.0104	mg/L	1.0000		102	80-120			
Chromium	0.102	0.0100	0.0003	mg/L	0.10000		102	80-120			
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000		100	80-120			
Copper	0.100	0.0250	0.0003	mg/L	0.10000		100	80-120			
Lead	0.114	0.0050	0.00007	mg/L	0.10000		114	80-120			
Molybdenum	0.111	0.0100	0.0006	mg/L	0.10000		111	80-120			
Nickel	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Selenium	0.105	0.0100	0.0014	mg/L	0.10000		105	80-120			
Silver	0.107	0.0100	0.0003	mg/L	0.10000		107	80-120			
Thallium	0.115	0.0010	0.00005	mg/L	0.10000		115	80-120			
Vanadium	0.101	0.0100	0.0014	mg/L	0.10000		101	80-120			
Zinc	0.0970	0.0100	0.0013	mg/L	0.10000		97	80-120			
Lithium	0.103	0.0500	0.0011	mg/L	0.10000		103	80-120			

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May 23, 2017

Report No.: AAE0439

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050544 - EPA 3005A											
Duplicate (7050544-DUP1)		**Source: AAE0482-01**				Prepared: 05/16/17 Analyzed: 05/19/17					
Antimony	ND	0.0030	0.0003	mg/L		ND				20	
Arsenic	0.0007	0.0050	0.0004	mg/L		0.0004			45	20	QR-01, J
Barium	0.0392	0.0100	0.0003	mg/L		0.0400			2	20	
Beryllium	0.00009	0.0030	0.00007	mg/L		ND				20	J
Boron	0.0120	0.0400	0.0060	mg/L		0.0082			38	20	QR-01, J
Cadmium	0.00008	0.0010	0.00006	mg/L		ND				20	J
Calcium	8.23	0.500	0.0104	mg/L		8.04			2	20	
Chromium	0.0007	0.0100	0.0003	mg/L		0.0004			41	20	QR-01, J
Cobalt	0.0015	0.0100	0.0005	mg/L		0.0016			6	20	J
Copper	0.0004	0.0250	0.0003	mg/L		0.0004			17	20	J
Lead	0.00008	0.0050	0.00007	mg/L		0.00008			6	20	J
Molybdenum	ND	0.0100	0.0006	mg/L		ND				20	
Nickel	0.0013	0.0100	0.0003	mg/L		0.0015			10	20	J
Selenium	ND	0.0100	0.0014	mg/L		ND				20	
Silver	ND	0.0100	0.0003	mg/L		ND				20	
Thallium	ND	0.0010	0.00005	mg/L		ND				20	
Vanadium	ND	0.0100	0.0014	mg/L		ND				20	
Zinc	0.0027	0.0100	0.0013	mg/L		0.0032			17	20	J
Lithium	0.0017	0.0500	0.0011	mg/L		0.0016			9	20	J
Matrix Spike (7050544-MS1)		**Source: AAE0439-01**				Prepared: 05/16/17 Analyzed: 05/19/17					
Antimony	0.111	0.0030	0.0003	mg/L	0.10000	ND	111	75-125			
Arsenic	0.0989	0.0050	0.0004	mg/L	0.10000	ND	99	75-125			
Barium	0.123	0.0100	0.0003	mg/L	0.10000	0.0231	100	75-125			
Beryllium	0.0983	0.0030	0.00007	mg/L	0.10000	ND	98	75-125			
Boron	2.50	0.0400	0.0060	mg/L	1.0000	1.65	85	75-125			
Cadmium	0.106	0.0010	0.00006	mg/L	0.10000	0.0004	106	75-125			
Calcium	96.4	25.0	0.522	mg/L	1.0000	102	NR	75-125			QM-02
Chromium	0.0952	0.0100	0.0003	mg/L	0.10000	0.0005	95	75-125			
Cobalt	0.121	0.0100	0.0005	mg/L	0.10000	0.0284	92	75-125			
Copper	0.0940	0.0250	0.0003	mg/L	0.10000	0.0021	92	75-125			
Lead	0.101	0.0050	0.00007	mg/L	0.10000	0.00009	101	75-125			
Molybdenum	0.104	0.0100	0.0006	mg/L	0.10000	0.0009	103	75-125			
Nickel	0.124	0.0100	0.0003	mg/L	0.10000	0.0275	97	75-125			
Selenium	0.0980	0.0100	0.0014	mg/L	0.10000	ND	98	75-125			
Silver	0.0963	0.0100	0.0003	mg/L	0.10000	ND	96	75-125			
Thallium	0.103	0.0010	0.00005	mg/L	0.10000	ND	103	75-125			
Vanadium	0.0984	0.0100	0.0014	mg/L	0.10000	ND	98	75-125			
Zinc	0.101	0.0100	0.0013	mg/L	0.10000	0.0057	95	75-125			
Lithium	0.177	0.0500	0.0011	mg/L	0.10000	0.0850	92	75-125			

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 23, 2017

Report No.: AAE0439

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050544 - EPA 3005A											
Matrix Spike Dup (7050544-MSD1)		**Source: AAE0439-01**			Prepared: 05/16/17 Analyzed: 05/19/17						
Antimony	0.115	0.0030	0.0003	mg/L	0.10000	ND	115	75-125	3	20	
Arsenic	0.108	0.0050	0.0004	mg/L	0.10000	ND	108	75-125	9	20	
Barium	0.131	0.0100	0.0003	mg/L	0.10000	0.0231	108	75-125	6	20	
Beryllium	0.103	0.0030	0.00007	mg/L	0.10000	ND	103	75-125	5	20	
Boron	2.62	0.0400	0.0060	mg/L	1.0000	1.65	97	75-125	5	20	
Cadmium	0.106	0.0010	0.00006	mg/L	0.10000	0.0004	106	75-125	0.1	20	
Calcium	103	25.0	0.522	mg/L	1.0000	102	153	75-125	7	20	QM-02
Chromium	0.103	0.0100	0.0003	mg/L	0.10000	0.0005	102	75-125	7	20	
Cobalt	0.129	0.0100	0.0005	mg/L	0.10000	0.0284	100	75-125	6	20	
Copper	0.0985	0.0250	0.0003	mg/L	0.10000	0.0021	96	75-125	5	20	
Lead	0.108	0.0050	0.00007	mg/L	0.10000	0.00009	108	75-125	6	20	
Molybdenum	0.109	0.0100	0.0006	mg/L	0.10000	0.0009	109	75-125	5	20	
Nickel	0.124	0.0100	0.0003	mg/L	0.10000	0.0275	96	75-125	0.4	20	
Selenium	0.108	0.0100	0.0014	mg/L	0.10000	ND	108	75-125	9	20	
Silver	0.101	0.0100	0.0003	mg/L	0.10000	ND	101	75-125	4	20	
Thallium	0.110	0.0010	0.00005	mg/L	0.10000	ND	110	75-125	7	20	
Vanadium	0.0979	0.0100	0.0014	mg/L	0.10000	ND	98	75-125	0.5	20	
Zinc	0.101	0.0100	0.0013	mg/L	0.10000	0.0057	95	75-125	0.2	20	
Lithium	0.183	0.0500	0.0011	mg/L	0.10000	0.0850	98	75-125	3	20	
Post Spike (7050544-PS1)		**Source: AAE0439-01**			Prepared: 05/16/17 Analyzed: 05/19/17						
Antimony	116			ug/L	100.00	0.103	115	80-120			
Arsenic	109			ug/L	100.00	0.281	109	80-120			
Barium	134			ug/L	100.00	23.1	111	80-120			
Beryllium	93.8			ug/L	100.00	0.0523	94	80-120			
Boron	2480			ug/L	1000.0	1650	83	80-120			
Cadmium	112			ug/L	100.00	0.406	111	80-120			
Calcium	104000			ug/L	1000.0	102000	214	80-120			QM-02
Chromium	103			ug/L	100.00	0.548	103	80-120			
Cobalt	128			ug/L	100.00	28.4	100	80-120			
Copper	102			ug/L	100.00	2.11	100	80-120			
Lead	107			ug/L	100.00	0.0897	107	80-120			
Molybdenum	115			ug/L	100.00	0.864	115	80-120			
Nickel	130			ug/L	100.00	27.5	102	80-120			
Selenium	109			ug/L	100.00	0.999	108	80-120			
Silver	102			ug/L	100.00	0.0174	102	80-120			
Thallium	109			ug/L	100.00	-0.0195	109	80-120			
Vanadium	104			ug/L	100.00	0.633	104	80-120			
Zinc	101			ug/L	100.00	5.71	96	80-120			
Lithium	175			ug/L	100.00	85.0	90	80-120			

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 23, 2017

Report No.: AAE0439

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050598 - EPA 7470A											
Blank (7050598-BLK1)						Prepared & Analyzed: 05/18/17					
Mercury	0.00007	0.00050	0.000041	mg/L							J
LCS (7050598-BS1)						Prepared & Analyzed: 05/18/17					
Mercury	0.00250	0.00050	0.000041	mg/L	2.5000E-3		100	80-120			
Matrix Spike (7050598-MS1)		**Source: AAE0482-06**				Prepared & Analyzed: 05/18/17					
Mercury	0.00254	0.00050	0.000041	mg/L	2.5000E-3	ND	102	75-125			
Matrix Spike Dup (7050598-MSD1)		**Source: AAE0482-06**				Prepared & Analyzed: 05/18/17					
Mercury	0.00251	0.00050	0.000041	mg/L	2.5000E-3	ND	100	75-125	1	20	
Post Spike (7050598-PS1)		**Source: AAE0482-06**				Prepared & Analyzed: 05/18/17					
Mercury	1.76			ug/L	1.6667	0.0190	104	80-120			

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May 23, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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-01 RPD was outside acceptance limits due to sample concentrations near or below the reporting limit.

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.

CHAIN OF CUSTODY RECORD

Pace Analytical
www.pacelabs.com

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

CLIENT NAME: GEORGIA POWER

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 RALPH McGILL BLVD SE B10185
ATLANTA GA 30308
404-506-7239

REPORT TO: DAWN PRELL
DAWN_PRELL@GOLDER.COM

CC: MARIA PADILLA
KJURINKO@GOLDER.COM

REQUESTED COMPLETION DATE:

PO #:
LABURCH@SOUTHERNCO.COM

PROJECT NAME/STATE:
PLANT McDONOUGH AP

PROJECT #:
PHASE II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		METALS APP III + IV (EPA 6020/7470)	Cl, F, SO4 + TDS (EPA 300.0 + SM2540C)	RADIUM 226 + 228 (SW-846 9315/9320)							LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P								
PRESERVATION:								3	7	3								
5.11.17	1612	GW		X	DGWA-2	6		1	1	4							1	EXTRA RAD
5.11.17	1603	GW		X	DGWA-53	4		1	1	2							2	
5.11.17	1500	W		X	FB-1	4		1	1	2							3	
5.12.17	0730	W		X	EB-1	4		1	1	2							4	

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

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: AUBREY ELLIS FIELD LEAD
DATE/TIME: 05.12.2017 / 0730

RELINQUISHED BY: Aubrey Ellis
DATE/TIME: 5.12.17 / 853

RECEIVED BY: Pic Nguyen
DATE/TIME: 5/12/17 0853

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB: Raeman
DATE/TIME: 05/12/17 1020

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

Packed: No NA
Ice: Yes No NA
Temperature: 2.5 Min: 2.5 Max:
Custody Seal: Intact Broken Not Present N/A
Pel-Coolers
Cooler ID:

FOR LAB USE ONLY
LAB #: AAE04439
Entered into LIMS: MR
Tracking #:

Rev. 12/15/2016

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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LOG-IN CHECKLIST

Printed: 5/15/2017 8:43:32AM

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 05/12/17 10:20

Work Order: AAE0439
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 4 **#Containers:** 18

Minimum Temp(C): 2.5 **Maximum Temp(C):** 2.5 **Custody Seal(s) Used:** N/A

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	N/A
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

June 07, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAE0439 Plant McDonough
Pace Project No.: 30218862

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on May 15, 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

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

CERTIFICATIONS

Project: AAE0439 Plant McDonough
Pace Project No.: 30218862

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

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: AAE0439 Plant McDonough
Pace Project No.: 30218862

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30218862001	**DGWA-2**	Water	05/11/17 16:12	05/15/17 09:30
30218862002	**DGWA-53**	Water	05/11/17 16:03	05/15/17 09:30
30218862003	**FB-1**	Water	05/11/17 15:00	05/15/17 09:30
30218862004	**EB-1**	Water	05/12/17 07:30	05/15/17 09:30

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: AAE0439 Plant McDonough
Pace Project No.: 30218862

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30218862001	**DGWA-2**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30218862002	**DGWA-53**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30218862003	**FB-1**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30218862004	**EB-1**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

Pace Analytical Services, LLC
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Greensburg, PA 15601
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAE0439 Plant McDonough
Pace Project No.: 30218862

Sample: DGWA-2 **Lab ID: 30218862001** Collected: 05/11/17 16:12 Received: 05/15/17 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	**0.223 ± 0.198 (0.384) C:84% T:NA**	pCi/L	05/22/17 09:24	13982-63-3	
Radium-228	EPA 9320	**0.669 ± 0.356 (0.637) C:96% T:84%**	pCi/L	06/02/17 16:28	15262-20-1	
Total Radium	Total Radium Calculation	**0.892 ± 0.554 (1.02)**	pCi/L	06/06/17 14:13	7440-14-4	

Sample: DGWA-53 **Lab ID: 30218862002** Collected: 05/11/17 16:03 Received: 05/15/17 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	**1.98 ± 0.498 (0.366) C:86% T:NA**	pCi/L	05/22/17 09:24	13982-63-3	
Radium-228	EPA 9320	**1.47 ± 0.470 (0.623) C:94% T:91%**	pCi/L	06/02/17 16:28	15262-20-1	
Total Radium	Total Radium Calculation	**3.45 ± 0.968 (0.989)**	pCi/L	06/06/17 14:13	7440-14-4	

Sample: FB-1 **Lab ID: 30218862003** Collected: 05/11/17 15:00 Received: 05/15/17 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	**-0.000829 ± 0.0628 (0.185) C:79% T:NA**	pCi/L	05/24/17 11:25	13982-63-3	
Radium-228	EPA 9320	**0.388 ± 0.372 (0.767) C:92% T:81%**	pCi/L	06/02/17 16:29	15262-20-1	
Total Radium	Total Radium Calculation	**0.388 ± 0.435 (0.952)**	pCi/L	06/06/17 14:13	7440-14-4	

Sample: EB-1 **Lab ID: 30218862004** Collected: 05/12/17 07:30 Received: 05/15/17 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	**-0.0385 ± 0.0338 (0.171) C:83% T:NA**	pCi/L	05/24/17 11:25	13982-63-3	
Radium-228	EPA 9320	**0.473 ± 0.354 (0.697) C:94% T:80%**	pCi/L	06/02/17 16:29	15262-20-1	
Total Radium	Total Radium Calculation	**0.473 ± 0.388 (0.868)**	pCi/L	06/06/17 14:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAE0439 Plant McDonough
Pace Project No.: 30218862

QC Batch: 258733 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30218862001, 30218862002, 30218862003, 30218862004

METHOD BLANK: 1274461 Matrix: Water
Associated Lab Samples: 30218862001, 30218862002, 30218862003, 30218862004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00989 ± 0.108 (0.288) C:89% T:NA	pCi/L	05/22/17 09:24	

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

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAE0439 Plant McDonough
Pace Project No.: 30218862

QC Batch: 259469 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30218862001, 30218862002, 30218862003, 30218862004

METHOD BLANK: 1278134 Matrix: Water
Associated Lab Samples: 30218862001, 30218862002, 30218862003, 30218862004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.550 ± 0.338 (0.616) C:94% T:73%	pCi/L	06/02/17 16:30	

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

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

QUALIFIERS

Project: AAE0439 Plant McDonough
Pace Project No.: 30218862

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.

WO# : 30218862

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAE0439 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 6/6/2017

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 HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	DGWA-2	G	5/11/2017 16:12	AAE0439-01	GW	4	X	001
2	DGWA-53	G	5/11/2017 16:03	AAE0439-02	GW	2	X	002
3	FB-1	G	5/11/2017 15:00	AAE0439-03	W	2	X	003
4	EB-1	G	5/12/2017 7:30	AAE0439-04	W	2	X	004
5								
6								
7								
8								
9								
10								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	5/12/17	LBig Pace	5/15/17 0930	
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.

RTB

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace GA Project # 30218862

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

Tracking #: 6812 5104 3558

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 5/15/17

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: -Includes date/time/ID Matrix: WT	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:	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. All containers needing preservation are found to be in compliance with EPA recommendation.	X			15. pH<2
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: 5/15/17 RTB; 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: RTB; Date: 5/15/17

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.

30218862

CHAIN OF CUSTODY RECORD

Pace Analytical
www.pacelabs.com

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

PAGE: 1 OF 1

CLIENT NAME: GEORGIA POWER

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 RALPH MCGILL BLVD SE B10185
ATLANTA GA 30308
404-506-7239

REPORT TO: DAWN PRELL
DAWN_PRELL@GOLDER.COM

CC: MARIA PADILLA
KJURINKO@GOLDER.COM

REQUESTED COMPLETION DATE:

PO #: LABURCH@SOUTHERNCO.COM

PROJECT NAME/STATE: PLANT MCDONOUGH AP

PROJECT #: PHASE II CCR

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		METALS APP III + IV (EPA 6020/4170)	Cl, F, SO4 + TDS (EPA 300.0 + SM2540C)	RADIUM 226 + 228 (SW-846 9315/9320)							LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P								
PRESERVATION:								3	7	3								
5.11.17	1612	GW		X	DGWA-2	6		1	1	4							1	EXTRA RAD
5.11.17	1603	GW		X	DGWA-53	4		1	1	2							2	
5.11.17	1500	W		X	FB-1	4		1	1	2							3	
5.12.17	0730	W		X	EB-1	4		1	1	2							4	

ANALYSIS REQUESTED

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: AUBREY ELLIS FIELD LEAD
DATE/TIME: 05.12.2017 / 0730

RECEIVED BY: Pete Nguyen
DATE/TIME: 5/12/17 0853

RELINQUISHED BY: Aubrey Ellis
DATE/TIME: 5.12.17 / 853

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY / AFFILIATION: Zoeaman
DATE/TIME: 05/12/17 1020

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

Custody Seal: Intact Broken Not Present N/A

Pet Coolers

Cooler ID:

Temperature: 2.1 Min 2.5 Max

Ice: Yes No NA

pH Checked: Yes No NA

FOR LAB USE ONLY
LAB #: AAE0439
Entered Into LIMS: MR
Tracking #:

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	5/27/2017
Worklist:	35805
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1278134
MB concentration:	0.550
M/B Counting Uncertainty:	0.323
MB MDC:	0.616
MB Numerical Performance Indicator:	3.34
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS35805	LCSD35805
Count Date:	6/2/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	24.388	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.829	
Target Conc. (pCi/L, g, F):	5.885	
Uncertainty (Calculated):	0.424	
Result (pCi/L, g, F):	6.176	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.678	
Numerical Performance Indicator:	0.71	
Percent Recovery:	104.93%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Duplicate Sample Assessment		
Sample I.D.:	30218862001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30218862001DUP	
Sample Result (pCi/L, g, F):	0.669	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.335	
Sample Duplicate Result (pCi/L, g, F):	0.732	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.329	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.265	30218862001
Duplicate RPD:	9.05%	30218862001DUP
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:	
(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:

6/7/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	5/22/2017
Worklist:	35680
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1274461
MB concentration:	0.010
M/B Counting Uncertainty:	0.108
MB MDC:	0.288
MB Numerical Performance Indicator:	0.18
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS35680	LCSD35680
Count Date:	5/24/2017	
Spike I.D.:	13-033	
Spike Concentration (pCi/mL):	19.848	
Volume Used (mL):	0.40	
Aliquot Volume (L, g, F):	0.502	
Target Conc. (pCi/L, g, F):	15.827	
Uncertainty (Calculated):	0.745	
Result (pCi/L, g, F):	14.483	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.895	
Numerical Performance Indicator:	-2.26	
Percent Recovery:	91.51%	
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:	
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.:	30218862001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30218862001DUP	
Sample Result (pCi/L, g, F):	0.223	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.195	
Sample Duplicate Result (pCi/L, g, F):	0.160	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.143	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.510	30218862001
Duplicate RPD:	32.90%	30218862001DUP
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:

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

2nd 6/7/17

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: AAE0482
May 24, 2017
Project: CCR Event
Project #:Plant McDonough

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

PACE ANALYTICAL SERVICES, LLC.

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May 24, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWA-71	AAE0482-01	Ground Water	05/12/17 11:08	05/13/17 11:30
FD-1	AAE0482-02	Ground Water	05/12/17 00:00	05/13/17 11:30
DGWC-4	AAE0482-03	Ground Water	05/12/17 14:12	05/13/17 11:30
DGWC-23	AAE0482-04	Ground Water	05/12/17 16:31	05/13/17 11:30
DGWC-67	AAE0482-05	Ground Water	05/12/17 16:18	05/13/17 11:30
DGWC-68A	AAE0482-06	Ground Water	05/12/17 13:21	05/13/17 11:30
DGWC-69	AAE0482-07	Ground Water	05/12/17 11:29	05/13/17 11:30

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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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Attention: Mr. Joju Abraham

May 24, 2017

Report No.: AAE0482
Client ID: DGWA-71
Date/Time Sampled: 5/12/2017 11:08:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAE0482-01
Date/Time Received: 5/13/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	92	25	10	mg/L	SM 2540 C		1	05/18/17 12:40	05/18/17 12:40	7050535	JPT
Inorganic Anions											
Chloride	3.8	0.25	0.01	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 15:15	7050518	SLH
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 15:15	7050518	SLH
Sulfate	17	1.0	0.09	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 15:15	7050518	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:55	7050544	CSW
Arsenic	0.0004	0.0050	0.0004	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 11:55	7050544	CSW
Barium	0.0400	0.0100	0.0003	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:55	7050544	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:55	7050544	CSW
Boron	0.0082	0.0400	0.0060	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 11:55	7050544	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:55	7050544	CSW
Calcium	8.04	0.500	0.0104	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:55	7050544	CSW
Chromium	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 11:55	7050544	CSW
Cobalt	0.0016	0.0100	0.0005	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 11:55	7050544	CSW
Lead	0.00008	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 11:55	7050544	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:55	7050544	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:55	7050544	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/16/17 14:25	05/19/17 11:55	7050544	CSW
Lithium	0.0016	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/16/17 14:25	05/19/17 11:55	7050544	CSW
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	05/18/17 08:30	05/18/17 14:27	7050598	MTC

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May 24, 2017

Report No.: AAE0482
Client ID: FD-1
Date/Time Sampled: 5/12/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAE0482-02
Date/Time Received: 5/13/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	121	25	10	mg/L	SM 2540 C		1	05/18/17 12:40	05/18/17 12:40	7050535	JPT
Inorganic Anions											
Chloride	3.8	0.25	0.01	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 15:36	7050518	SLH
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 15:36	7050518	SLH
Sulfate	17	1.0	0.09	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 15:36	7050518	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 18:40	7050560	CSW
Arsenic	0.0004	0.0050	0.0004	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 18:40	7050560	CSW
Barium	0.0384	0.0100	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 18:40	7050560	CSW
Beryllium	0.00009	0.0030	0.00007	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 18:40	7050560	CSW
Boron	0.0110	0.0400	0.0060	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 18:40	7050560	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 18:40	7050560	CSW
Calcium	8.92	5.00	0.522	mg/L	EPA 6020B	B-01	50	05/17/17 14:40	05/18/17 18:46	7050560	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 18:40	7050560	CSW
Cobalt	0.0017	0.0100	0.0005	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 18:40	7050560	CSW
Lead	0.00007	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 18:40	7050560	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 18:40	7050560	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 18:40	7050560	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 18:40	7050560	CSW
Lithium	0.0019	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 18:40	7050560	CSW
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	05/18/17 08:30	05/18/17 14:29	7050598	MTC

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May 24, 2017

Report No.: AAE0482
Client ID: DGWC-4
Date/Time Sampled: 5/12/2017 2:12:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAE0482-03
Date/Time Received: 5/13/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1230	25	10	mg/L	SM 2540 C		1	05/18/17 12:40	05/18/17 12:40	7050535	JPT
Inorganic Anions											
Chloride	29	0.25	0.01	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 17:19	7050518	SLH
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 17:19	7050518	SLH
Sulfate	680	20	1.8	mg/L	EPA 300.0		20	05/15/17 19:30	05/22/17 19:07	7050518	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 18:51	7050560	CSW
Arsenic	0.0005	0.0050	0.0004	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 18:51	7050560	CSW
Barium	0.0337	0.0100	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 18:51	7050560	CSW
Beryllium	0.0002	0.0030	0.00007	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 18:51	7050560	CSW
Boron	3.58	0.0400	0.0060	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 18:51	7050560	CSW
Cadmium	0.0006	0.0010	0.00006	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 18:51	7050560	CSW
Calcium	233	25.0	0.522	mg/L	EPA 6020B	B-01	50	05/17/17 14:40	05/18/17 18:57	7050560	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 18:51	7050560	CSW
Cobalt	0.0015	0.0100	0.0005	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 18:51	7050560	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 18:51	7050560	CSW
Molybdenum	0.0062	0.0100	0.0006	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 18:51	7050560	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 18:51	7050560	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 18:51	7050560	CSW
Lithium	0.0027	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 18:51	7050560	CSW
Mercury	0.000082	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	05/18/17 08:30	05/18/17 14:32	7050598	MTC

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Report No.: AAE0482
Client ID: DGWC-23
Date/Time Sampled: 5/12/2017 4:31:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAE0482-04
Date/Time Received: 5/13/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	438	25	10	mg/L	SM 2540 C		1	05/18/17 12:40	05/18/17 12:40	7050535	JPT
Inorganic Anions											
Chloride	17	0.25	0.01	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 18:21	7050518	SLH
Fluoride	0.36	0.30	0.004	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 18:21	7050518	SLH
Sulfate	220	10	0.92	mg/L	EPA 300.0		10	05/15/17 19:30	05/22/17 19:28	7050518	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:14	7050560	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:14	7050560	CSW
Barium	0.0202	0.0100	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:14	7050560	CSW
Beryllium	0.0004	0.0030	0.00007	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 19:14	7050560	CSW
Boron	4.03	0.0400	0.0060	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:14	7050560	CSW
Cadmium	0.0003	0.0010	0.00006	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 19:14	7050560	CSW
Calcium	71.1	25.0	0.522	mg/L	EPA 6020B	B-01	50	05/17/17 14:40	05/18/17 19:20	7050560	CSW
Chromium	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 19:14	7050560	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:14	7050560	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:14	7050560	CSW
Molybdenum	0.0085	0.0100	0.0006	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 19:14	7050560	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:14	7050560	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:14	7050560	CSW
Lithium	0.0036	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 19:14	7050560	CSW
Mercury	0.00015	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	05/18/17 08:30	05/18/17 14:34	7050598	MTC

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Report No.: AAE0482
Client ID: DGWC-67
Date/Time Sampled: 5/12/2017 4:18:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAE0482-05
Date/Time Received: 5/13/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	287	25	10	mg/L	SM 2540 C		1	05/18/17 12:40	05/18/17 12:40	7050535	JPT
Inorganic Anions											
Chloride	5.6	0.25	0.01	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 18:42	7050518	SLH
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 18:42	7050518	SLH
Sulfate	100	10	0.92	mg/L	EPA 300.0		10	05/15/17 19:30	05/22/17 19:49	7050518	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:26	7050560	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:26	7050560	CSW
Barium	0.127	0.0100	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:26	7050560	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:26	7050560	CSW
Boron	3.24	0.0400	0.0060	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:26	7050560	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:26	7050560	CSW
Calcium	43.6	25.0	0.522	mg/L	EPA 6020B	B-01	50	05/17/17 14:40	05/18/17 19:31	7050560	CSW
Chromium	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 19:26	7050560	CSW
Cobalt	0.0037	0.0100	0.0005	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 19:26	7050560	CSW
Lead	0.00009	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 19:26	7050560	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:26	7050560	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:26	7050560	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:26	7050560	CSW
Lithium	0.0054	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 19:26	7050560	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/18/17 08:30	05/18/17 14:36	7050598	MTC

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Report No.: AAE0482
Client ID: DGWC-68A
Date/Time Sampled: 5/12/2017 1:21:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAE0482-06
Date/Time Received: 5/13/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	300	25	10	mg/L	SM 2540 C		1	05/18/17 12:40	05/18/17 12:40	7050535	JPT
Inorganic Anions											
Chloride	4.2	0.25	0.01	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 19:02	7050518	SLH
Fluoride	0.37	0.30	0.004	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 19:02	7050518	SLH
Sulfate	50	1.0	0.09	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 19:02	7050518	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:37	7050560	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:37	7050560	CSW
Barium	0.0890	0.0100	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:37	7050560	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:37	7050560	CSW
Boron	1.80	0.0400	0.0060	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:37	7050560	CSW
Cadmium	0.00008	0.0010	0.00006	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 19:37	7050560	CSW
Calcium	51.7	25.0	0.522	mg/L	EPA 6020B	B-01	50	05/17/17 14:40	05/18/17 19:43	7050560	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:37	7050560	CSW
Cobalt	0.0015	0.0100	0.0005	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 19:37	7050560	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:37	7050560	CSW
Molybdenum	0.275	0.0100	0.0006	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:37	7050560	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:37	7050560	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:37	7050560	CSW
Lithium	0.0016	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 19:37	7050560	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/18/17 08:30	05/18/17 14:39	7050598	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 24, 2017

Report No.: AAE0482
Client ID: DGWC-69
Date/Time Sampled: 5/12/2017 11:29:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAE0482-07
Date/Time Received: 5/13/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	243	25	10	mg/L	SM 2540 C		1	05/18/17 12:40	05/18/17 12:40	7050535	JPT
Inorganic Anions											
Chloride	4.4	0.25	0.01	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 19:23	7050518	SLH
Fluoride	0.12	0.30	0.004	mg/L	EPA 300.0	J	1	05/15/17 19:30	05/16/17 19:23	7050518	SLH
Sulfate	17	1.0	0.09	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 19:23	7050518	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:49	7050560	CSW
Arsenic	0.0097	0.0050	0.0004	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:49	7050560	CSW
Barium	0.0929	0.0100	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:49	7050560	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:49	7050560	CSW
Boron	0.311	0.0400	0.0060	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:49	7050560	CSW
Cadmium	0.0002	0.0010	0.00006	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 19:49	7050560	CSW
Calcium	18.9	25.0	0.522	mg/L	EPA 6020B	B-01, J	50	05/17/17 14:40	05/18/17 19:54	7050560	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:49	7050560	CSW
Cobalt	0.0016	0.0100	0.0005	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 19:49	7050560	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 19:49	7050560	CSW
Molybdenum	0.0117	0.0100	0.0006	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:49	7050560	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:49	7050560	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 19:49	7050560	CSW
Lithium	0.0030	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 19:49	7050560	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/18/17 08:30	05/18/17 14:41	7050598	MTC

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General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050535 - SM 2540 C											
Blank (7050535-BLK1)						Prepared & Analyzed: 05/18/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7050535-BS1)						Prepared & Analyzed: 05/18/17					
Total Dissolved Solids	408	25	10	mg/L	400.00		102	84-108			
Duplicate (7050535-DUP1)		**Source: AAE0482-07**				Prepared & Analyzed: 05/18/17					
Total Dissolved Solids	132	25	10	mg/L		243			59	10	QR-03
Duplicate (7050535-DUP2)		**Source: AAE0548-05**				Prepared & Analyzed: 05/18/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	

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Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050518 - EPA 300.0											
Blank (7050518-BLK1)						Prepared: 05/15/17 Analyzed: 05/16/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7050518-BS1)						Prepared: 05/15/17 Analyzed: 05/16/17					
Chloride	10.1	0.25	0.01	mg/L	10.020		101	90-110			
Fluoride	9.90	0.30	0.004	mg/L	10.020		99	90-110			
Sulfate	10.2	1.0	0.09	mg/L	10.050		102	90-110			
Matrix Spike (7050518-MS1)		**Source: AAE0482-03**				Prepared: 05/15/17 Analyzed: 05/16/17					
Chloride	36.4	0.25	0.01	mg/L	10.020	28.9	75	90-110			QM-02
Fluoride	10.3	0.30	0.004	mg/L	10.020	ND	103	90-110			
Sulfate	356	1.0	0.09	mg/L	10.050	376	NR	90-110			QM-02
Matrix Spike (7050518-MS2)		**Source: AAE0503-02**				Prepared: 05/15/17 Analyzed: 05/16/17					
Chloride	12.0	0.25	0.01	mg/L	10.020	1.82	101	90-110			
Fluoride	10.1	0.30	0.004	mg/L	10.020	0.02	101	90-110			
Sulfate	10.8	1.0	0.09	mg/L	10.050	0.45	103	90-110			
Matrix Spike Dup (7050518-MSD1)		**Source: AAE0482-03**				Prepared: 05/15/17 Analyzed: 05/16/17					
Chloride	36.4	0.25	0.01	mg/L	10.020	28.9	75	90-110	0.2	15	QM-02
Fluoride	10.5	0.30	0.004	mg/L	10.020	ND	105	90-110	2	15	
Sulfate	356	1.0	0.09	mg/L	10.050	376	NR	90-110	0.04	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
Batch 7050544 - EPA 3005A											
Blank (7050544-BLK1)						Prepared: 05/16/17 Analyzed: 05/19/17					
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	ND	0.0250	0.0003	mg/L							
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	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0011	mg/L							
LCS (7050544-BS1)						Prepared: 05/16/17 Analyzed: 05/19/17					
Antimony	0.118	0.0030	0.0003	mg/L	0.10000		118	80-120			
Arsenic	0.104	0.0050	0.0004	mg/L	0.10000		104	80-120			
Barium	0.112	0.0100	0.0003	mg/L	0.10000		112	80-120			
Beryllium	0.107	0.0030	0.00007	mg/L	0.10000		107	80-120			
Boron	1.06	0.0400	0.0060	mg/L	1.0000		106	80-120			
Cadmium	0.112	0.0010	0.00006	mg/L	0.10000		112	80-120			
Calcium	1.02	0.500	0.0104	mg/L	1.0000		102	80-120			
Chromium	0.102	0.0100	0.0003	mg/L	0.10000		102	80-120			
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000		100	80-120			
Copper	0.100	0.0250	0.0003	mg/L	0.10000		100	80-120			
Lead	0.114	0.0050	0.00007	mg/L	0.10000		114	80-120			
Molybdenum	0.111	0.0100	0.0006	mg/L	0.10000		111	80-120			
Nickel	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Selenium	0.105	0.0100	0.0014	mg/L	0.10000		105	80-120			
Silver	0.107	0.0100	0.0003	mg/L	0.10000		107	80-120			
Thallium	0.115	0.0010	0.00005	mg/L	0.10000		115	80-120			
Vanadium	0.101	0.0100	0.0014	mg/L	0.10000		101	80-120			
Zinc	0.0970	0.0100	0.0013	mg/L	0.10000		97	80-120			
Lithium	0.103	0.0500	0.0011	mg/L	0.10000		103	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
Batch 7050544 - EPA 3005A											
Duplicate (7050544-DUP1)		**Source: AAE0482-01**				Prepared: 05/16/17 Analyzed: 05/19/17					
Antimony	ND	0.0030	0.0003	mg/L		ND				20	
Arsenic	0.0007	0.0050	0.0004	mg/L		0.0004			45	20	QR-01, J
Barium	0.0392	0.0100	0.0003	mg/L		0.0400			2	20	
Beryllium	0.00009	0.0030	0.00007	mg/L		ND				20	J
Boron	0.0120	0.0400	0.0060	mg/L		0.0082			38	20	QR-01, J
Cadmium	0.00008	0.0010	0.00006	mg/L		ND				20	J
Calcium	8.23	0.500	0.0104	mg/L		8.04			2	20	
Chromium	0.0007	0.0100	0.0003	mg/L		0.0004			41	20	QR-01, J
Cobalt	0.0015	0.0100	0.0005	mg/L		0.0016			6	20	J
Copper	0.0004	0.0250	0.0003	mg/L		0.0004			17	20	J
Lead	0.00008	0.0050	0.00007	mg/L		0.00008			6	20	J
Molybdenum	ND	0.0100	0.0006	mg/L		ND				20	
Nickel	0.0013	0.0100	0.0003	mg/L		0.0015			10	20	J
Selenium	ND	0.0100	0.0014	mg/L		ND				20	
Silver	ND	0.0100	0.0003	mg/L		ND				20	
Thallium	ND	0.0010	0.00005	mg/L		ND				20	
Vanadium	ND	0.0100	0.0014	mg/L		ND				20	
Zinc	0.0027	0.0100	0.0013	mg/L		0.0032			17	20	J
Lithium	0.0017	0.0500	0.0011	mg/L		0.0016			9	20	J
Matrix Spike (7050544-MS1)		**Source: AAE0439-01**				Prepared: 05/16/17 Analyzed: 05/19/17					
Antimony	0.111	0.0030	0.0003	mg/L	0.10000	ND	111	75-125			
Arsenic	0.0989	0.0050	0.0004	mg/L	0.10000	ND	99	75-125			
Barium	0.123	0.0100	0.0003	mg/L	0.10000	0.0231	100	75-125			
Beryllium	0.0983	0.0030	0.00007	mg/L	0.10000	ND	98	75-125			
Boron	2.50	0.0400	0.0060	mg/L	1.0000	1.65	85	75-125			
Cadmium	0.106	0.0010	0.00006	mg/L	0.10000	0.0004	106	75-125			
Calcium	96.4	25.0	0.522	mg/L	1.0000	102	NR	75-125			QM-02
Chromium	0.0952	0.0100	0.0003	mg/L	0.10000	0.0005	95	75-125			
Cobalt	0.121	0.0100	0.0005	mg/L	0.10000	0.0284	92	75-125			
Copper	0.0940	0.0250	0.0003	mg/L	0.10000	0.0021	92	75-125			
Lead	0.101	0.0050	0.00007	mg/L	0.10000	0.00009	101	75-125			
Molybdenum	0.104	0.0100	0.0006	mg/L	0.10000	0.0009	103	75-125			
Nickel	0.124	0.0100	0.0003	mg/L	0.10000	0.0275	97	75-125			
Selenium	0.0980	0.0100	0.0014	mg/L	0.10000	ND	98	75-125			
Silver	0.0963	0.0100	0.0003	mg/L	0.10000	ND	96	75-125			
Thallium	0.103	0.0010	0.00005	mg/L	0.10000	ND	103	75-125			
Vanadium	0.0984	0.0100	0.0014	mg/L	0.10000	ND	98	75-125			
Zinc	0.101	0.0100	0.0013	mg/L	0.10000	0.0057	95	75-125			
Lithium	0.177	0.0500	0.0011	mg/L	0.10000	0.0850	92	75-125			

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May 24, 2017

Report No.: AAE0482

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050544 - EPA 3005A											
Matrix Spike Dup (7050544-MSD1)		**Source: AAE0439-01**			Prepared: 05/16/17 Analyzed: 05/19/17						
Antimony	0.115	0.0030	0.0003	mg/L	0.10000	ND	115	75-125	3	20	
Arsenic	0.108	0.0050	0.0004	mg/L	0.10000	ND	108	75-125	9	20	
Barium	0.131	0.0100	0.0003	mg/L	0.10000	0.0231	108	75-125	6	20	
Beryllium	0.103	0.0030	0.00007	mg/L	0.10000	ND	103	75-125	5	20	
Boron	2.62	0.0400	0.0060	mg/L	1.0000	1.65	97	75-125	5	20	
Cadmium	0.106	0.0010	0.00006	mg/L	0.10000	0.0004	106	75-125	0.1	20	
Calcium	103	25.0	0.522	mg/L	1.0000	102	153	75-125	7	20	QM-02
Chromium	0.103	0.0100	0.0003	mg/L	0.10000	0.0005	102	75-125	7	20	
Cobalt	0.129	0.0100	0.0005	mg/L	0.10000	0.0284	100	75-125	6	20	
Copper	0.0985	0.0250	0.0003	mg/L	0.10000	0.0021	96	75-125	5	20	
Lead	0.108	0.0050	0.00007	mg/L	0.10000	0.00009	108	75-125	6	20	
Molybdenum	0.109	0.0100	0.0006	mg/L	0.10000	0.0009	109	75-125	5	20	
Nickel	0.124	0.0100	0.0003	mg/L	0.10000	0.0275	96	75-125	0.4	20	
Selenium	0.108	0.0100	0.0014	mg/L	0.10000	ND	108	75-125	9	20	
Silver	0.101	0.0100	0.0003	mg/L	0.10000	ND	101	75-125	4	20	
Thallium	0.110	0.0010	0.00005	mg/L	0.10000	ND	110	75-125	7	20	
Vanadium	0.0979	0.0100	0.0014	mg/L	0.10000	ND	98	75-125	0.5	20	
Zinc	0.101	0.0100	0.0013	mg/L	0.10000	0.0057	95	75-125	0.2	20	
Lithium	0.183	0.0500	0.0011	mg/L	0.10000	0.0850	98	75-125	3	20	
Post Spike (7050544-PS1)		**Source: AAE0439-01**			Prepared: 05/16/17 Analyzed: 05/19/17						
Antimony	116			ug/L	100.00	0.103	115	80-120			
Arsenic	109			ug/L	100.00	0.281	109	80-120			
Barium	134			ug/L	100.00	23.1	111	80-120			
Beryllium	93.8			ug/L	100.00	0.0523	94	80-120			
Boron	2480			ug/L	1000.0	1650	83	80-120			
Cadmium	112			ug/L	100.00	0.406	111	80-120			
Calcium	104000			ug/L	1000.0	102000	214	80-120			QM-02
Chromium	103			ug/L	100.00	0.548	103	80-120			
Cobalt	128			ug/L	100.00	28.4	100	80-120			
Copper	102			ug/L	100.00	2.11	100	80-120			
Lead	107			ug/L	100.00	0.0897	107	80-120			
Molybdenum	115			ug/L	100.00	0.864	115	80-120			
Nickel	130			ug/L	100.00	27.5	102	80-120			
Selenium	109			ug/L	100.00	0.999	108	80-120			
Silver	102			ug/L	100.00	0.0174	102	80-120			
Thallium	109			ug/L	100.00	-0.0195	109	80-120			
Vanadium	104			ug/L	100.00	0.633	104	80-120			
Zinc	101			ug/L	100.00	5.71	96	80-120			
Lithium	175			ug/L	100.00	85.0	90	80-120			

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May 24, 2017

Report No.: AAE0482

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050560 - EPA 3005A											
Blank (7050560-BLK1)						Prepared: 05/17/17 Analyzed: 05/18/17					
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	0.0124	0.500	0.0104	mg/L							J
Chromium	ND	0.0100	0.0003	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0003	mg/L							
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	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0011	mg/L							
LCS (7050560-BS1)						Prepared: 05/17/17 Analyzed: 05/18/17					
Antimony	0.107	0.0030	0.0003	mg/L	0.10000		107	80-120			
Arsenic	0.103	0.0050	0.0004	mg/L	0.10000		103	80-120			
Barium	0.106	0.0100	0.0003	mg/L	0.10000		106	80-120			
Beryllium	0.106	0.0030	0.00007	mg/L	0.10000		106	80-120			
Boron	1.07	0.0400	0.0060	mg/L	1.0000		107	80-120			
Cadmium	0.108	0.0010	0.00006	mg/L	0.10000		108	80-120			
Calcium	1.05	0.500	0.0104	mg/L	1.0000		105	80-120			
Chromium	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Copper	0.102	0.0250	0.0003	mg/L	0.10000		102	80-120			
Lead	0.104	0.0050	0.00007	mg/L	0.10000		104	80-120			
Molybdenum	0.108	0.0100	0.0006	mg/L	0.10000		108	80-120			
Nickel	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Selenium	0.105	0.0100	0.0014	mg/L	0.10000		105	80-120			
Silver	0.107	0.0100	0.0003	mg/L	0.10000		107	80-120			
Thallium	0.107	0.0010	0.00005	mg/L	0.10000		107	80-120			
Vanadium	0.103	0.0100	0.0014	mg/L	0.10000		103	80-120			
Zinc	0.102	0.0100	0.0013	mg/L	0.10000		102	80-120			
Lithium	0.111	0.0500	0.0011	mg/L	0.10000		111	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

May 24, 2017

Report No.: AAE0482

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050560 - EPA 3005A											
Matrix Spike (7050560-MS1)		**Source: AAE0498-01**			Prepared: 05/17/17 Analyzed: 05/18/17						
Antimony	0.108	0.0030	0.0003	mg/L	0.10000	ND	108	75-125			
Arsenic	0.0999	0.0050	0.0004	mg/L	0.10000	ND	100	75-125			
Barium	0.129	0.0100	0.0003	mg/L	0.10000	0.0181	111	75-125			
Beryllium	0.103	0.0030	0.00007	mg/L	0.10000	ND	103	75-125			
Boron	0.980	0.0400	0.0060	mg/L	1.0000	0.0073	97	75-125			
Cadmium	0.106	0.0010	0.00006	mg/L	0.10000	ND	106	75-125			
Calcium	7.92	25.0	0.522	mg/L	1.0000	6.50	142	75-125			QM-02, J
Chromium	0.104	0.0100	0.0003	mg/L	0.10000	0.0006	103	75-125			
Cobalt	0.104	0.0100	0.0005	mg/L	0.10000	0.0024	101	75-125			
Copper	0.103	0.0250	0.0003	mg/L	0.10000	0.0007	102	75-125			
Lead	0.103	0.0050	0.00007	mg/L	0.10000	0.0001	103	75-125			
Molybdenum	0.106	0.0100	0.0006	mg/L	0.10000	ND	106	75-125			
Nickel	0.106	0.0100	0.0003	mg/L	0.10000	0.0021	104	75-125			
Selenium	0.101	0.0100	0.0014	mg/L	0.10000	ND	101	75-125			
Silver	0.107	0.0100	0.0003	mg/L	0.10000	ND	107	75-125			
Thallium	0.106	0.0010	0.00005	mg/L	0.10000	ND	106	75-125			
Vanadium	0.103	0.0100	0.0014	mg/L	0.10000	ND	103	75-125			
Zinc	0.117	0.0100	0.0013	mg/L	0.10000	0.0142	103	75-125			
Lithium	0.105	0.0500	0.0011	mg/L	0.10000	0.0020	103	75-125			
Matrix Spike Dup (7050560-MSD1)		**Source: AAE0498-01**			Prepared: 05/17/17 Analyzed: 05/18/17						
Antimony	0.109	0.0030	0.0003	mg/L	0.10000	ND	109	75-125	0.8	20	
Arsenic	0.102	0.0050	0.0004	mg/L	0.10000	ND	102	75-125	2	20	
Barium	0.128	0.0100	0.0003	mg/L	0.10000	0.0181	109	75-125	1	20	
Beryllium	0.105	0.0030	0.00007	mg/L	0.10000	ND	105	75-125	2	20	
Boron	1.05	0.0400	0.0060	mg/L	1.0000	0.0073	104	75-125	7	20	
Cadmium	0.108	0.0010	0.00006	mg/L	0.10000	ND	108	75-125	2	20	
Calcium	7.66	25.0	0.522	mg/L	1.0000	6.50	116	75-125	3	20	J
Chromium	0.105	0.0100	0.0003	mg/L	0.10000	0.0006	104	75-125	1	20	
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000	0.0024	102	75-125	1	20	
Copper	0.102	0.0250	0.0003	mg/L	0.10000	0.0007	102	75-125	0.3	20	
Lead	0.105	0.0050	0.00007	mg/L	0.10000	0.0001	105	75-125	1	20	
Molybdenum	0.107	0.0100	0.0006	mg/L	0.10000	ND	107	75-125	1	20	
Nickel	0.106	0.0100	0.0003	mg/L	0.10000	0.0021	104	75-125	0.5	20	
Selenium	0.104	0.0100	0.0014	mg/L	0.10000	ND	104	75-125	3	20	
Silver	0.106	0.0100	0.0003	mg/L	0.10000	ND	106	75-125	0.8	20	
Thallium	0.107	0.0010	0.00005	mg/L	0.10000	ND	107	75-125	0.6	20	
Vanadium	0.106	0.0100	0.0014	mg/L	0.10000	ND	106	75-125	3	20	
Zinc	0.119	0.0100	0.0013	mg/L	0.10000	0.0142	105	75-125	2	20	
Lithium	0.109	0.0500	0.0011	mg/L	0.10000	0.0020	107	75-125	4	20	

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 24, 2017

Report No.: AAE0482

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050560 - EPA 3005A											
Post Spike (7050560-PS1)			**Source: AAE0498-01**			Prepared: 05/17/17 Analyzed: 05/18/17					
Antimony	104			ug/L	100.00	0.198	104	80-120			
Arsenic	106			ug/L	100.00	-0.203	106	80-120			
Barium	129			ug/L	100.00	18.1	110	80-120			
Beryllium	106			ug/L	100.00	0.0341	106	80-120			
Boron	1000			ug/L	1000.0	7.26	100	80-120			
Cadmium	107			ug/L	100.00	0.0444	107	80-120			
Calcium	8060			ug/L	1000.0	6500	156	80-120			QM-02
Chromium	106			ug/L	100.00	0.597	106	80-120			
Cobalt	107			ug/L	100.00	2.40	104	80-120			
Copper	106			ug/L	100.00	0.726	105	80-120			
Lead	107			ug/L	100.00	0.108	107	80-120			
Molybdenum	108			ug/L	100.00	0.264	108	80-120			
Nickel	108			ug/L	100.00	2.06	106	80-120			
Selenium	106			ug/L	100.00	0.0945	106	80-120			
Silver	106			ug/L	100.00	0.0012	106	80-120			
Thallium	108			ug/L	100.00	0.0100	108	80-120			
Vanadium	107			ug/L	100.00	0.297	107	80-120			
Zinc	120			ug/L	100.00	14.2	106	80-120			
Lithium	110			ug/L	100.00	2.03	108	80-120			
Batch 7050598 - EPA 7470A											
Blank (7050598-BLK1)						Prepared & Analyzed: 05/18/17					
Mercury	0.00007	0.00050	0.000041	mg/L							J
LCS (7050598-BS1)						Prepared & Analyzed: 05/18/17					
Mercury	0.00250	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

May 24, 2017

Report No.: AAE0482

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050598 - EPA 7470A											
Matrix Spike (7050598-MS1)		**Source: AAE0482-06**				Prepared & Analyzed: 05/18/17					
Mercury	0.00254	0.00050	0.000041	mg/L	2.5000E-3	ND	102	75-125			
Matrix Spike Dup (7050598-MSD1)		**Source: AAE0482-06**				Prepared & Analyzed: 05/18/17					
Mercury	0.00251	0.00050	0.000041	mg/L	2.5000E-3	ND	100	75-125	1	20	
Post Spike (7050598-PS1)		**Source: AAE0482-06**				Prepared & Analyzed: 05/18/17					
Mercury	1.76			ug/L	1.6667	0.0190	104	80-120			

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 24, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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.

QR-01 RPD was outside acceptance limits due to sample concentrations near or below the reporting limit.

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.

CHAIN OF CUSTODY RECORD

Pace Analytical®
www.pacelabs.com

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

CLIENT NAME: GA POWER

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 RALPH McGILL BLVD SE B10185
ATLANTA GA 30308
404.506.7239

REPORT TO: DAWN PRELL
DAWN_PRELL@GOLDER.COM

CC: MARIA PADILLA
KJURINKO@GOLDER.COM

REQUESTED COMPLETION DATE:

PO #:
LABURCH@SOUTHERNCO.COM

PROJECT NAME/STATE:
PLANT McDONOUGH AP

PROJECT #:
PHASE II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		METALS APP III + IV (EPA 6020/7470) P 3	Cl, F, SO4 + TDS (EPA 300.0 + SM2540C) P 1	RADIUM 226 + 228 (SW 846 9315/9320) P 3							LAB ID NUMBER
5.12.17	1108	GW		X	DGWA-71	4		1	1	2							1
5.12.17	—	GW		X	FD-1	4		1	1	2							2
5.12.17	1412	GW		X	DGWC-4	4		1	1	2							3
5.12.17	1631	GW		X	DGWC-23	4		1	1	2							4
5.12.17	1618	GW		X	DGWC-67	4		1	1	2							5
5.12.17	1321	GW		X	DGWC-68A	4		1	1	2							6
5.12.17	1129	GW		X	DGWC-69	4		1	1	2							7

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: A. ELLIS FIELD LEAD
DATE/TIME: 5.12.17 / 1700

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME: 5.13.17 / 1130

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB:
DATE/TIME: 5/13/17 1130

Checked: No NA
Ice: Yes No NA
Temperature: 2°C Min: 2°C Max:

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
Custody Seal: Intact Broken Not Present N/A
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AAK0482
Entered into LIMS:
Tracking #:

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: 5/15/2017 8:49:02AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 05/13/17 11:30

Work Order: AAE0482
Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 7 **#Containers:** 28

Minimum Temp(C): 2.0 **Maximum Temp(C):** 2.0 **Custody Seal(s) Used:** N/A

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	N/A
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

June 07, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAE0482 Plant McDonough
Pace Project No.: 30218988

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on May 16, 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

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

CERTIFICATIONS

Project: AAE0482 Plant McDonough
Pace Project No.: 30218988

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

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

SAMPLE SUMMARY

Project: AAE0482 Plant McDonough
Pace Project No.: 30218988

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30218988001	**DGWA-71**	Water	05/12/17 11:08	05/16/17 10:00
30218988002	**FD-1**	Water	05/12/17 00:00	05/16/17 10:00
30218988003	**DGWC-4**	Water	05/12/17 14:12	05/16/17 10:00
30218988004	**DGWC-23**	Water	05/12/17 16:31	05/16/17 10:00
30218988005	**DGWC-67**	Water	05/12/17 16:18	05/16/17 10:00
30218988006	**DGWC-68A**	Water	05/12/17 13:21	05/16/17 10:00
30218988007	**DGWC-69**	Water	05/12/17 11:29	05/16/17 10:00

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: AAE0482 Plant McDonough
Pace Project No.: 30218988

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30218988001	**DGWA-71**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30218988002	**FD-1**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30218988003	**DGWC-4**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30218988004	**DGWC-23**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30218988005	**DGWC-67**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30218988006	**DGWC-68A**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30218988007	**DGWC-69**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAE0482 Plant McDonough
Pace Project No.: 30218988

Sample: DGWA-71 **Lab ID: 30218988001** Collected: 05/12/17 11:08 Received: 05/16/17 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	**0.0260 ± 0.0746 (0.184) C:90% T:NA**	pCi/L	05/24/17 11:25	13982-63-3	
Radium-228	EPA 9320	**0.139 ± 0.333 (0.740) C:93% T:77%**	pCi/L	06/02/17 16:29	15262-20-1	
Total Radium	Total Radium Calculation	**0.165 ± 0.408 (0.924)**	pCi/L	06/06/17 14:13	7440-14-4	

Sample: FD-1 **Lab ID: 30218988002** Collected: 05/12/17 00:00 Received: 05/16/17 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	**0.157 ± 0.113 (0.180) C:89% T:NA**	pCi/L	05/24/17 11:25	13982-63-3	
Radium-228	EPA 9320	**0.420 ± 0.364 (0.738) C:94% T:76%**	pCi/L	06/02/17 16:29	15262-20-1	
Total Radium	Total Radium Calculation	**0.577 ± 0.477 (0.918)**	pCi/L	06/06/17 14:13	7440-14-4	

Sample: DGWC-4 **Lab ID: 30218988003** Collected: 05/12/17 14:12 Received: 05/16/17 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	**0.563 ± 0.199 (0.161) C:91% T:NA**	pCi/L	05/24/17 11:25	13982-63-3	
Radium-228	EPA 9320	**0.586 ± 0.372 (0.710) C:93% T:86%**	pCi/L	06/02/17 16:29	15262-20-1	
Total Radium	Total Radium Calculation	**1.15 ± 0.571 (0.871)**	pCi/L	06/06/17 14:13	7440-14-4	

Sample: DGWC-23 **Lab ID: 30218988004** Collected: 05/12/17 16:31 Received: 05/16/17 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	**0.183 ± 0.122 (0.191) C:87% T:NA**	pCi/L	05/24/17 11:25	13982-63-3	
Radium-228	EPA 9320	**0.510 ± 0.336 (0.642) C:92% T:91%**	pCi/L	06/02/17 16:29	15262-20-1	
Total Radium	Total Radium Calculation	**0.693 ± 0.458 (0.833)**	pCi/L	06/06/17 14:13	7440-14-4	

Sample: DGWC-67 **Lab ID: 30218988005** Collected: 05/12/17 16:18 Received: 05/16/17 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	**0.105 ± 0.122 (0.250) C:82% T:NA**	pCi/L	05/24/17 11:25	13982-63-3	
Radium-228	EPA 9320	**0.101 ± 0.314 (0.707) C:92% T:82%**	pCi/L	06/02/17 16:29	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAE0482 Plant McDonough
Pace Project No.: 30218988

Sample: DGWC-67 **Lab ID: 30218988005** Collected: 05/12/17 16:18 Received: 05/16/17 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	**0.206 ± 0.436 (0.957)**	pCi/L	06/06/17 14:13	7440-14-4	

Sample: DGWC-68A **Lab ID: 30218988006** Collected: 05/12/17 13:21 Received: 05/16/17 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	**0.199 ± 0.133 (0.205) C:80% T:NA**	pCi/L	05/24/17 11:25	13982-63-3	
Radium-228	EPA 9320	**0.978 ± 0.448 (0.752) C:93% T:74%**	pCi/L	06/02/17 16:29	15262-20-1	
Total Radium	Total Radium Calculation	**1.18 ± 0.581 (0.957)**	pCi/L	06/06/17 14:13	7440-14-4	

Sample: DGWC-69 **Lab ID: 30218988007** Collected: 05/12/17 11:29 Received: 05/16/17 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	**0.445 ± 0.183 (0.181) C:83% T:NA**	pCi/L	05/24/17 11:25	13982-63-3	
Radium-228	EPA 9320	**0.835 ± 0.442 (0.802) C:92% T:79%**	pCi/L	06/02/17 16:29	15262-20-1	
Total Radium	Total Radium Calculation	**1.29 ± 0.625 (0.983)**	pCi/L	06/06/17 14:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAE0482 Plant McDonough
Pace Project No.: 30218988

QC Batch: 258733 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30218988001, 30218988002, 30218988003, 30218988004, 30218988005, 30218988006, 30218988007

METHOD BLANK: 1274461 Matrix: Water
Associated Lab Samples: 30218988001, 30218988002, 30218988003, 30218988004, 30218988005, 30218988006, 30218988007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00989 ± 0.108 (0.288) C:89% T:NA	pCi/L	05/22/17 09:24	

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

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAE0482 Plant McDonough
Pace Project No.: 30218988

QC Batch: 259469 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30218988001, 30218988002, 30218988003, 30218988004, 30218988005, 30218988006, 30218988007

METHOD BLANK: 1278134 Matrix: Water
Associated Lab Samples: 30218988001, 30218988002, 30218988003, 30218988004, 30218988005, 30218988006, 30218988007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.550 ± 0.338 (0.616) C:94% T:73%	pCi/L	06/02/17 16:30	

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

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

QUALIFIERS

Project: AAE0482 Plant McDonough
Pace Project No.: 30218988

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.

WO#:30218988

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAE0482 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 6/7/2017

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 HNO3					Requested Analysis Radium 226, 228, Total												LAB USE ONLY
1	DGWA-71	G	5/12/2017 11:08	AAE0482-01	GW	2					X												001
2	FD-1	G	5/12/2017 0:00	AAE0482-02	GW	2					X												002
3	DGWC-4	G	5/12/2017 14:12	AAE0482-03	GW	2					X												003
4	DGWC-23	G	5/12/2017 16:31	AAE0482-04	GW	2					X												004
5	DGWC-67	G	5/12/2017 16:18	AAE0482-05	GW	2					X												005
6	DGWC-68A	G	5/12/2017 13:21	AAE0482-06	GW	2					X												006
7	DGWC-69	G	5/12/2017 11:29	AAE0482-07	GW	2					X												007
8																							
9																							
10																							

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	Carl Ferb	5/15/17 1730	Michael Tod	5-16-17 1000	
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.

30218988

CHAIN OF CUSTODY RECORD

Pace Analytical®
www.pacelabs.com

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

CLIENT NAME: GA POWER

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 RALPH MCGILL BLVD SE B10185
ATLANTA GA 30308
404.506.7239

REPORT TO: DAWN PRELL
DAWN_PRELL@GOLDER.COM

CC: MARIA PADILLA
MTURINKO@GOLDER.COM

REQUESTED COMPLETION DATE:

PO #:
LABURCH@SOUTHERNCO.COM

PROJECT NAME/STATE:
PLANT MCDONOUGH AP

PROJECT #:
PHASE II CCR

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		METALS APP III + IV (EPA 6020/7470)	Cl, F, SO4, TDS (EPA 300.0 +SM2540C)	RADIUM 226 + 228 (SW 846 9315/9320)							LAB ID NUMBER
CONTAINER TYPE:								P	P	P							
PRESERVATION:								3	3	3							
5.12.17	1108	GW		X	DGWA-71	4		1	1	2							
5.12.17	—	GW		X	FD-1	4		1	1	2							
5.12.17	1412	GW		X	DGWC-4	4		1	1	2							
5.12.17	1631	GW		X	DGWC-23	4		1	1	2							
5.12.17	1618	GW		X	DGWC-67	4		1	1	2							
5.12.17	1321	GW		X	DGWC-68A	4		1	1	2							
5.12.17	1129	GW		X	DGWC-69	4		1	1	2							

ANALYSIS REQUESTED

SAMPLED BY AND TITLE: A. ELLIS FIELD LEAD
DATE/TIME: 5.12.17 / 1700
RELINQUISHED BY:
DATE/TIME: 5.13.17 / 1130

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

RECEIVED BY LAB:
DATE/TIME: 5/13/17 1130
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 2°C Max:
Custody Seal: Intact Broken Not Present N/A
# of Coolers
Cooler ID:

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

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

KEH

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace Atlanta Project # 30218988

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

Tracking #: 6812 5104 3683

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 5-16-17

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: -Includes date/time/ID Matrix: WT	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.
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. All containers needing preservation are found to be in compliance with EPA recommendation.	X			15. pH < 2
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: ML 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: ML Date: 5-16-17

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

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	5/27/2017
Worklist:	35805
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1278134
MB concentration:	0.550
M/B Counting Uncertainty:	0.323
MB MDC:	0.616
MB Numerical Performance Indicator:	3.34
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS35805	LCSD35805
Count Date:	6/2/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	24.388	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.829	
Target Conc. (pCi/L, g, F):	5.885	
Uncertainty (Calculated):	0.424	
Result (pCi/L, g, F):	6.176	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.678	
Numerical Performance Indicator:	0.71	
Percent Recovery:	104.93%	
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:	
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.:	30218862001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30218862001DUP	
Sample Result (pCi/L, g, F):	0.669	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.335	
Sample Duplicate Result (pCi/L, g, F):	0.732	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.329	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.265	30218862001
Duplicate RPD:	9.05%	30218862001DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

6/7/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	5/22/2017
Worklist:	35680
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1274461
MB concentration:	0.010
M/B Counting Uncertainty:	0.108
MB MDC:	0.288
MB Numerical Performance Indicator:	0.18
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS35680	LCSD35680
Count Date:	5/24/2017	
Spike I.D.:	13-033	
Spike Concentration (pCi/mL):	19.848	
Volume Used (mL):	0.40	
Aliquot Volume (L, g, F):	0.502	
Target Conc. (pCi/L, g, F):	15.827	
Uncertainty (Calculated):	0.745	
Result (pCi/L, g, F):	14.483	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.895	
Numerical Performance Indicator:	-2.26	
Percent Recovery:	91.51%	
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:	
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.:	30218862001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30218862001DUP	
Sample Result (pCi/L, g, F):	0.223	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.195	
Sample Duplicate Result (pCi/L, g, F):	0.160	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.143	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.510	30218862001
Duplicate RPD:	32.90%	30218862001DUP
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:

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

2nd RR

6/7/17

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: AAE0498
May 24, 2017
Project: CCR Event
Project #:Plant McDonough

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

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

May 24, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWA-70A	AAE0498-01	Ground Water	05/15/17 11:30	05/15/17 13:35

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

May 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.

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

May 24, 2017

Report No.: AAE0498
Client ID: DGWA-70A
Date/Time Sampled: 5/15/2017 11:30:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAE0498-01
Date/Time Received: 5/15/2017 1:35:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	88	25	10	mg/L	SM 2540 C		1	05/18/17 12:40	05/18/17 12:40	7050535	JPT
Inorganic Anions											
Chloride	2.2	0.25	0.01	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 19:44	7050518	SLH
Fluoride	0.005	0.30	0.004	mg/L	EPA 300.0	J	1	05/15/17 19:30	05/16/17 19:44	7050518	SLH
Sulfate	1.0	1.0	0.09	mg/L	EPA 300.0		1	05/15/17 19:30	05/16/17 19:44	7050518	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 20:00	7050560	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 20:00	7050560	CSW
Barium	0.0181	0.0100	0.0003	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 20:00	7050560	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 20:00	7050560	CSW
Boron	0.0073	0.0400	0.0060	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 20:00	7050560	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 20:00	7050560	CSW
Calcium	6.50	5.00	0.522	mg/L	EPA 6020B	B-01	50	05/17/17 14:40	05/18/17 20:06	7050560	CSW
Chromium	0.0006	0.0100	0.0003	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 20:00	7050560	CSW
Cobalt	0.0024	0.0100	0.0005	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 20:00	7050560	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 20:00	7050560	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 20:00	7050560	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 20:00	7050560	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/17/17 14:40	05/18/17 20:00	7050560	CSW
Lithium	0.0020	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/17/17 14:40	05/18/17 20:00	7050560	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/18/17 08:30	05/18/17 14:44	7050598	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

May 24, 2017

Report No.: AAE0498

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050535 - SM 2540 C											
Blank (7050535-BLK1)						Prepared & Analyzed: 05/18/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7050535-BS1)						Prepared & Analyzed: 05/18/17					
Total Dissolved Solids	408	25	10	mg/L	400.00		102	84-108			
Duplicate (7050535-DUP1)		**Source: AAE0482-07**				Prepared & Analyzed: 05/18/17					
Total Dissolved Solids	132	25	10	mg/L		243			59	10	QR-03
Duplicate (7050535-DUP2)		**Source: AAE0548-05**				Prepared & Analyzed: 05/18/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 24, 2017

Report No.: AAE0498

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050518 - EPA 300.0											
Blank (7050518-BLK1)						Prepared: 05/15/17 Analyzed: 05/16/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7050518-BS1)						Prepared: 05/15/17 Analyzed: 05/16/17					
Chloride	10.1	0.25	0.01	mg/L	10.020		101	90-110			
Fluoride	9.90	0.30	0.004	mg/L	10.020		99	90-110			
Sulfate	10.2	1.0	0.09	mg/L	10.050		102	90-110			
Matrix Spike (7050518-MS1)		**Source: AAE0482-03**				Prepared: 05/15/17 Analyzed: 05/16/17					
Chloride	36.4	0.25	0.01	mg/L	10.020	28.9	75	90-110			QM-02
Fluoride	10.3	0.30	0.004	mg/L	10.020	ND	103	90-110			
Sulfate	356	1.0	0.09	mg/L	10.050	376	NR	90-110			QM-02
Matrix Spike (7050518-MS2)		**Source: AAE0503-02**				Prepared: 05/15/17 Analyzed: 05/16/17					
Chloride	12.0	0.25	0.01	mg/L	10.020	1.82	101	90-110			
Fluoride	10.1	0.30	0.004	mg/L	10.020	0.02	101	90-110			
Sulfate	10.8	1.0	0.09	mg/L	10.050	0.45	103	90-110			
Matrix Spike Dup (7050518-MSD1)		**Source: AAE0482-03**				Prepared: 05/15/17 Analyzed: 05/16/17					
Chloride	36.4	0.25	0.01	mg/L	10.020	28.9	75	90-110	0.2	15	QM-02
Fluoride	10.5	0.30	0.004	mg/L	10.020	ND	105	90-110	2	15	
Sulfate	356	1.0	0.09	mg/L	10.050	376	NR	90-110	0.04	15	QM-02

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Attention: Mr. Joju Abraham

May 24, 2017

Report No.: AAE0498

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050560 - EPA 3005A											
Blank (7050560-BLK1)						Prepared: 05/17/17 Analyzed: 05/18/17					
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	0.0124	0.500	0.0104	mg/L							J
Chromium	ND	0.0100	0.0003	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0003	mg/L							
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	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0011	mg/L							
LCS (7050560-BS1)						Prepared: 05/17/17 Analyzed: 05/18/17					
Antimony	0.107	0.0030	0.0003	mg/L	0.10000		107	80-120			
Arsenic	0.103	0.0050	0.0004	mg/L	0.10000		103	80-120			
Barium	0.106	0.0100	0.0003	mg/L	0.10000		106	80-120			
Beryllium	0.106	0.0030	0.00007	mg/L	0.10000		106	80-120			
Boron	1.07	0.0400	0.0060	mg/L	1.0000		107	80-120			
Cadmium	0.108	0.0010	0.00006	mg/L	0.10000		108	80-120			
Calcium	1.05	0.500	0.0104	mg/L	1.0000		105	80-120			
Chromium	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Copper	0.102	0.0250	0.0003	mg/L	0.10000		102	80-120			
Lead	0.104	0.0050	0.00007	mg/L	0.10000		104	80-120			
Molybdenum	0.108	0.0100	0.0006	mg/L	0.10000		108	80-120			
Nickel	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Selenium	0.105	0.0100	0.0014	mg/L	0.10000		105	80-120			
Silver	0.107	0.0100	0.0003	mg/L	0.10000		107	80-120			
Thallium	0.107	0.0010	0.00005	mg/L	0.10000		107	80-120			
Vanadium	0.103	0.0100	0.0014	mg/L	0.10000		103	80-120			
Zinc	0.102	0.0100	0.0013	mg/L	0.10000		102	80-120			
Lithium	0.111	0.0500	0.0011	mg/L	0.10000		111	80-120			

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 24, 2017

Report No.: AAE0498

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050560 - EPA 3005A											
Matrix Spike (7050560-MS1)		**Source: AAE0498-01**			Prepared: 05/17/17 Analyzed: 05/18/17						
Antimony	0.108	0.0030	0.0003	mg/L	0.10000	ND	108	75-125			
Arsenic	0.0999	0.0050	0.0004	mg/L	0.10000	ND	100	75-125			
Barium	0.129	0.0100	0.0003	mg/L	0.10000	0.0181	111	75-125			
Beryllium	0.103	0.0030	0.00007	mg/L	0.10000	ND	103	75-125			
Boron	0.980	0.0400	0.0060	mg/L	1.0000	0.0073	97	75-125			
Cadmium	0.106	0.0010	0.00006	mg/L	0.10000	ND	106	75-125			
Calcium	7.92	25.0	0.522	mg/L	1.0000	6.50	142	75-125			QM-02, J
Chromium	0.104	0.0100	0.0003	mg/L	0.10000	0.0006	103	75-125			
Cobalt	0.104	0.0100	0.0005	mg/L	0.10000	0.0024	101	75-125			
Copper	0.103	0.0250	0.0003	mg/L	0.10000	0.0007	102	75-125			
Lead	0.103	0.0050	0.00007	mg/L	0.10000	0.0001	103	75-125			
Molybdenum	0.106	0.0100	0.0006	mg/L	0.10000	ND	106	75-125			
Nickel	0.106	0.0100	0.0003	mg/L	0.10000	0.0021	104	75-125			
Selenium	0.101	0.0100	0.0014	mg/L	0.10000	ND	101	75-125			
Silver	0.107	0.0100	0.0003	mg/L	0.10000	ND	107	75-125			
Thallium	0.106	0.0010	0.00005	mg/L	0.10000	ND	106	75-125			
Vanadium	0.103	0.0100	0.0014	mg/L	0.10000	ND	103	75-125			
Zinc	0.117	0.0100	0.0013	mg/L	0.10000	0.0142	103	75-125			
Lithium	0.105	0.0500	0.0011	mg/L	0.10000	0.0020	103	75-125			
Matrix Spike Dup (7050560-MSD1)		**Source: AAE0498-01**			Prepared: 05/17/17 Analyzed: 05/18/17						
Antimony	0.109	0.0030	0.0003	mg/L	0.10000	ND	109	75-125	0.8	20	
Arsenic	0.102	0.0050	0.0004	mg/L	0.10000	ND	102	75-125	2	20	
Barium	0.128	0.0100	0.0003	mg/L	0.10000	0.0181	109	75-125	1	20	
Beryllium	0.105	0.0030	0.00007	mg/L	0.10000	ND	105	75-125	2	20	
Boron	1.05	0.0400	0.0060	mg/L	1.0000	0.0073	104	75-125	7	20	
Cadmium	0.108	0.0010	0.00006	mg/L	0.10000	ND	108	75-125	2	20	
Calcium	7.66	25.0	0.522	mg/L	1.0000	6.50	116	75-125	3	20	J
Chromium	0.105	0.0100	0.0003	mg/L	0.10000	0.0006	104	75-125	1	20	
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000	0.0024	102	75-125	1	20	
Copper	0.102	0.0250	0.0003	mg/L	0.10000	0.0007	102	75-125	0.3	20	
Lead	0.105	0.0050	0.00007	mg/L	0.10000	0.0001	105	75-125	1	20	
Molybdenum	0.107	0.0100	0.0006	mg/L	0.10000	ND	107	75-125	1	20	
Nickel	0.106	0.0100	0.0003	mg/L	0.10000	0.0021	104	75-125	0.5	20	
Selenium	0.104	0.0100	0.0014	mg/L	0.10000	ND	104	75-125	3	20	
Silver	0.106	0.0100	0.0003	mg/L	0.10000	ND	106	75-125	0.8	20	
Thallium	0.107	0.0010	0.00005	mg/L	0.10000	ND	107	75-125	0.6	20	
Vanadium	0.106	0.0100	0.0014	mg/L	0.10000	ND	106	75-125	3	20	
Zinc	0.119	0.0100	0.0013	mg/L	0.10000	0.0142	105	75-125	2	20	
Lithium	0.109	0.0500	0.0011	mg/L	0.10000	0.0020	107	75-125	4	20	

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 24, 2017

Report No.: AAE0498

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050560 - EPA 3005A											
Post Spike (7050560-PS1)			**Source: AAE0498-01**			Prepared: 05/17/17 Analyzed: 05/18/17					
Antimony	104			ug/L	100.00	0.198	104	80-120			
Arsenic	106			ug/L	100.00	-0.203	106	80-120			
Barium	129			ug/L	100.00	18.1	110	80-120			
Beryllium	106			ug/L	100.00	0.0341	106	80-120			
Boron	1000			ug/L	1000.0	7.26	100	80-120			
Cadmium	107			ug/L	100.00	0.0444	107	80-120			
Calcium	8060			ug/L	1000.0	6500	156	80-120			QM-02
Chromium	106			ug/L	100.00	0.597	106	80-120			
Cobalt	107			ug/L	100.00	2.40	104	80-120			
Copper	106			ug/L	100.00	0.726	105	80-120			
Lead	107			ug/L	100.00	0.108	107	80-120			
Molybdenum	108			ug/L	100.00	0.264	108	80-120			
Nickel	108			ug/L	100.00	2.06	106	80-120			
Selenium	106			ug/L	100.00	0.0945	106	80-120			
Silver	106			ug/L	100.00	0.0012	106	80-120			
Thallium	108			ug/L	100.00	0.0100	108	80-120			
Vanadium	107			ug/L	100.00	0.297	107	80-120			
Zinc	120			ug/L	100.00	14.2	106	80-120			
Lithium	110			ug/L	100.00	2.03	108	80-120			
Batch 7050598 - EPA 7470A											
Blank (7050598-BLK1)						Prepared & Analyzed: 05/18/17					
Mercury	0.00007	0.00050	0.000041	mg/L							J
LCS (7050598-BS1)						Prepared & Analyzed: 05/18/17					
Mercury	0.00250	0.00050	0.000041	mg/L	2.5000E-3		100	80-120			

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May 24, 2017

Report No.: AAE0498

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050598 - EPA 7470A											
Matrix Spike (7050598-MS1)		**Source: AAE0482-06**				Prepared & Analyzed: 05/18/17					
Mercury	0.00254	0.00050	0.000041	mg/L	2.5000E-3	ND	102	75-125			
Matrix Spike Dup (7050598-MSD1)		**Source: AAE0482-06**				Prepared & Analyzed: 05/18/17					
Mercury	0.00251	0.00050	0.000041	mg/L	2.5000E-3	ND	100	75-125	1	20	
Post Spike (7050598-PS1)		**Source: AAE0482-06**				Prepared & Analyzed: 05/18/17					
Mercury	1.76			ug/L	1.6667	0.0190	104	80-120			

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May 24, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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-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.

CHAIN OF CUSTODY RECORD

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	CONTAINER TYPE	PRESERVATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
						P	P		3	7	3								
5/15/17	1130	GW		X	DGWA-70A			4	1	1	2							1	

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Kristen Jurinko Golder
DATE/TIME: 5/15/17 1335
RELINQUISHED BY:
DATE/TIME: 5/15/17 1335

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

RECEIVED BY LAB:
DATE/TIME: 5/15/17 1335
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

Checked: No NA
Ice: Yes No NA
Temperature: Min: 15°C Max: 16°C
Custody Seal: Intact Broken Not Present N/A
# of Coolers
Cooler ID:

FOR LAB USE ONLY
LAB #: AXE0498
Entered into LIMS: GH
Tracking #:

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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LOG-IN CHECKLIST **Printed: 5/16/2017 11:47:06AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 05/15/17 13:35

Work Order: AAE0498
Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 1 **#Containers:** 4

Minimum Temp(C): 15.0 **Maximum Temp(C):** 15.0 **Custody Seal(s) Used:** N/A

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	N/A
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

June 07, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAE0498 Plant McDonough
Pace Project No.: 30219104

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on May 17, 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.

#PM

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

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

CERTIFICATIONS

Project: AAE0498 Plant McDonough
Pace Project No.: 30219104

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

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

SAMPLE SUMMARY

Project: AAE0498 Plant McDonough
Pace Project No.: 30219104

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30219104001	**DGWA-70A**	Water	05/15/17 11:30	05/17/17 10:00

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: AAE0498 Plant McDonough
Pace Project No.: 30219104

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30219104001	**DGWA-70A**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAE0498 Plant McDonough
Pace Project No.: 30219104

Sample: DGWA-70A **Lab ID: 30219104001** Collected: 05/15/17 11:30 Received: 05/17/17 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	**0.0339 ± 0.109 (0.278) C:95% T:NA**	pCi/L	05/26/17 10:09	13982-63-3	
Radium-228	EPA 9320	**0.254 ± 0.321 (0.680) C:88% T:78%**	pCi/L	06/02/17 16:30	15262-20-1	
Total Radium	Total Radium Calculation	**0.288 ± 0.430 (0.958)**	pCi/L	06/06/17 14:45	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAE0498 Plant McDonough
Pace Project No.: 30219104

QC Batch: 259465 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30219104001

METHOD BLANK: 1278110 Matrix: Water
Associated Lab Samples: 30219104001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0238 ± 0.113 (0.301) C:95% T:NA	pCi/L	05/26/17 10:09	

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

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAE0498 Plant McDonough
Pace Project No.: 30219104

QC Batch: 259469 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30219104001

METHOD BLANK: 1278134 Matrix: Water
Associated Lab Samples: 30219104001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.550 ± 0.338 (0.616) C:94% T:73%	pCi/L	06/02/17 16:30	

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.

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: AAE0498 Plant McDonough
Pace Project No.: 30219104

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.

30219104

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAE0498 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 6/8/2017

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

WO#:30219104

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	DGWA-70A	G	5/15/2017 11:30	AAE0498-01	GW	2	X	001
2								
3								
4								
5								
6								
7								
8								
9								
10								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	5/16/17	[illegible]	5/17/17 1000	
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.

30219104_1

CHAIN OF CUSTODY RECORD

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB ID NUMBER
CONTAINER TYPE:								P	P	P						
PRESERVATION:								3	7	3						
5/15/17	1130	GW		X	DGWA-70A	4		1	1	2						1

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

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Kristen Jurinko Golder
DATE/TIME: 5/15/17 1335
RELINQUISHED BY:
DATE/TIME: 5/15/17 1335

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

RECEIVED BY LAB:
DATE/TIME: 5/15/17 1335
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 15° Max: 16°
Custody Seal: Intact Broken Not Present N/A
# of Coolers
Cooler ID:

FOR LAB USE ONLY
LAB #: 40498
Entered into LIMS: CH
Tracking #:

KEH

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

30219104_1

Client Name: Pace Georgia Project #

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

Tracking #: 0812 5104 4072

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: KH 5/17/17

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 Matrix: WT	✓			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.
Orthophosphate field filtered			✓	12.
Organic Samples checked for dechlorination:			✓	13.
Filtered volume received for Dissolved tests			✓	14.
All containers have been checked for preservation. All containers needing preservation are found to be in compliance with EPA recommendation.	✓ ✓			15. pH < 2
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed KH Date/time of preservation; Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	16.
Trip Blank Present:			✓	17.
Trip Blank Custody Seals Present			✓	
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓	-	Initial when completed: KH Date: 5/17/17

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

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	5/25/2017
Worklist:	35802
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1278110
MB concentration:	0.024
M/B Counting Uncertainty:	0.113
MB MDC:	0.301
MB Numerical Performance Indicator:	0.41
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS35802	LCSD35802
Count Date:	5/26/2017	
Spike I.D.:	13-033	
Spike Concentration (pCi/mL):	19.848	
Volume Used (mL):	0.40	
Aliquot Volume (L, g, F):	0.512	
Target Conc. (pCi/L, g, F):	15.508	
Uncertainty (Calculated):	0.729	
Result (pCi/L, g, F):	12.896	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.046	
Numerical Performance Indicator:	-4.01	
Percent Recovery:	83.16%	
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:	
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.:	30219377001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30219377001DUP	
Sample Result (pCi/L, g, F):	0.507	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.245	
Sample Duplicate Result (pCi/L, g, F):	0.235	
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:	1.749	30219377001
Duplicate RPD:	73.17%	30219377001DUP
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:

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

5/26/17

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	5/27/2017
Worklist:	35805
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1278134
MB concentration:	0.550
M/B Counting Uncertainty:	0.323
MB MDC:	0.616
MB Numerical Performance Indicator:	3.34
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS35805	LCSD35805
Count Date:	6/2/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	24.388	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.829	
Target Conc. (pCi/L, g, F):	5.885	
Uncertainty (Calculated):	0.424	
Result (pCi/L, g, F):	6.176	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.678	
Numerical Performance Indicator:	0.71	
Percent Recovery:	104.93%	
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:	
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		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30218862001	
Duplicate Sample I.D.	30218862001DUP	
Sample Result (pCi/L, g, F):	0.669	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.335	
Sample Duplicate Result (pCi/L, g, F):	0.732	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.329	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.265	30218862001
Duplicate RPD:	9.05%	30218862001DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

5/30/17

LABORATORY ANALYTICAL DATA

June 2017

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: AAF0649
June 27, 2017
Project: CCR Event
Project #:Plant McDonough

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

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

June 27, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWA-2	AAF0649-01	Ground Water	06/15/17 10:40	06/16/17 16:20
DGWA-53	AAF0649-02	Ground Water	06/15/17 10:05	06/16/17 16:20
DGWA-70A	AAF0649-03	Ground Water	06/15/17 15:35	06/16/17 16:20
DGWC-4	AAF0649-04	Ground Water	06/15/17 13:05	06/16/17 16:20
DGWC-23	AAF0649-05	Ground Water	06/15/17 13:15	06/16/17 16:20
FD-1	AAF0649-06	Ground Water	06/15/17 00:00	06/16/17 16:20
FB-1	AAF0649-07	Water	06/15/17 14:30	06/16/17 16:20
EB-1	AAF0649-08	Water	06/15/17 16:30	06/16/17 16:20
DGWC-67	AAF0649-09	Ground Water	06/16/17 09:20	06/16/17 16:20
DGWC-68A	AAF0649-10	Ground Water	06/16/17 11:10	06/16/17 16:20
DGWA-71	AAF0649-11	Ground Water	06/16/17 09:25	06/16/17 16:20
DGWC-69	AAF0649-12	Ground Water	06/16/17 11:30	06/16/17 16:20

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

June 27, 2017

Case Narrative

Georgia Power Plant McDonough Report AAF0649 6/23/2017
Report revised to include missing analyte (sulfate on AAF0649-02, DGWA-53).

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.

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

June 27, 2017

Report No.: AAF0649
Client ID: DGWA-2
Date/Time Sampled: 6/15/2017 10:40:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0649-01
Date/Time Received: 6/16/2017 4:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	626	25	10	mg/L	SM 2540 C		1	06/21/17 17:40	06/21/17 17:40	7060626	JPT
Inorganic Anions											
Chloride	4.8	0.25	0.01	mg/L	EPA 300.0		1	06/19/17 17:53	06/20/17 16:57	7060568	RLC
Fluoride	0.07	0.30	0.004	mg/L	EPA 300.0	J	1	06/19/17 17:53	06/20/17 16:57	7060568	RLC
Sulfate	300	10	0.92	mg/L	EPA 300.0		10	06/19/17 17:53	06/22/17 12:39	7060568	RLC
Metals, Total											
Antimony	0.0006	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/20/17 07:30	06/21/17 08:55	7060562	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 08:55	7060562	CSW
Barium	0.0223	0.0100	0.0004	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 08:55	7060562	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 08:55	7060562	CSW
Boron	1.44	0.0400	0.0060	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 08:55	7060562	CSW
Cadmium	0.0003	0.0010	0.0001	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 08:55	7060562	CSW
Calcium	96.2	25.0	2.02	mg/L	EPA 6020B		50	06/20/17 07:30	06/21/17 09:01	7060562	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 08:55	7060562	CSW
Cobalt	0.0238	0.0100	0.0003	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 08:55	7060562	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 08:55	7060562	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 08:55	7060562	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 08:55	7060562	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 08:55	7060562	CSW
Lithium	0.0781	0.0500	0.0015	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 08:55	7060562	CSW
Mercury	0.00008	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 13:59	7060593	DDN

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

June 27, 2017

Report No.: AAF0649
Client ID: DGWA-53
Date/Time Sampled: 6/15/2017 10:05:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0649-02
Date/Time Received: 6/16/2017 4:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	251	25	10	mg/L	SM 2540 C		1	06/21/17 17:40	06/21/17 17:40	7060626	JPT
Inorganic Anions											
Chloride	2.6	0.25	0.01	mg/L	EPA 300.0		1	06/19/17 17:53	06/20/17 17:18	7060568	RLC
Fluoride	0.19	0.30	0.004	mg/L	EPA 300.0	J	1	06/19/17 17:53	06/20/17 17:18	7060568	RLC
Sulfate	16	1.0	0.09	mg/L	EPA 300.0		1	06/19/17 17:53	06/20/17 17:18	7060568	RLC
Metals, Total											
Antimony	0.0006	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/20/17 07:30	06/21/17 09:07	7060562	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:07	7060562	CSW
Barium	0.140	0.0100	0.0004	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:07	7060562	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:07	7060562	CSW
Boron	0.0725	0.0400	0.0060	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:07	7060562	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:07	7060562	CSW
Calcium	36.0	25.0	2.02	mg/L	EPA 6020B		50	06/20/17 07:30	06/21/17 09:12	7060562	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:07	7060562	CSW
Cobalt	0.0322	0.0100	0.0003	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:07	7060562	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:07	7060562	CSW
Molybdenum	0.0409	0.0100	0.0010	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:07	7060562	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:07	7060562	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:07	7060562	CSW
Lithium	0.0088	0.0500	0.0015	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 09:07	7060562	CSW
Mercury	0.00008	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 14:01	7060593	DDN

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 27, 2017

Report No.: AAF0649
Client ID: DGWA-70A
Date/Time Sampled: 6/15/2017 3:35:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0649-03
Date/Time Received: 6/16/2017 4:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	65	25	10	mg/L	SM 2540 C		1	06/21/17 17:40	06/21/17 17:40	7060626	JPT
Inorganic Anions											
Chloride	2.0	0.25	0.01	mg/L	EPA 300.0		1	06/19/17 17:53	06/20/17 17:39	7060568	RLC
Fluoride	0.02	0.30	0.004	mg/L	EPA 300.0	J	1	06/19/17 17:53	06/20/17 17:39	7060568	RLC
Sulfate	0.86	1.0	0.09	mg/L	EPA 300.0	J	1	06/19/17 17:53	06/20/17 17:39	7060568	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:18	7060562	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:18	7060562	CSW
Barium	0.0277	0.0100	0.0004	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:18	7060562	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:18	7060562	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:18	7060562	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:18	7060562	CSW
Calcium	5.38	0.500	0.0404	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:18	7060562	CSW
Chromium	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 09:18	7060562	CSW
Cobalt	0.0014	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 09:18	7060562	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 09:18	7060562	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:18	7060562	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:18	7060562	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:18	7060562	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:18	7060562	CSW
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 14:03	7060593	DDN

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 27, 2017

Report No.: AAF0649
Client ID: DGWC-4
Date/Time Sampled: 6/15/2017 1:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0649-04
Date/Time Received: 6/16/2017 4:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1290	25	10	mg/L	SM 2540 C		1	06/21/17 17:40	06/21/17 17:40	7060626	JPT
Inorganic Anions											
Chloride	28	0.25	0.01	mg/L	EPA 300.0		1	06/19/17 17:53	06/20/17 17:59	7060568	RLC
Fluoride	0.02	0.30	0.004	mg/L	EPA 300.0	J	1	06/19/17 17:53	06/20/17 17:59	7060568	RLC
Sulfate	730	20	1.8	mg/L	EPA 300.0		20	06/19/17 17:53	06/22/17 12:59	7060568	RLC
Metals, Total											
Antimony	0.0008	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/20/17 07:30	06/21/17 09:41	7060562	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:41	7060562	CSW
Barium	0.0300	0.0100	0.0004	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:41	7060562	CSW
Beryllium	0.0001	0.0030	0.00009	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 09:41	7060562	CSW
Boron	3.58	0.0400	0.0060	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:41	7060562	CSW
Cadmium	0.0005	0.0010	0.0001	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 09:41	7060562	CSW
Calcium	224	25.0	2.02	mg/L	EPA 6020B		50	06/20/17 07:30	06/21/17 09:47	7060562	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:41	7060562	CSW
Cobalt	0.0015	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 09:41	7060562	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:41	7060562	CSW
Molybdenum	0.0044	0.0100	0.0010	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 09:41	7060562	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:41	7060562	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:41	7060562	CSW
Lithium	0.0025	0.0500	0.0015	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 09:41	7060562	CSW
Mercury	0.00008	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 14:10	7060593	DDN

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 27, 2017

Report No.: AAF0649
Client ID: DGWC-23
Date/Time Sampled: 6/15/2017 1:15:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0649-05
Date/Time Received: 6/16/2017 4:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	458	25	10	mg/L	SM 2540 C		1	06/21/17 17:40	06/21/17 17:40	7060626	JPT
Inorganic Anions											
Chloride	16	0.25	0.01	mg/L	EPA 300.0		1	06/19/17 17:53	06/20/17 18:41	7060568	RLC
Fluoride	0.21	0.30	0.004	mg/L	EPA 300.0	J	1	06/19/17 17:53	06/20/17 18:41	7060568	RLC
Sulfate	200	10	0.92	mg/L	EPA 300.0		10	06/19/17 17:53	06/22/17 13:20	7060568	RLC
Metals, Total											
Antimony	0.0007	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/20/17 07:30	06/21/17 09:52	7060562	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/22/17 15:50	7060562	CSW
Barium	0.0188	0.0100	0.0004	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:52	7060562	CSW
Beryllium	0.0004	0.0030	0.00009	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/22/17 15:50	7060562	CSW
Boron	4.11	2.00	0.298	mg/L	EPA 6020B		50	06/20/17 07:30	06/21/17 09:58	7060562	CSW
Cadmium	0.0002	0.0010	0.0001	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 09:52	7060562	CSW
Calcium	65.9	25.0	2.02	mg/L	EPA 6020B		50	06/20/17 07:30	06/21/17 09:58	7060562	CSW
Chromium	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 09:52	7060562	CSW
Cobalt	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 09:52	7060562	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:52	7060562	CSW
Molybdenum	0.0104	0.0100	0.0010	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:52	7060562	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/20/17 07:30	06/22/17 15:50	7060562	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 09:52	7060562	CSW
Lithium	0.0063	0.0500	0.0015	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/22/17 15:50	7060562	CSW
Mercury	0.00019	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 14:13	7060593	DDN

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 27, 2017

Report No.: AAF0649
Client ID: FD-1
Date/Time Sampled: 6/15/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0649-06
Date/Time Received: 6/16/2017 4:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	621	25	10	mg/L	SM 2540 C		1	06/21/17 17:40	06/21/17 17:40	7060626	JPT
Inorganic Anions											
Chloride	4.8	0.25	0.01	mg/L	EPA 300.0		1	06/19/17 17:53	06/20/17 19:01	7060568	RLC
Fluoride	0.26	0.30	0.004	mg/L	EPA 300.0	J	1	06/19/17 17:53	06/20/17 19:01	7060568	RLC
Sulfate	320	10	0.92	mg/L	EPA 300.0		10	06/19/17 17:53	06/22/17 13:41	7060568	RLC
Metals, Total											
Antimony	0.0009	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/20/17 07:30	06/21/17 14:01	7060562	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:01	7060562	CSW
Barium	0.0229	0.0100	0.0004	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:01	7060562	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:01	7060562	CSW
Boron	1.49	0.0400	0.0060	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:01	7060562	CSW
Cadmium	0.0004	0.0010	0.0001	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 14:01	7060562	CSW
Calcium	99.0	25.0	2.02	mg/L	EPA 6020B		50	06/20/17 07:30	06/21/17 14:07	7060562	CSW
Chromium	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 14:01	7060562	CSW
Cobalt	0.0241	0.0100	0.0003	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:01	7060562	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 14:01	7060562	CSW
Molybdenum	0.0012	0.0100	0.0010	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 14:01	7060562	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:01	7060562	CSW
Thallium	0.00006	0.0010	0.00005	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 14:01	7060562	CSW
Lithium	0.0774	0.0500	0.0015	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:01	7060562	CSW
Mercury	0.000075	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 14:15	7060593	DDN

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 27, 2017

Report No.: AAF0649
Client ID: FB-1
Date/Time Sampled: 6/15/2017 2:30:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAF0649-07
Date/Time Received: 6/16/2017 4:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	06/21/17 17:40	06/21/17 17:40	7060626	JPT
Inorganic Anions											
Chloride	0.06	0.25	0.01	mg/L	EPA 300.0	J	1	06/19/17 17:53	06/20/17 19:22	7060568	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	06/19/17 17:53	06/20/17 19:22	7060568	RLC
Sulfate	0.17	1.0	0.09	mg/L	EPA 300.0	J	1	06/19/17 17:53	06/20/17 19:22	7060568	RLC
Metals, Total											
Antimony	0.0007	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/20/17 07:30	06/21/17 14:12	7060562	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:12	7060562	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:12	7060562	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:12	7060562	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:12	7060562	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:12	7060562	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:12	7060562	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:12	7060562	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:12	7060562	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:12	7060562	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:12	7060562	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:12	7060562	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:12	7060562	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:12	7060562	CSW
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 14:18	7060593	DDN

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 27, 2017

Report No.: AAF0649
Client ID: EB-1
Date/Time Sampled: 6/15/2017 4:30:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAF0649-08
Date/Time Received: 6/16/2017 4:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	06/21/17 17:40	06/21/17 17:40	7060626	JPT
Inorganic Anions											
Chloride	0.08	0.25	0.01	mg/L	EPA 300.0	J	1	06/19/17 17:53	06/20/17 19:43	7060568	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	06/19/17 17:53	06/20/17 19:43	7060568	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	06/19/17 17:53	06/20/17 19:43	7060568	RLC
Metals, Total											
Antimony	0.0008	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/20/17 07:30	06/21/17 14:18	7060562	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:18	7060562	CSW
Barium	0.0012	0.0100	0.0004	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 14:18	7060562	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:18	7060562	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:18	7060562	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:18	7060562	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:18	7060562	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:18	7060562	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:18	7060562	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:18	7060562	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:18	7060562	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:18	7060562	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:18	7060562	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:18	7060562	CSW
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/20/17 14:50	06/21/17 14:20	7060593	DDN

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

Attention: Mr. Joju Abraham

June 27, 2017

Report No.: AAF0649
Client ID: DGWC-67
Date/Time Sampled: 6/16/2017 9:20:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0649-09
Date/Time Received: 6/16/2017 4:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	309	25	10	mg/L	SM 2540 C		1	06/21/17 17:40	06/21/17 17:40	7060626	JPT
Inorganic Anions											
Chloride	5.5	0.25	0.01	mg/L	EPA 300.0		1	06/19/17 17:53	06/20/17 20:03	7060568	RLC
Fluoride	0.03	0.30	0.004	mg/L	EPA 300.0	J	1	06/19/17 17:53	06/20/17 20:03	7060568	RLC
Sulfate	100	5.0	0.46	mg/L	EPA 300.0		5	06/19/17 17:53	06/22/17 14:01	7060568	RLC
Metals, Total											
Antimony	0.0008	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/20/17 07:30	06/21/17 14:24	7060562	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:24	7060562	CSW
Barium	0.110	0.0100	0.0004	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:24	7060562	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:24	7060562	CSW
Boron	3.42	0.0400	0.0060	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:24	7060562	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:24	7060562	CSW
Calcium	42.5	25.0	2.02	mg/L	EPA 6020B		50	06/20/17 07:30	06/21/17 14:29	7060562	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:24	7060562	CSW
Cobalt	0.0041	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 14:24	7060562	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:24	7060562	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:24	7060562	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:24	7060562	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 14:24	7060562	CSW
Lithium	0.0048	0.0500	0.0015	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 14:24	7060562	CSW
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/21/17 09:20	06/21/17 15:58	7060604	DDN

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 27, 2017

Report No.: AAF0649
Client ID: DGWC-68A
Date/Time Sampled: 6/16/2017 11:10:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0649-10
Date/Time Received: 6/16/2017 4:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	271	25	10	mg/L	SM 2540 C		1	06/21/17 17:40	06/21/17 17:40	7060626	JPT
Inorganic Anions											
Chloride	4.2	0.25	0.01	mg/L	EPA 300.0		1	06/19/17 17:53	06/20/17 21:46	7060568	RLC
Fluoride	0.12	0.30	0.004	mg/L	EPA 300.0	J	1	06/19/17 17:53	06/20/17 21:46	7060568	RLC
Sulfate	47	1.0	0.09	mg/L	EPA 300.0		1	06/19/17 17:53	06/20/17 21:46	7060568	RLC
Metals, Total											
Antimony	0.0008	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/20/17 07:30	06/21/17 15:15	7060562	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:15	7060562	CSW
Barium	0.0855	0.0100	0.0004	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:15	7060562	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:15	7060562	CSW
Boron	1.88	0.0400	0.0060	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:15	7060562	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:15	7060562	CSW
Calcium	47.9	25.0	2.02	mg/L	EPA 6020B		50	06/20/17 07:30	06/21/17 15:21	7060562	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:15	7060562	CSW
Cobalt	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 15:15	7060562	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:15	7060562	CSW
Molybdenum	0.190	0.0100	0.0010	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:15	7060562	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:15	7060562	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:15	7060562	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:15	7060562	CSW
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/21/17 09:20	06/21/17 16:01	7060604	DDN

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 27, 2017

Report No.: AAF0649
Client ID: DGWA-71
Date/Time Sampled: 6/16/2017 9:25:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0649-11
Date/Time Received: 6/16/2017 4:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	100	25	10	mg/L	SM 2540 C		1	06/21/17 17:40	06/21/17 17:40	7060626	JPT
Inorganic Anions											
Chloride	3.4	0.25	0.01	mg/L	EPA 300.0		1	06/19/17 17:53	06/20/17 22:07	7060568	RLC
Fluoride	0.008	0.30	0.004	mg/L	EPA 300.0	J	1	06/19/17 17:53	06/20/17 22:07	7060568	RLC
Sulfate	11	1.0	0.09	mg/L	EPA 300.0		1	06/19/17 17:53	06/20/17 22:07	7060568	RLC
Metals, Total											
Antimony	0.0007	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/20/17 07:30	06/21/17 15:26	7060562	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:26	7060562	CSW
Barium	0.0369	0.0100	0.0004	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:26	7060562	CSW
Beryllium	0.0001	0.0030	0.00009	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 15:26	7060562	CSW
Boron	0.0085	0.0400	0.0060	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 15:26	7060562	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:26	7060562	CSW
Calcium	7.66	0.500	0.0404	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:26	7060562	CSW
Chromium	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 15:26	7060562	CSW
Cobalt	0.0011	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 15:26	7060562	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:26	7060562	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:26	7060562	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:26	7060562	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:26	7060562	CSW
Lithium	0.0016	0.0500	0.0015	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 15:26	7060562	CSW
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/21/17 09:20	06/21/17 16:03	7060604	DDN

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 27, 2017

Report No.: AAF0649
Client ID: DGWC-69
Date/Time Sampled: 6/16/2017 11:30:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAF0649-12
Date/Time Received: 6/16/2017 4:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	155	25	10	mg/L	SM 2540 C		1	06/21/17 17:40	06/21/17 17:40	7060626	JPT
Inorganic Anions											
Chloride	4.7	0.25	0.01	mg/L	EPA 300.0		1	06/19/17 17:53	06/20/17 22:28	7060568	RLC
Fluoride	0.16	0.30	0.004	mg/L	EPA 300.0	J	1	06/19/17 17:53	06/20/17 22:28	7060568	RLC
Sulfate	20	1.0	0.09	mg/L	EPA 300.0		1	06/19/17 17:53	06/20/17 22:28	7060568	RLC
Metals, Total											
Antimony	0.0007	0.0030	0.0006	mg/L	EPA 6020B	B-01, J	1	06/20/17 07:30	06/21/17 15:38	7060562	CSW
Arsenic	0.0113	0.0050	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:38	7060562	CSW
Barium	0.100	0.0100	0.0004	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:38	7060562	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:38	7060562	CSW
Boron	0.381	0.0400	0.0060	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:38	7060562	CSW
Cadmium	0.0002	0.0010	0.0001	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 15:38	7060562	CSW
Calcium	17.7	2.50	0.202	mg/L	EPA 6020B		5	06/20/17 07:30	06/21/17 15:49	7060562	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:38	7060562	CSW
Cobalt	0.0009	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 15:38	7060562	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:38	7060562	CSW
Molybdenum	0.0087	0.0100	0.0010	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 15:38	7060562	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:38	7060562	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	06/20/17 07:30	06/21/17 15:38	7060562	CSW
Lithium	0.0031	0.0500	0.0015	mg/L	EPA 6020B	J	1	06/20/17 07:30	06/21/17 15:38	7060562	CSW
Mercury	0.00007	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	06/21/17 09:20	06/21/17 16:05	7060604	DDN

PACE ANALYTICAL SERVICES, LLC.

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Attention: Mr. Joju Abraham

June 27, 2017

Report No.: AAF0649

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060626 - SM 2540 C											
Blank (7060626-BLK1)						Prepared & Analyzed: 06/21/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7060626-BS1)						Prepared & Analyzed: 06/21/17					
Total Dissolved Solids	383	25	10	mg/L	400.00		96	84-108			
Duplicate (7060626-DUP1)		**Source: AAF0631-03**				Prepared & Analyzed: 06/21/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7060626-DUP2)		**Source: AAF0649-02**				Prepared & Analyzed: 06/21/17					
Total Dissolved Solids	238	25	10	mg/L		251			5	10	

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June 27, 2017

Report No.: AAF0649

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060568 - EPA 300.0											
Blank (7060568-BLK1)						Prepared: 06/19/17 Analyzed: 06/20/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7060568-BS1)						Prepared: 06/19/17 Analyzed: 06/20/17					
Chloride	10.1	0.25	0.01	mg/L	10.020		101	90-110			
Fluoride	10.3	0.30	0.004	mg/L	10.020		102	90-110			
Sulfate	10.2	1.0	0.09	mg/L	10.050		101	90-110			
Matrix Spike (7060568-MS1)		**Source: AAF0631-07**				Prepared: 06/19/17 Analyzed: 06/20/17					
Chloride	14.8	0.25	0.01	mg/L	10.020	4.78	100	90-110			
Fluoride	13.0	0.30	0.004	mg/L	10.020	0.77	122	90-110			QM-05
Sulfate	277	1.0	0.09	mg/L	10.050	296	NR	90-110			QM-02
Matrix Spike (7060568-MS2)		**Source: AAF0649-04**				Prepared: 06/19/17 Analyzed: 06/20/17					
Chloride	35.2	0.25	0.01	mg/L	10.020	28.5	67	90-110			QM-02
Fluoride	10.8	0.30	0.004	mg/L	10.020	0.02	107	90-110			
Sulfate	348	1.0	0.09	mg/L	10.050	367	NR	90-110			QM-02
Matrix Spike Dup (7060568-MSD1)		**Source: AAF0631-07**				Prepared: 06/19/17 Analyzed: 06/20/17					
Chloride	14.8	0.25	0.01	mg/L	10.020	4.78	100	90-110	0.1	15	
Fluoride	13.6	0.30	0.004	mg/L	10.020	0.77	128	90-110	5	15	QM-05
Sulfate	278	1.0	0.09	mg/L	10.050	296	NR	90-110	0.2	15	QM-02

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June 27, 2017

Report No.: AAF0649

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060562 - EPA 3005A											
Blank (7060562-BLK1)						Prepared & Analyzed: 06/20/17					
Antimony	0.0008	0.0030	0.0006	mg/L							J
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 (7060562-BS1)						Prepared & Analyzed: 06/20/17					
Antimony	0.102	0.0030	0.0006	mg/L	0.10000		102	80-120			
Arsenic	0.0975	0.0050	0.0005	mg/L	0.10000		97	80-120			
Barium	0.0988	0.0100	0.0004	mg/L	0.10000		99	80-120			
Beryllium	0.0990	0.0030	0.00009	mg/L	0.10000		99	80-120			
Boron	0.990	0.0400	0.0060	mg/L	1.0000		99	80-120			
Cadmium	0.0984	0.0010	0.0001	mg/L	0.10000		98	80-120			
Calcium	0.950	0.500	0.0404	mg/L	1.0000		95	80-120			
Chromium	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Cobalt	0.0971	0.0100	0.0003	mg/L	0.10000		97	80-120			
Copper	0.0979	0.0250	0.0003	mg/L	0.10000		98	80-120			
Lead	0.0937	0.0050	0.00007	mg/L	0.10000		94	80-120			
Molybdenum	0.100	0.0100	0.0010	mg/L	0.10000		100	80-120			
Nickel	0.0989	0.0100	0.0005	mg/L	0.10000		99	80-120			
Selenium	0.0934	0.0100	0.0018	mg/L	0.10000		93	80-120			
Silver	0.0984	0.0100	0.0002	mg/L	0.10000		98	80-120			
Thallium	0.0938	0.0010	0.00005	mg/L	0.10000		94	80-120			
Vanadium	0.0988	0.0100	0.0012	mg/L	0.10000		99	80-120			
Zinc	0.101	0.0100	0.0012	mg/L	0.10000		101	80-120			
Lithium	0.103	0.0500	0.0015	mg/L	0.10000		103	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

June 27, 2017

Report No.: AAF0649

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060562 - EPA 3005A											
Matrix Spike (7060562-MS1)		**Source: AAF0631-02**			Prepared & Analyzed: 06/20/17						
Antimony	0.105	0.0030	0.0006	mg/L	0.10000	0.0009	104	75-125			
Arsenic	0.100	0.0050	0.0005	mg/L	0.10000	0.0006	100	75-125			
Barium	0.137	0.0100	0.0004	mg/L	0.10000	0.0364	101	75-125			
Beryllium	0.101	0.0030	0.00009	mg/L	0.10000	ND	101	75-125			
Boron	0.975	0.0400	0.0060	mg/L	1.0000	ND	97	75-125			
Cadmium	0.0967	0.0010	0.0001	mg/L	0.10000	ND	97	75-125			
Calcium	29.1	25.0	2.02	mg/L	1.0000	29.0	2	75-125			QM-02
Chromium	0.111	0.0100	0.0005	mg/L	0.10000	0.0117	100	75-125			
Cobalt	0.100	0.0100	0.0003	mg/L	0.10000	ND	100	75-125			
Copper	0.0950	0.0250	0.0003	mg/L	0.10000	ND	95	75-125			
Lead	0.0923	0.0050	0.00007	mg/L	0.10000	ND	92	75-125			
Molybdenum	0.103	0.0100	0.0010	mg/L	0.10000	ND	103	75-125			
Nickel	0.0983	0.0100	0.0005	mg/L	0.10000	0.0012	97	75-125			
Selenium	0.0948	0.0100	0.0018	mg/L	0.10000	0.0024	92	75-125			
Silver	0.0980	0.0100	0.0002	mg/L	0.10000	ND	98	75-125			
Thallium	0.0939	0.0010	0.00005	mg/L	0.10000	ND	94	75-125			
Vanadium	0.117	0.0100	0.0012	mg/L	0.10000	0.0171	100	75-125			
Zinc	0.101	0.0100	0.0012	mg/L	0.10000	0.0013	100	75-125			
Lithium	0.0998	0.0500	0.0015	mg/L	0.10000	ND	100	75-125			
Matrix Spike Dup (7060562-MSD1)		**Source: AAF0631-02**			Prepared & Analyzed: 06/20/17						
Antimony	0.105	0.0030	0.0006	mg/L	0.10000	0.0009	104	75-125	0.2	20	
Arsenic	0.105	0.0050	0.0005	mg/L	0.10000	0.0006	105	75-125	5	20	
Barium	0.136	0.0100	0.0004	mg/L	0.10000	0.0364	100	75-125	0.6	20	
Beryllium	0.0996	0.0030	0.00009	mg/L	0.10000	ND	100	75-125	0.9	20	
Boron	0.959	0.0400	0.0060	mg/L	1.0000	ND	96	75-125	2	20	
Cadmium	0.0989	0.0010	0.0001	mg/L	0.10000	ND	99	75-125	2	20	
Calcium	30.1	25.0	2.02	mg/L	1.0000	29.0	103	75-125	3	20	
Chromium	0.113	0.0100	0.0005	mg/L	0.10000	0.0117	102	75-125	2	20	
Cobalt	0.0977	0.0100	0.0003	mg/L	0.10000	ND	98	75-125	3	20	
Copper	0.0972	0.0250	0.0003	mg/L	0.10000	ND	97	75-125	2	20	
Lead	0.0928	0.0050	0.00007	mg/L	0.10000	ND	93	75-125	0.6	20	
Molybdenum	0.102	0.0100	0.0010	mg/L	0.10000	ND	102	75-125	0.6	20	
Nickel	0.0980	0.0100	0.0005	mg/L	0.10000	0.0012	97	75-125	0.3	20	
Selenium	0.101	0.0100	0.0018	mg/L	0.10000	0.0024	98	75-125	6	20	
Silver	0.0976	0.0100	0.0002	mg/L	0.10000	ND	98	75-125	0.4	20	
Thallium	0.0942	0.0010	0.00005	mg/L	0.10000	ND	94	75-125	0.4	20	
Vanadium	0.118	0.0100	0.0012	mg/L	0.10000	0.0171	101	75-125	1	20	
Zinc	0.101	0.0100	0.0012	mg/L	0.10000	0.0013	100	75-125	0.0007	20	
Lithium	0.101	0.0500	0.0015	mg/L	0.10000	ND	101	75-125	1	20	

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 27, 2017

Report No.: AAF0649

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060562 - EPA 3005A											
Post Spike (7060562-PS1)			**Source: AAF0631-02**			Prepared & Analyzed: 06/20/17					
Antimony	99.2			ug/L	100.00	0.874	98	80-120			
Arsenic	101			ug/L	100.00	0.566	101	80-120			
Barium	137			ug/L	100.00	36.4	100	80-120			
Beryllium	101			ug/L	100.00	0.0039	101	80-120			
Boron	1010			ug/L	1000.0	1.30	101	80-120			
Cadmium	98.3			ug/L	100.00	-0.0357	98	80-120			
Calcium	30100			ug/L	1000.0	29000	110	80-120			
Chromium	120			ug/L	100.00	11.7	108	80-120			
Cobalt	103			ug/L	100.00	0.0265	103	80-120			
Copper	99.8			ug/L	100.00	0.0522	100	80-120			
Lead	94.6			ug/L	100.00	0.0002	95	80-120			
Molybdenum	103			ug/L	100.00	0.110	103	80-120			
Nickel	103			ug/L	100.00	1.22	102	80-120			
Selenium	101			ug/L	100.00	2.39	99	80-120			
Silver	99.1			ug/L	100.00	-0.0002	99	80-120			
Thallium	97.3			ug/L	100.00	0.0174	97	80-120			
Vanadium	128			ug/L	100.00	17.1	110	80-120			
Zinc	108			ug/L	100.00	1.26	106	80-120			
Lithium	104			ug/L	100.00	0.917	103	80-120			
Batch 7060593 - EPA 7470A											
Blank (7060593-BLK1)						Prepared: 06/20/17 Analyzed: 06/21/17					
Mercury	0.00007	0.00050	0.000041	mg/L							J
LCS (7060593-BS1)						Prepared: 06/20/17 Analyzed: 06/21/17					
Mercury	0.00257	0.00050	0.000041	mg/L	2.5000E-3		103	80-120			

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 27, 2017

Report No.: AAF0649

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7060593 - EPA 7470A											
Matrix Spike (7060593-MS1)			**Source: AAF0595-01**			Prepared: 06/20/17 Analyzed: 06/21/17					
Mercury	0.00254	0.00050	0.000041	mg/L	2.5000E-3	0.00006	99	75-125			
Matrix Spike Dup (7060593-MSD1)			**Source: AAF0595-01**			Prepared: 06/20/17 Analyzed: 06/21/17					
Mercury	0.00262	0.00050	0.000041	mg/L	2.5000E-3	0.00006	102	75-125	3	20	
Post Spike (7060593-PS1)			**Source: AAF0595-01**			Prepared: 06/20/17 Analyzed: 06/21/17					
Mercury	1.88			ug/L	1.6667	0.0424	110	80-120			
Batch 7060604 - EPA 7470A											
Blank (7060604-BLK1)						Prepared & Analyzed: 06/21/17					
Mercury	0.00007	0.00050	0.000041	mg/L							J
LCS (7060604-BS1)						Prepared & Analyzed: 06/21/17					
Mercury	0.00262	0.00050	0.000041	mg/L	2.5000E-3		105	80-120			
Matrix Spike (7060604-MS1)			**Source: AAF0737-02**			Prepared & Analyzed: 06/21/17					
Mercury	0.00253	0.00050	0.000041	mg/L	2.5000E-3	0.00008	98	75-125			
Matrix Spike Dup (7060604-MSD1)			**Source: AAF0737-02**			Prepared & Analyzed: 06/21/17					
Mercury	0.00248	0.00050	0.000041	mg/L	2.5000E-3	0.00008	96	75-125	2	20	
Post Spike (7060604-PS1)			**Source: AAF0737-02**			Prepared & Analyzed: 06/21/17					
Mercury	1.84			ug/L	1.6667	0.0501	108	80-120			

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Attention: Mr. Joju Abraham

June 27, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 27, 2017

Report Notes

The sample collection times for FB-1 and EB-1 were not listed on the COC and were taken from the container labels. MMR

CHAIN OF CUSTODY RECORD

Pace Analytical®

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB NUMBER	REMARKS/ADDITIONAL INFORMATION
	CONTAINER TYPE:						P	P	P		
	PRESERVATION:						3	7	3		
6/15/17	1040	GW		X	DGWA-2	4	1	1	2	1	
6/15/17	1005	"			DGWA-53	4	1	1	2	2	
6/15/17	1535				DGWA-70A	4	1	1	2	3	
6/15/17	1305				DGWC-4	6	1	1	4	4	Extra Radium
6/15/17	1315				DGWC-23	4	1	1	2	5	
6/15/17	—				FD-1	4	1	1	2	6	
6/15/17		W			FB-1	4	1	1	2	7	Collection Time: 14:30
6/15/17		W			EB-1	4	1	1	2	8	" : 16:30
6/16/17	0920	GW			DGWC-67	4	1	1	2	9	MR 06/16/17
6/16/17	1110	GW			DGWC-68A	4	1	1	2	10	
6/16/17	0925	GW			DGWA-71	4	1	1	2	11	
6/16/17	1130	GW			DGWC-69	4	1	1	2	12	

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Ben Hodges Golder
DATE/TIME: 6/16/17 1358
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY: Mike Norman
DATE/TIME: 6/16/17 1358
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB: Rahman
DATE/TIME: 06/16/17 1620
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS

Packed: No NA
Ice: Yes No NA
Temperature: 1.3 Min: 1.3 Max:
Custody Seal: Intact Broken Not Present N/A
# of Coolers
Cooler ID:

FOR LAB USE ONLY
LAB #: AAF0649
Entered into LIMS: MR
Tracking #:

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: 6/19/2017 12:03:34PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 06/16/17 16:20

Work Order: AAF0649
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 12 **#Containers:** 50

Minimum Temp(C): 1.3 **Maximum Temp(C):** 1.3 **Custody Seal(s) Used:** N/A

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	NO
Sample Container(s) Match COC	YES
Custody seal Intact	N/A
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:

The sample collection times for FB-1 and EB-1 were not listed on the COC and were taken from the container labels. MMR

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

July 13, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAF0649 Plant McDonough
Pace Project No.: 30222152

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on June 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

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

CERTIFICATIONS

Project: AAF0649 Plant McDonough
Pace Project No.: 30222152

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

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

SAMPLE SUMMARY

Project: AAF0649 Plant McDonough
Pace Project No.: 30222152

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30222152001	**DGWA-2**	Water	06/15/17 10:40	06/20/17 10:10
30222152002	**DGWA-53**	Water	06/15/17 10:05	06/20/17 10:10
30222152003	**DGWA-70A**	Water	06/15/17 15:35	06/20/17 10:10
30222152004	**DGWC-4**	Water	06/15/17 13:05	06/20/17 10:10
30222152005	**DGWC-23**	Water	06/15/17 13:15	06/20/17 10:10
30222152006	**FD-1**	Water	06/15/17 00:00	06/20/17 10:10
30222152007	**FB-1**	Water	06/15/17 14:30	06/20/17 10:10
30222152008	**EB-1**	Water	06/15/17 16:30	06/20/17 10:10
30222152009	**DGWC-67**	Water	06/16/17 09:20	06/20/17 10:10
30222152010	**DGWC-68A**	Water	06/16/17 11:10	06/20/17 10:10
30222152011	**DGWA-71**	Water	06/16/17 09:25	06/20/17 10:10
30222152012	**DGWC-69**	Water	06/16/17 11:30	06/20/17 10:10

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

SAMPLE ANALYTE COUNT

Project: AAF0649 Plant McDonough
Pace Project No.: 30222152

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30222152001	DGWA-2	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30222152002	DGWA-53	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30222152003	DGWA-70A	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30222152004	DGWC-4	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30222152005	DGWC-23	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30222152006	FD-1	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30222152007	FB-1	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30222152008	EB-1	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30222152009	DGWC-67	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30222152010	DGWC-68A	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30222152011	DGWA-71	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30222152012	DGWC-69	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAF0649 Plant McDonough
Pace Project No.: 30222152

Sample: DGWA-2 **Lab ID: 30222152001** Collected: 06/15/17 10:40 Received: 06/20/17 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	**0.404 ± 0.258 (0.406) C:93% T:NA**	pCi/L	07/07/17 08:35	13982-63-3	
Radium-228	EPA 9320	**0.575 ± 0.400 (0.773) C:76% T:86%**	pCi/L	07/07/17 16:22	15262-20-1	
Total Radium	Total Radium Calculation	**0.979 ± 0.658 (1.18)**	pCi/L	07/13/17 10:54	7440-14-4	

Sample: DGWA-53 **Lab ID: 30222152002** Collected: 06/15/17 10:05 Received: 06/20/17 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	**2.44 ± 0.638 (0.410) C:86% T:NA**	pCi/L	07/07/17 08:36	13982-63-3	
Radium-228	EPA 9320	**2.14 ± 0.624 (0.761) C:72% T:91%**	pCi/L	07/07/17 16:22	15262-20-1	
Total Radium	Total Radium Calculation	**4.58 ± 1.26 (1.17)**	pCi/L	07/13/17 10:54	7440-14-4	

Sample: DGWA-70A **Lab ID: 30222152003** Collected: 06/15/17 15:35 Received: 06/20/17 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	**0.248 ± 0.208 (0.366) C:94% T:NA**	pCi/L	07/07/17 08:36	13982-63-3	
Radium-228	EPA 9320	**0.762 ± 0.495 (0.962) C:76% T:82%**	pCi/L	07/07/17 16:22	15262-20-1	
Total Radium	Total Radium Calculation	**1.01 ± 0.703 (1.33)**	pCi/L	07/13/17 10:54	7440-14-4	

Sample: DGWC-4 **Lab ID: 30222152004** Collected: 06/15/17 13:05 Received: 06/20/17 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	**0.345 ± 0.236 (0.363) C:83% T:NA**	pCi/L	07/07/17 08:36	13982-63-3	
Radium-228	EPA 9320	**0.420 ± 0.384 (0.781) C:74% T:82%**	pCi/L	07/07/17 16:22	15262-20-1	
Total Radium	Total Radium Calculation	**0.765 ± 0.620 (1.14)**	pCi/L	07/13/17 10:54	7440-14-4	

Sample: DGWC-23 **Lab ID: 30222152005** Collected: 06/15/17 13:15 Received: 06/20/17 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	**0.412 ± 0.223 (0.277) C:83% T:NA**	pCi/L	06/29/17 12:08	13982-63-3	2c
Radium-228	EPA 9320	**0.0225 ± 0.340 (0.786) C:72% T:87%**	pCi/L	07/07/17 16:22	15262-20-1	1c

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAF0649 Plant McDonough
Pace Project No.: 30222152

Sample: DGWC-23 **Lab ID: 30222152005** Collected: 06/15/17 13:15 Received: 06/20/17 10:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.435 ± 0.563 (1.06)**	pCi/L	07/13/17 10:54	7440-14-4	

Sample: FD-1 **Lab ID: 30222152006** Collected: 06/15/17 00:00 Received: 06/20/17 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	**0.667 ± 0.319 (0.437) C:90% T:NA**	pCi/L	07/07/17 08:37	13982-63-3	
Radium-228	EPA 9320	**0.455 ± 0.395 (0.797) C:66% T:89%**	pCi/L	07/07/17 16:23	15262-20-1	
Total Radium	Total Radium Calculation	**1.12 ± 0.714 (1.23)**	pCi/L	07/13/17 10:54	7440-14-4	

Sample: FB-1 **Lab ID: 30222152007** Collected: 06/15/17 14:30 Received: 06/20/17 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	**-0.0745 ± 0.156 (0.485) C:83% T:NA**	pCi/L	07/07/17 08:37	13982-63-3	
Radium-228	EPA 9320	**0.254 ± 0.340 (0.726) C:74% T:83%**	pCi/L	07/07/17 16:23	15262-20-1	
Total Radium	Total Radium Calculation	**0.254 ± 0.496 (1.21)**	pCi/L	07/13/17 10:54	7440-14-4	

Sample: EB-1 **Lab ID: 30222152008** Collected: 06/15/17 16:30 Received: 06/20/17 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	**0.166 ± 0.183 (0.358) C:86% T:NA**	pCi/L	07/07/17 08:37	13982-63-3	
Radium-228	EPA 9320	**0.412 ± 0.345 (0.692) C:74% T:88%**	pCi/L	07/07/17 16:23	15262-20-1	
Total Radium	Total Radium Calculation	**0.578 ± 0.528 (1.05)**	pCi/L	07/13/17 10:54	7440-14-4	

Sample: DGWC-67 **Lab ID: 30222152009** Collected: 06/16/17 09:20 Received: 06/20/17 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	**0.158 ± 0.226 (0.493) C:85% T:NA**	pCi/L	07/07/17 08:37	13982-63-3	
Radium-228	EPA 9320	**0.808 ± 0.431 (0.784) C:79% T:85%**	pCi/L	07/07/17 16:23	15262-20-1	
Total Radium	Total Radium Calculation	**0.966 ± 0.657 (1.28)**	pCi/L	07/13/17 10:54	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAF0649 Plant McDonough
Pace Project No.: 30222152

Sample: DGWC-68A **Lab ID: 30222152010** Collected: 06/16/17 11:10 Received: 06/20/17 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	**0.276 ± 0.208 (0.320) C:80% T:NA**	pCi/L	07/07/17 08:37	13982-63-3	
Radium-228	EPA 9320	**0.0557 ± 0.298 (0.682) C:75% T:89%**	pCi/L	07/07/17 16:23	15262-20-1	
Total Radium	Total Radium Calculation	**0.332 ± 0.506 (1.00)**	pCi/L	07/13/17 10:54	7440-14-4	

Sample: DGWA-71 **Lab ID: 30222152011** Collected: 06/16/17 09:25 Received: 06/20/17 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	**0.372 ± 0.251 (0.413) C:92% T:NA**	pCi/L	07/07/17 08:37	13982-63-3	
Radium-228	EPA 9320	**0.360 ± 0.378 (0.788) C:70% T:88%**	pCi/L	07/07/17 16:23	15262-20-1	
Total Radium	Total Radium Calculation	**0.732 ± 0.629 (1.20)**	pCi/L	07/13/17 10:54	7440-14-4	

Sample: DGWC-69 **Lab ID: 30222152012** Collected: 06/16/17 11:30 Received: 06/20/17 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	**0.482 ± 0.286 (0.431) C:80% T:NA**	pCi/L	07/07/17 08:37	13982-63-3	
Radium-228	EPA 9320	**1.13 ± 0.480 (0.775) C:76% T:79%**	pCi/L	07/07/17 16:24	15262-20-1	
Total Radium	Total Radium Calculation	**1.61 ± 0.766 (1.21)**	pCi/L	07/13/17 10:54	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAF0649 Plant McDonough
Pace Project No.: 30222152

QC Batch: 262721 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30222152001, 30222152002, 30222152003, 30222152004, 30222152005, 30222152006, 30222152007, 30222152008, 30222152009, 30222152010, 30222152011, 30222152012

METHOD BLANK: 1293767 Matrix: Water
Associated Lab Samples: 30222152001, 30222152002, 30222152003, 30222152004, 30222152005, 30222152006, 30222152007, 30222152008, 30222152009, 30222152010, 30222152011, 30222152012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.137 ± 0.161 (0.320) C:91% T:NA	pCi/L	07/07/17 08:35	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAF0649 Plant McDonough
Pace Project No.: 30222152

QC Batch: 262719 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30222152001, 30222152002, 30222152003, 30222152004, 30222152005, 30222152006, 30222152007, 30222152008, 30222152009, 30222152010, 30222152011, 30222152012

METHOD BLANK: 1293765 Matrix: Water
Associated Lab Samples: 30222152001, 30222152002, 30222152003, 30222152004, 30222152005, 30222152006, 30222152007, 30222152008, 30222152009, 30222152010, 30222152011, 30222152012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.185 ± 0.344 (0.756) C:75% T:81%	pCi/L	07/07/17 16:22	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: AAF0649 Plant McDonough
Pace Project No.: 30222152

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.

ANALYTE QUALIFIERS

1c	Sample RPD for Ra-228 was outside of acceptance limits. Results for the sample and duplicate are both less than 1 pCi/L. There is no remaining volume available for re-analysis. Samples have been reported with narration.
2c	The LCS recovery associated with this sample failed low and outside of the default acceptance criteria for Total Alpha Radium Ra-226 analysis at 74.38%. Pace's default lower limit is 75%. There was no sample volume available for re-analysis. All remaining samples from the associated analytical batch were re-prepped, and all sample results duplicated. Results for sample 30222152005 have been reported with narration and client permission.

Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: AAF0649 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 7/12/2017

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

WO#:30222152

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	DGWA-2	G	6/15/2017 10:40	AAF0649-01	GW	2	X	001
2	DGWA-53	G	6/15/2017 10:05	AAF0649-02	GW	2	X	002
3	DGWA-70A	G	6/15/2017 15:35	AAF0649-03	GW	2	X	003
4	DGWC-4	G	6/15/2017 13:05	AAF0649-04	GW	4	X	004
5	DGWC-23	G	6/15/2017 13:15	AAF0649-05	GW	2	X	005
6	FD-1	G	6/15/2017 0:00	AAF0649-06	GW	2	X	006
7	FB-1	G	6/15/2017 14:30	AAF0649-07	GW	2	X	007
8	EB-1	G	6/15/2017 16:30	AAF0649-08	GW	2	X	008
9	DGWC-67	G	6/16/2017 9:20	AAF0649-09	GW	2	X	009
10	DGWC-68A	G	6/16/2017 11:10	AAF0649-10	GW	2	X	010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	6/19/17		6/20/17 10:00	
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

Pace Analytical
www.pacelabs.com

Workorder: AAF0649 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 7/12/2017

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 HNO3					Requested Analysis Radium 226, 228, Total												LAB USE ONLY
																							30222152
11	DGWA-71	G	6/16/2017 9:25	AAF0649-11	GW	2					X												011
12	DGWC-69	G	6/16/2017 11:30	AAF0649-12	GW	2					X												012
13																							
14																							
15																							
16																							
17																							
18																							
19																							
20																							

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1					
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.

CHAIN OF CUSTODY RECORD

Pace Analytical®

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB #
	CONTAINER TYPE:						P	P	P	
	PRESERVATION:						3	7	3	
6/15/17	1040	GW		X	DGWA-2	4	1	1	2	1
6/15/17	1005	"		"	DGWA-53	4	1	1	2	2
6/15/17	1535				DGWA-70A	4	1	1	2	3
6/15/17	1305				DGWC-4	6	1	1	4	4
6/15/17	1315				DGWC-23	4	1	1	2	5
6/15/17	—				FD-1	4	1	1	2	6
6/15/17		W			FB-1	4	1	1	2	7
6/15/17		W			EB-1	4	1	1	2	8
6/16/17	0920	GW			DGWC-67	4	1	1	2	9
6/16/17	1110	GW			DGWC-68A	4	1	1	2	10
6/16/17	0925	GW			DGWA-71	4	1	1	2	11
6/16/17	1130	GW			DGWC-69	4	1	1	2	12

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

1
2 30222152
3
4 Extra Radium
5
6
7 Collection Time: 14:30 6/15/17
8 " : 16:30 "
9 MR 06/16/17
10
11
12

SAMPLED BY AND TITLE: Ben Hodges Golder
DATE/TIME: 6/16/17 1358

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY: Mike Norman
DATE/TIME: 6/16/17 1358

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Mzahmain
DATE/TIME: 06/16/17 1620

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

Custody Seal: Intact Broken Not Present N/A
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AAF0649
Entered into LIMS: MR
Tracking #:

pH checked: Yes No NA
Ice: Yes No NA
Temperature: 1.2 Min: 1.3 Max

Sample Condition Upon Receipt Pittsburgh

30222152

Pace Analytical

Client Name: PACE-Atlanta Project #

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

Tracking #: 608175105 1214

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: ZH 6/20/17

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:	✓			5.
-Includes date/time/ID Matrix: WT				
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.
Orthophosphate field filtered			✓	12.
Organic Samples checked for dechlorination:			✓	13.
Filtered volume received for Dissolved tests			✓	14.
All containers have been checked for preservation.	✓			15. PH<2
All containers needing preservation are found to be in compliance with EPA recommendation.	✓			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed ZH Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	16.
Trip Blank Present:			✓	17.
Trip Blank Custody Seals Present			✓	
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: ZH Date: 6/20/17

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

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	JC2
Date:	7/6/2017
Worklist:	36335
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1293767
MB concentration:	0.137
M/B Counting Uncertainty:	0.160
MB MDC:	0.320
MB Numerical Performance Indicator:	1.68
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS36335	LCSD36335
Count Date:	7/7/2017	
Spike I.D.:	17-030	
Spike Concentration (pCi/mL):	80.199	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.513	
Target Conc. (pCi/L, g, F):	15.637	
Uncertainty (Calculated):	1.441	
Result (pCi/L, g, F):	13.863	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.245	
Numerical Performance Indicator:	-1.83	
Percent Recovery:	88.66%	
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:	
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		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30222152004	
Duplicate Sample I.D.	30222152004DUP	
Sample Result (pCi/L, g, F):	0.345	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.231	
Sample Duplicate Result (pCi/L, g, F):	0.227	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.258	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.668	30222152004
Duplicate RPD:	41.21%	30222152004DUP
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:

result to < 5x MDC, use numerical indicator to assess < 3 for WT

***Batch must be re-prepped due to unacceptable precision. JH 7/13/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	6/27/2017
Worklist:	36333
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1293765
MB concentration:	0.185
M/B Counting Uncertainty:	0.343
MB MDC:	0.756
MB Numerical Performance Indicator:	1.06
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS36333	LCSD36333
Count Date:	7/7/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	24.108	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.809	
Target Conc. (pCi/L, g, F):	5.962	
Uncertainty (Calculated):	0.429	
Result (pCi/L, g, F):	6.074	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.683	
Numerical Performance Indicator:	0.27	
Percent Recovery:	101.88%	
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:	
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.:	30222152005	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30222152005DUP	
Sample Result (pCi/L, g, F):	0.022	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.340	
Sample Duplicate Result (pCi/L, g, F):	0.922	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.392	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-3.395	30222152005
Duplicate RPD:	190.48%	30222152005DUP
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:	
(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:

***Batch must be re-prepped due to unacceptable precision. Nonated in report, no available sample for re-prep
JLW 7/13/17

LABORATORY ANALYTICAL DATA

July 2017

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: AAG0277
July 20, 2017
Project: CCR Event
Project #:Plant McDonough

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

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

July 20, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWA-70A	AAG0277-01	Ground Water	07/11/17 10:15	07/12/17 13:30
DGWA-71	AAG0277-02	Ground Water	07/11/17 12:15	07/12/17 13:30
DGWA-2	AAG0277-03	Ground Water	07/11/17 10:05	07/12/17 13:30
DGWC-4	AAG0277-04	Ground Water	07/11/17 09:45	07/12/17 13:30
DGWC-5	AAG0277-05	Ground Water	07/11/17 11:35	07/12/17 13:30
DGWC-8	AAG0277-06	Ground Water	07/11/17 14:35	07/12/17 13:30
DGWC-9	AAG0277-07	Ground Water	07/11/17 14:05	07/12/17 13:30
FD-1	AAG0277-08	Ground Water	07/11/17 00:00	07/12/17 13:30
FB-1	AAG0277-09	Water	07/11/17 09:45	07/12/17 13:30
EB-1	AAG0277-10	Water	07/11/17 15:05	07/12/17 13:30

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 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.

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

July 20, 2017

Report No.: AAG0277
Client ID: DGWA-70A
Date/Time Sampled: 7/11/2017 10:15:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0277-01
Date/Time Received: 7/12/2017 1:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	25	25	10	mg/L	SM 2540 C		1	07/17/17 19:10	07/17/17 19:10	7070375	JPT
Inorganic Anions											
Chloride	2.1	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/13/17 09:37	07/13/17 17:59	7070282	RLC
Fluoride	0.06	0.30	0.004	mg/L	EPA 300.0	J	1	07/13/17 09:37	07/13/17 17:59	7070282	RLC
Sulfate	1.4	1.0	0.09	mg/L	EPA 300.0		1	07/13/17 09:37	07/13/17 17:59	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:36	7070270	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:36	7070270	CSW
Barium	0.0306	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:36	7070270	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:36	7070270	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	07/13/17 09:45	07/14/17 14:55	7070270	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:36	7070270	CSW
Calcium	5.96	5.00	2.02	mg/L	EPA 6020B		50	07/13/17 09:45	07/13/17 20:41	7070270	CSW
Chromium	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 20:36	7070270	CSW
Cobalt	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 20:36	7070270	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:36	7070270	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:36	7070270	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:36	7070270	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:36	7070270	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:36	7070270	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 12:34	7070369	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0277
Client ID: DGWA-71
Date/Time Sampled: 7/11/2017 12:15:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0277-02
Date/Time Received: 7/12/2017 1:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	59	25	10	mg/L	SM 2540 C		1	07/17/17 19:10	07/17/17 19:10	7070375	JPT
Inorganic Anions											
Chloride	3.1	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/13/17 09:37	07/13/17 18:19	7070282	RLC
Fluoride	0.007	0.30	0.004	mg/L	EPA 300.0	J	1	07/13/17 09:37	07/13/17 18:19	7070282	RLC
Sulfate	11	1.0	0.09	mg/L	EPA 300.0		1	07/13/17 09:37	07/13/17 18:19	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:47	7070270	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:47	7070270	CSW
Barium	0.0362	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:47	7070270	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:47	7070270	CSW
Boron	0.0077	0.0400	0.0060	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/14/17 15:01	7070270	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:47	7070270	CSW
Calcium	7.71	5.00	2.02	mg/L	EPA 6020B		50	07/13/17 09:45	07/13/17 20:53	7070270	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:47	7070270	CSW
Cobalt	0.0008	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 20:47	7070270	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:47	7070270	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:47	7070270	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:47	7070270	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:47	7070270	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:47	7070270	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 12:36	7070369	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0277
Client ID: DGWA-2
Date/Time Sampled: 7/11/2017 10:05:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0277-03
Date/Time Received: 7/12/2017 1:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	542	25	10	mg/L	SM 2540 C		1	07/17/17 19:10	07/17/17 19:10	7070375	JPT
Inorganic Anions											
Chloride	4.6	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/13/17 09:37	07/13/17 18:40	7070282	RLC
Fluoride	0.04	0.30	0.004	mg/L	EPA 300.0	J	1	07/13/17 09:37	07/13/17 18:40	7070282	RLC
Sulfate	330	20	1.8	mg/L	EPA 300.0		20	07/13/17 09:37	07/18/17 01:41	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:10	7070270	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:10	7070270	CSW
Barium	0.0201	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/17 09:45	07/14/17 17:57	7070270	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:10	7070270	CSW
Boron	1.39	0.500	0.0060	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:10	7070270	CSW
Cadmium	0.0003	0.0010	0.0001	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 21:10	7070270	CSW
Calcium	98.4	25.0	2.02	mg/L	EPA 6020B		50	07/13/17 09:45	07/13/17 21:15	7070270	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:10	7070270	CSW
Cobalt	0.0238	0.0100	0.0003	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:10	7070270	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:10	7070270	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:10	7070270	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:10	7070270	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:10	7070270	CSW
Lithium	0.0731	0.0500	0.0015	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:10	7070270	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 12:39	7070369	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0277
Client ID: DGWC-4
Date/Time Sampled: 7/11/2017 9:45:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0277-04
Date/Time Received: 7/12/2017 1:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1160	25	10	mg/L	SM 2540 C		1	07/17/17 19:10	07/17/17 19:10	7070375	JPT
Inorganic Anions											
Chloride	28	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/13/17 09:37	07/13/17 19:01	7070282	RLC
Fluoride	0.02	0.30	0.004	mg/L	EPA 300.0	J	1	07/13/17 09:37	07/13/17 19:01	7070282	RLC
Sulfate	740	50	4.6	mg/L	EPA 300.0		50	07/13/17 09:37	07/18/17 02:01	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:21	7070270	CSW
Arsenic	0.0008	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 21:21	7070270	CSW
Barium	0.0301	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/17 09:45	07/14/17 18:03	7070270	CSW
Beryllium	0.0001	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 21:21	7070270	CSW
Boron	3.85	0.500	0.0060	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:21	7070270	CSW
Cadmium	0.0006	0.0010	0.0001	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 21:21	7070270	CSW
Calcium	249	25.0	2.02	mg/L	EPA 6020B		50	07/13/17 09:45	07/13/17 21:27	7070270	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:21	7070270	CSW
Cobalt	0.0015	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 21:21	7070270	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:21	7070270	CSW
Molybdenum	0.0041	0.0100	0.0010	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 21:21	7070270	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:21	7070270	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:21	7070270	CSW
Lithium	0.0022	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 21:21	7070270	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 12:41	7070369	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0277
Client ID: DGWC-5
Date/Time Sampled: 7/11/2017 11:35:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0277-05
Date/Time Received: 7/12/2017 1:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	612	25	10	mg/L	SM 2540 C		1	07/17/17 19:10	07/17/17 19:10	7070375	JPT
Inorganic Anions											
Chloride	9.0	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/13/17 09:37	07/13/17 19:21	7070282	RLC
Fluoride	0.70	0.30	0.004	mg/L	EPA 300.0		1	07/13/17 09:37	07/13/17 19:21	7070282	RLC
Sulfate	440	20	1.8	mg/L	EPA 300.0		20	07/13/17 09:37	07/18/17 02:22	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:33	7070270	CSW
Arsenic	0.0203	0.0050	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:33	7070270	CSW
Barium	0.0174	0.0500	0.0021	mg/L	EPA 6020B	R-01, J	5	07/13/17 09:45	07/14/17 18:08	7070270	CSW
Beryllium	0.0050	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:33	7070270	CSW
Boron	4.61	0.500	0.0060	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:33	7070270	CSW
Cadmium	0.0003	0.0010	0.0001	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 21:33	7070270	CSW
Calcium	84.6	25.0	2.02	mg/L	EPA 6020B		50	07/13/17 09:45	07/13/17 21:39	7070270	CSW
Chromium	ND	0.100	0.0045	mg/L	EPA 6020B	R-01	10	07/13/17 09:45	07/17/17 09:12	7070270	CSW
Cobalt	0.0351	0.100	0.0026	mg/L	EPA 6020B	R-01, J	10	07/13/17 09:45	07/17/17 09:12	7070270	CSW
Lead	ND	0.0050	0.0003	mg/L	EPA 6020B		5	07/13/17 09:45	07/14/17 18:08	7070270	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:33	7070270	CSW
Selenium	0.0607	0.0100	0.0018	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:33	7070270	CSW
Thallium	ND	0.0020	0.0003	mg/L	EPA 6020B	R-01	5	07/13/17 09:45	07/14/17 18:08	7070270	CSW
Lithium	0.0031	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 21:33	7070270	CSW
Mercury	0.00020	0.00050	0.000041	mg/L	EPA 7470A	J	1	07/19/17 08:50	07/19/17 12:43	7070369	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

July 20, 2017

Report No.: AAG0277
Client ID: DGWC-8
Date/Time Sampled: 7/11/2017 2:35:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0277-06
Date/Time Received: 7/12/2017 1:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	679	25	10	mg/L	SM 2540 C		1	07/17/17 19:10	07/17/17 19:10	7070375	JPT
Inorganic Anions											
Chloride	9.7	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/13/17 09:37	07/13/17 19:42	7070282	RLC
Fluoride	0.20	0.30	0.004	mg/L	EPA 300.0	J	1	07/13/17 09:37	07/13/17 19:42	7070282	RLC
Sulfate	440	50	4.6	mg/L	EPA 300.0		50	07/13/17 09:37	07/18/17 02:43	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:44	7070270	CSW
Arsenic	0.0012	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 21:44	7070270	CSW
Barium	0.0389	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/17 09:45	07/14/17 18:14	7070270	CSW
Beryllium	0.0022	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 21:44	7070270	CSW
Boron	2.55	0.500	0.0060	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:44	7070270	CSW
Cadmium	0.0021	0.0010	0.0001	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:44	7070270	CSW
Calcium	91.1	25.0	2.02	mg/L	EPA 6020B		50	07/13/17 09:45	07/13/17 21:50	7070270	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:44	7070270	CSW
Cobalt	0.0601	0.0100	0.0003	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:44	7070270	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:44	7070270	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:44	7070270	CSW
Selenium	0.0031	0.0100	0.0018	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 21:44	7070270	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 21:44	7070270	CSW
Lithium	0.0045	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 21:44	7070270	CSW
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	J	1	07/19/17 08:50	07/19/17 12:51	7070369	MTC

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2480 Maner Road
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Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0277
Client ID: DGWC-9
Date/Time Sampled: 7/11/2017 2:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0277-07
Date/Time Received: 7/12/2017 1:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	436	25	10	mg/L	SM 2540 C		1	07/17/17 19:10	07/17/17 19:10	7070375	JPT
Inorganic Anions											
Chloride	6.9	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/13/17 09:37	07/13/17 20:03	7070282	RLC
Fluoride	1.1	0.30	0.004	mg/L	EPA 300.0		1	07/13/17 09:37	07/13/17 20:03	7070282	RLC
Sulfate	320	20	1.8	mg/L	EPA 300.0		20	07/13/17 09:37	07/18/17 03:03	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:56	7070270	CSW
Arsenic	0.0194	0.0050	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:56	7070270	CSW
Barium	0.0154	0.0500	0.0021	mg/L	EPA 6020B	R-01, J	5	07/13/17 09:45	07/14/17 18:34	7070270	CSW
Beryllium	0.0048	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:56	7070270	CSW
Boron	1.78	0.500	0.0060	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:56	7070270	CSW
Cadmium	0.0005	0.0010	0.0001	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 21:56	7070270	CSW
Calcium	73.7	25.0	2.02	mg/L	EPA 6020B		50	07/13/17 09:45	07/13/17 22:01	7070270	CSW
Chromium	ND	0.100	0.0045	mg/L	EPA 6020B	R-01	10	07/13/17 09:45	07/17/17 09:17	7070270	CSW
Cobalt	0.136	0.100	0.0026	mg/L	EPA 6020B		10	07/13/17 09:45	07/17/17 09:17	7070270	CSW
Lead	ND	0.0050	0.0003	mg/L	EPA 6020B		5	07/13/17 09:45	07/14/17 18:34	7070270	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:56	7070270	CSW
Selenium	0.0561	0.0100	0.0018	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 21:56	7070270	CSW
Thallium	0.0007	0.0020	0.0003	mg/L	EPA 6020B	R-01, J	5	07/13/17 09:45	07/14/17 18:34	7070270	CSW
Lithium	0.0220	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 21:56	7070270	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 12:53	7070369	MTC

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0277
Client ID: FD-1
Date/Time Sampled: 7/11/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0277-08
Date/Time Received: 7/12/2017 1:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	35	25	10	mg/L	SM 2540 C		1	07/17/17 19:50	07/17/17 19:50	7070376	JPT
Inorganic Anions											
Chloride	2.2	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/13/17 09:37	07/13/17 22:48	7070282	RLC
Fluoride	0.05	0.30	0.004	mg/L	EPA 300.0	J	1	07/13/17 09:37	07/13/17 22:48	7070282	RLC
Sulfate	1.1	1.0	0.09	mg/L	EPA 300.0		1	07/13/17 09:37	07/13/17 22:48	7070282	RLC
Metals, Total											
Antimony	0.0006	0.0030	0.0006	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 22:19	7070270	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:19	7070270	CSW
Barium	0.0279	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/17 09:45	07/14/17 15:19	7070270	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:19	7070270	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	07/13/17 09:45	07/14/17 15:19	7070270	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:19	7070270	CSW
Calcium	5.79	5.00	2.02	mg/L	EPA 6020B		50	07/13/17 09:45	07/13/17 22:24	7070270	CSW
Chromium	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 22:19	7070270	CSW
Cobalt	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 22:19	7070270	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 22:19	7070270	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:19	7070270	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:19	7070270	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:19	7070270	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:19	7070270	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 12:55	7070369	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0277
Client ID: FB-1
Date/Time Sampled: 7/11/2017 9:45:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAG0277-09
Date/Time Received: 7/12/2017 1:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	07/17/17 19:50	07/17/17 19:50	7070376	JPT
Inorganic Anions											
Chloride	0.08	0.25	0.01	mg/L	EPA 300.0	B-01, J	1	07/13/17 09:37	07/13/17 23:09	7070282	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	07/13/17 09:37	07/13/17 23:09	7070282	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	07/13/17 09:37	07/13/17 23:09	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:30	7070270	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:30	7070270	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:30	7070270	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:30	7070270	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	07/13/17 09:45	07/14/17 15:25	7070270	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:30	7070270	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:30	7070270	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:30	7070270	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:30	7070270	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:30	7070270	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:30	7070270	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:30	7070270	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:30	7070270	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:30	7070270	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 12:58	7070369	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0277
Client ID: EB-1
Date/Time Sampled: 7/11/2017 3:05:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAG0277-10
Date/Time Received: 7/12/2017 1:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	07/17/17 19:50	07/17/17 19:50	7070376	JPT
Inorganic Anions											
Chloride	0.07	0.25	0.01	mg/L	EPA 300.0	B-01, J	1	07/13/17 09:37	07/13/17 23:29	7070282	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	07/13/17 09:37	07/13/17 23:29	7070282	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	07/13/17 09:37	07/13/17 23:29	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:36	7070270	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:36	7070270	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:36	7070270	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:36	7070270	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	07/13/17 09:45	07/14/17 15:31	7070270	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:36	7070270	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:36	7070270	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:36	7070270	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:36	7070270	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:36	7070270	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:36	7070270	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:36	7070270	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:36	7070270	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 22:36	7070270	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 13:00	7070369	MTC

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Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0277

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070375 - SM 2540 C											
Blank (7070375-BLK1)						Prepared & Analyzed: 07/17/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7070375-BS1)						Prepared & Analyzed: 07/17/17					
Total Dissolved Solids	390	25	10	mg/L	400.00		98	84-108			
Duplicate (7070375-DUP1)		**Source: AAG0275-08**				Prepared & Analyzed: 07/17/17					
Total Dissolved Solids	ND	25	10	mg/L		15				10	
Duplicate (7070375-DUP2)		**Source: AAG0275-09**				Prepared & Analyzed: 07/17/17					
Total Dissolved Solids	824	25	10	mg/L		836			1	10	
Batch 7070376 - SM 2540 C											
Blank (7070376-BLK1)						Prepared & Analyzed: 07/17/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7070376-BS1)						Prepared & Analyzed: 07/17/17					
Total Dissolved Solids	340	25	10	mg/L	400.00		85	84-108			
Duplicate (7070376-DUP1)		**Source: AAG0277-09**				Prepared & Analyzed: 07/17/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7070376-DUP2)		**Source: AAG0387-03**				Prepared & Analyzed: 07/17/17					
Total Dissolved Solids	236	25	10	mg/L		238			0.8	10	

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July 20, 2017

Report No.: AAG0277

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070282 - EPA 300.0											
Blank (7070282-BLK1)						Prepared & Analyzed: 07/13/17					
Chloride	0.01	0.25	0.01	mg/L							J
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7070282-BS1)						Prepared & Analyzed: 07/13/17					
Chloride	10.0	0.25	0.01	mg/L	10.020		100	90-110			
Fluoride	9.96	0.30	0.004	mg/L	10.020		99	90-110			
Sulfate	10.3	1.0	0.09	mg/L	10.050		103	90-110			
Matrix Spike (7070282-MS1)		**Source: AAG0275-05**				Prepared & Analyzed: 07/13/17					
Chloride	15.7	0.25	0.01	mg/L	10.020	5.73	100	90-110			
Fluoride	10.4	0.30	0.004	mg/L	10.020	0.06	103	90-110			
Sulfate	94.1	1.0	0.09	mg/L	10.050	94.1	NR	90-110			QM-02
Matrix Spike (7070282-MS2)		**Source: AAG0277-07**				Prepared & Analyzed: 07/13/17					
Chloride	16.9	0.25	0.01	mg/L	10.020	6.93	100	90-110			
Fluoride	15.1	0.30	0.004	mg/L	10.020	1.09	140	90-110			QM-05
Sulfate	210	1.0	0.09	mg/L	10.050	225	NR	90-110			QM-02
Matrix Spike Dup (7070282-MSD1)		**Source: AAG0275-05**				Prepared & Analyzed: 07/13/17					
Chloride	15.8	0.25	0.01	mg/L	10.020	5.73	101	90-110	0.7	15	
Fluoride	10.6	0.30	0.004	mg/L	10.020	0.06	106	90-110	2	15	
Sulfate	94.0	1.0	0.09	mg/L	10.050	94.1	NR	90-110	0.1	15	QM-02

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

July 20, 2017

Report No.: AAG0277

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070270 - EPA 3005A											
Blank (7070270-BLK1)						Prepared & Analyzed: 07/13/17					
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	0.0003	0.0250	0.0003	mg/L							J
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 (7070270-BS1)						Prepared & Analyzed: 07/13/17					
Antimony	0.104	0.0030	0.0006	mg/L	0.10000		104	80-120			
Arsenic	0.100	0.0050	0.0005	mg/L	0.10000		100	80-120			
Barium	0.0945	0.0100	0.0004	mg/L	0.10000		94	80-120			
Beryllium	0.104	0.0030	0.00009	mg/L	0.10000		104	80-120			
Boron	1.05	0.0400	0.0060	mg/L	1.0000		105	80-120			
Cadmium	0.105	0.0010	0.0001	mg/L	0.10000		105	80-120			
Calcium	1.03	0.500	0.0404	mg/L	1.0000		103	80-120			
Chromium	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Cobalt	0.101	0.0100	0.0003	mg/L	0.10000		101	80-120			
Copper	0.100	0.0250	0.0003	mg/L	0.10000		100	80-120			
Lead	0.103	0.0050	0.00007	mg/L	0.10000		103	80-120			
Molybdenum	0.105	0.0100	0.0010	mg/L	0.10000		105	80-120			
Nickel	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Selenium	0.102	0.0100	0.0018	mg/L	0.10000		102	80-120			
Silver	0.103	0.0100	0.0002	mg/L	0.10000		103	80-120			
Thallium	0.103	0.0010	0.00005	mg/L	0.10000		103	80-120			
Vanadium	0.105	0.0100	0.0012	mg/L	0.10000		105	80-120			
Zinc	0.103	0.0100	0.0012	mg/L	0.10000		103	80-120			
Lithium	0.106	0.0500	0.0015	mg/L	0.10000		106	80-120			

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0277

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070270 - EPA 3005A											
Matrix Spike (7070270-MS1)		**Source: AAG0230-03**			Prepared & Analyzed: 07/13/17						
Antimony	0.106	0.0030	0.0006	mg/L	0.10000	ND	106	75-125			
Arsenic	0.103	0.0050	0.0005	mg/L	0.10000	0.0011	102	75-125			
Barium	0.121	0.0100	0.0004	mg/L	0.10000	0.0305	90	75-125			
Beryllium	0.0993	0.0030	0.00009	mg/L	0.10000	ND	99	75-125			
Boron	1.03	0.0400	0.0060	mg/L	1.0000	0.0534	98	75-125			
Cadmium	0.103	0.0010	0.0001	mg/L	0.10000	ND	103	75-125			
Calcium	40.3	25.0	2.02	mg/L	1.0000	39.0	136	75-125			QM-02
Chromium	0.101	0.0100	0.0005	mg/L	0.10000	0.0009	100	75-125			
Cobalt	0.0986	0.0100	0.0003	mg/L	0.10000	ND	99	75-125			
Copper	0.0966	0.0250	0.0003	mg/L	0.10000	ND	97	75-125			
Lead	0.101	0.0050	0.00007	mg/L	0.10000	ND	101	75-125			
Molybdenum	0.108	0.0100	0.0010	mg/L	0.10000	0.0013	107	75-125			
Nickel	0.0990	0.0100	0.0005	mg/L	0.10000	ND	99	75-125			
Selenium	0.102	0.0100	0.0018	mg/L	0.10000	ND	102	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	0.102	0.0100	0.0012	mg/L	0.10000	ND	102	75-125			
Zinc	0.101	0.0100	0.0012	mg/L	0.10000	ND	101	75-125			
Lithium	0.0972	0.0500	0.0015	mg/L	0.10000	ND	97	75-125			
Matrix Spike Dup (7070270-MSD1)		**Source: AAG0230-03**			Prepared & Analyzed: 07/13/17						
Antimony	0.106	0.0030	0.0006	mg/L	0.10000	ND	106	75-125	0.4	20	
Arsenic	0.103	0.0050	0.0005	mg/L	0.10000	0.0011	102	75-125	0.4	20	
Barium	0.122	0.0100	0.0004	mg/L	0.10000	0.0305	92	75-125	1	20	
Beryllium	0.0961	0.0030	0.00009	mg/L	0.10000	ND	96	75-125	3	20	
Boron	1.02	0.0400	0.0060	mg/L	1.0000	0.0534	97	75-125	1	20	
Cadmium	0.102	0.0010	0.0001	mg/L	0.10000	ND	102	75-125	1	20	
Calcium	40.9	25.0	2.02	mg/L	1.0000	39.0	190	75-125	1	20	QM-02
Chromium	0.102	0.0100	0.0005	mg/L	0.10000	0.0009	101	75-125	1	20	
Cobalt	0.0990	0.0100	0.0003	mg/L	0.10000	ND	99	75-125	0.4	20	
Copper	0.0962	0.0250	0.0003	mg/L	0.10000	ND	96	75-125	0.5	20	
Lead	0.0998	0.0050	0.00007	mg/L	0.10000	ND	100	75-125	1	20	
Molybdenum	0.107	0.0100	0.0010	mg/L	0.10000	0.0013	106	75-125	1	20	
Nickel	0.0992	0.0100	0.0005	mg/L	0.10000	ND	99	75-125	0.2	20	
Selenium	0.101	0.0100	0.0018	mg/L	0.10000	ND	101	75-125	2	20	
Silver	0.0998	0.0100	0.0002	mg/L	0.10000	ND	100	75-125	2	20	
Thallium	0.102	0.0010	0.00005	mg/L	0.10000	ND	102	75-125	2	20	
Vanadium	0.103	0.0100	0.0012	mg/L	0.10000	ND	103	75-125	1	20	
Zinc	0.101	0.0100	0.0012	mg/L	0.10000	ND	101	75-125	0.06	20	
Lithium	0.0970	0.0500	0.0015	mg/L	0.10000	ND	97	75-125	0.2	20	

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0277

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070270 - EPA 3005A											
Post Spike (7070270-PS1)			**Source: AAG0230-03**			Prepared & Analyzed: 07/13/17					
Antimony	104			ug/L	100.00	0.235	103	80-120			
Arsenic	105			ug/L	100.00	1.07	104	80-120			
Barium	123			ug/L	100.00	30.5	93	80-120			
Beryllium	99.0			ug/L	100.00	-0.0033	99	80-120			
Boron	1040			ug/L	1000.0	53.4	99	80-120			
Cadmium	103			ug/L	100.00	0.0002	103	80-120			
Calcium	41600			ug/L	1000.0	39000	266	80-120			QM-02
Chromium	104			ug/L	100.00	0.949	103	80-120			
Cobalt	101			ug/L	100.00	-0.0112	101	80-120			
Copper	99.8			ug/L	100.00	0.0455	100	80-120			
Lead	102			ug/L	100.00	-0.0029	102	80-120			
Molybdenum	110			ug/L	100.00	1.28	108	80-120			
Nickel	103			ug/L	100.00	0.126	103	80-120			
Selenium	103			ug/L	100.00	-0.139	103	80-120			
Silver	103			ug/L	100.00	-0.0060	103	80-120			
Thallium	104			ug/L	100.00	-0.0074	104	80-120			
Vanadium	104			ug/L	100.00	1.00	103	80-120			
Zinc	103			ug/L	100.00	0.520	103	80-120			
Lithium	97.5			ug/L	100.00	0.0887	97	80-120			
Batch 7070369 - EPA 7470A											
Blank (7070369-BLK1)						Prepared & Analyzed: 07/19/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7070369-BS1)						Prepared & Analyzed: 07/19/17					
Mercury	0.00214	0.00050	0.000041	mg/L	2.5000E-3		86	80-120			

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Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0277

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070369 - EPA 7470A											
Matrix Spike (7070369-MS1)		**Source: AAG0275-01**				Prepared & Analyzed: 07/19/17					
Mercury	0.00208	0.00050	0.000041	mg/L	2.5000E-3	ND	83	75-125			
Matrix Spike Dup (7070369-MSD1)		**Source: AAG0275-01**				Prepared & Analyzed: 07/19/17					
Mercury	0.00213	0.00050	0.000041	mg/L	2.5000E-3	ND	85	75-125	2	20	
Post Spike (7070369-PS1)		**Source: AAG0275-01**				Prepared & Analyzed: 07/19/17					
Mercury	1.61			ug/L	1.6667	0.00618	96	80-120			

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Attention: Mr. Joju Abraham

July 20, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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-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.

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P							
PRESERVATION:								3	7	3							
07/11/17	1015	GW		x	DGWA-70A	4		1	1	2						1	
07/11/17	1215	GW		x	DGWA-71	4		1	1	2						2	
07/11/17	1005	GW		x	DGWA-2	4		1	1	2						3	
07/11/17	0945	GW		x	DGWC-4	4		1	1	4						4	Extra Radium
07/11/17	1135	GW		x	DGWC-5	4		1	1	2						5	
07/11/17	1435	GW		x	DGWC-8	4		1	1	2						6	
07/11/17	1405	GW		x	DGWC-9	4		1	1	2						7	
07/11/17	--	GW		x	FD-1	4		1	1	2						8	
07/11/17	0945	W		x	FB-1	4		1	1	2						9	
07/11/17	1505	W		x	EB-1	4		1	1	2						10	

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 7/11/17 1600
RELINQUISHED BY: Daniel
DATE/TIME: 7/12/17 10:00

RECEIVED BY: Mike Nowlen
DATE/TIME: 7/12/17 1000
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Adamian
DATE/TIME: 07/12/17 1330
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

Checked: Yes No NA
Ice: Yes No NA
Temperature: 2.1 Min: 2.1 Max:
Custody Seal: Intact Broken Not Present (N/A)
# of Coolers
Cooler ID:

FOR LAB USE ONLY
LAB #: AAG10277
Entered into LIMS:
Tracking #:

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: 7/13/2017 8:41:42AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 07/12/17 13:30

Work Order: AAG0277
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 10 **#Containers:** 42

Minimum Temp(C): 2.1 **Maximum Temp(C):** 2.1 **Custody Seal(s) Used:** N/A

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	N/A
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

August 04, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAG0277 Plant McDonough
Pace Project No.: 30224002

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on July 13, 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

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

CERTIFICATIONS

Project: AAG0277 Plant McDonough
Pace Project No.: 30224002

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

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

SAMPLE SUMMARY

Project: AAG0277 Plant McDonough
Pace Project No.: 30224002

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30224002001	**DGWA-70A**	Water	07/11/17 10:15	07/13/17 10:15
30224002002	**DGWA-71**	Water	07/11/17 12:15	07/13/17 10:15
30224002003	**DGWA-2**	Water	07/11/17 10:05	07/13/17 10:15
30224002004	**DGWC-4**	Water	07/11/17 09:45	07/13/17 10:15
30224002005	**DGWC-5**	Water	07/11/17 11:35	07/13/17 10:15
30224002006	**DGWC-8**	Water	07/11/17 14:35	07/13/17 10:15
30224002007	**DGWC-9**	Water	07/11/17 14:05	07/13/17 10:15
30224002008	**FD-1**	Water	07/11/17 00:00	07/13/17 10:15
30224002009	**FB-1**	Water	07/11/17 09:45	07/13/17 10:15
30224002010	**EB-1**	Water	07/11/17 15:05	07/13/17 10:15

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

SAMPLE ANALYTE COUNT

Project: AAG0277 Plant McDonough
Pace Project No.: 30224002

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30224002001	**DGWA-70A**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224002002	**DGWA-71**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224002003	**DGWA-2**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224002004	**DGWC-4**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224002005	**DGWC-5**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224002006	**DGWC-8**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224002007	**DGWC-9**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224002008	**FD-1**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224002009	**FB-1**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224002010	**EB-1**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0277 Plant McDonough
Pace Project No.: 30224002

Sample: DGWA-70A **Lab ID: 30224002001** Collected: 07/11/17 10:15 Received: 07/13/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0557 ± 0.0682 (0.139) C:78% T:NA**	pCi/L	07/25/17 12:04	13982-63-3	
Radium-228	EPA 9320	**0.198 ± 0.369 (0.809) C:75% T:75%**	pCi/L	07/28/17 11:28	15262-20-1	
Total Radium	Total Radium Calculation	**0.254 ± 0.437 (0.948)**	pCi/L	08/02/17 11:13	7440-14-4	

Sample: DGWA-71 **Lab ID: 30224002002** Collected: 07/11/17 12:15 Received: 07/13/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0113 ± 0.0484 (0.117) C:86% T:NA**	pCi/L	07/25/17 12:04	13982-63-3	
Radium-228	EPA 9320	**0.450 ± 0.360 (0.712) C:71% T:85%**	pCi/L	07/28/17 11:28	15262-20-1	
Total Radium	Total Radium Calculation	**0.461 ± 0.408 (0.829)**	pCi/L	08/02/17 11:13	7440-14-4	

Sample: DGWA-2 **Lab ID: 30224002003** Collected: 07/11/17 10:05 Received: 07/13/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.142 ± 0.0976 (0.176) C:82% T:NA**	pCi/L	07/25/17 12:04	13982-63-3	
Radium-228	EPA 9320	**0.729 ± 0.404 (0.726) C:72% T:85%**	pCi/L	07/28/17 11:28	15262-20-1	
Total Radium	Total Radium Calculation	**0.871 ± 0.502 (0.902)**	pCi/L	08/02/17 11:13	7440-14-4	

Sample: DGWC-4 **Lab ID: 30224002004** Collected: 07/11/17 09:45 Received: 07/13/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.372 ± 0.126 (0.138) C:89% T:NA**	pCi/L	07/25/17 12:04	13982-63-3	
Radium-228	EPA 9320	**0.754 ± 0.393 (0.693) C:80% T:81%**	pCi/L	07/28/17 11:28	15262-20-1	
Total Radium	Total Radium Calculation	**1.13 ± 0.519 (0.831)**	pCi/L	08/02/17 11:13	7440-14-4	

Sample: DGWC-5 **Lab ID: 30224002005** Collected: 07/11/17 11:35 Received: 07/13/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.330 ± 0.115 (0.125) C:94% T:NA**	pCi/L	07/25/17 12:04	13982-63-3	
Radium-228	EPA 9320	**1.05 ± 0.489 (0.828) C:77% T:74%**	pCi/L	07/28/17 11:28	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0277 Plant McDonough
Pace Project No.: 30224002

Sample: DGWC-5 **Lab ID: 30224002005** Collected: 07/11/17 11:35 Received: 07/13/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**1.38 ± 0.604 (0.953)**	pCi/L	08/02/17 11:13	7440-14-4	

Sample: DGWC-8 **Lab ID: 30224002006** Collected: 07/11/17 14:35 Received: 07/13/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.174 ± 0.0864 (0.122) C:91% T:NA**	pCi/L	07/25/17 12:04	13982-63-3	
Radium-228	EPA 9320	**0.0346 ± 0.292 (0.673) C:77% T:90%**	pCi/L	07/28/17 11:28	15262-20-1	
Total Radium	Total Radium Calculation	**0.209 ± 0.378 (0.795)**	pCi/L	08/02/17 11:13	7440-14-4	

Sample: DGWC-9 **Lab ID: 30224002007** Collected: 07/11/17 14:05 Received: 07/13/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.328 ± 0.112 (0.118) C:95% T:NA**	pCi/L	07/25/17 15:28	13982-63-3	
Radium-228	EPA 9320	**0.292 ± 0.347 (0.734) C:78% T:90%**	pCi/L	07/28/17 14:31	15262-20-1	
Total Radium	Total Radium Calculation	**0.620 ± 0.459 (0.852)**	pCi/L	08/02/17 11:13	7440-14-4	

Sample: FD-1 **Lab ID: 30224002008** Collected: 07/11/17 00:00 Received: 07/13/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.264 ± 0.103 (0.119) C:83% T:NA**	pCi/L	07/25/17 15:28	13982-63-3	
Radium-228	EPA 9320	**0.577 ± 0.357 (0.665) C:81% T:92%**	pCi/L	07/28/17 14:31	15262-20-1	
Total Radium	Total Radium Calculation	**0.841 ± 0.460 (0.784)**	pCi/L	08/02/17 11:13	7440-14-4	

Sample: FB-1 **Lab ID: 30224002009** Collected: 07/11/17 09:45 Received: 07/13/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.247 ± 0.0968 (0.117) C:98% T:NA**	pCi/L	07/25/17 15:28	13982-63-3	
Radium-228	EPA 9320	**0.289 ± 0.324 (0.678) C:77% T:92%**	pCi/L	07/28/17 14:31	15262-20-1	
Total Radium	Total Radium Calculation	**0.536 ± 0.421 (0.795)**	pCi/L	08/02/17 11:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0277 Plant McDonough
Pace Project No.: 30224002

Sample: EB-1 **Lab ID: 30224002010** Collected: 07/11/17 15:05 Received: 07/13/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.173 ± 0.0884 (0.127) C:84% T:NA**	pCi/L	07/25/17 15:28	13982-63-3	
Radium-228	EPA 9320	**0.892 ± 0.496 (0.931) C:80% T:85%**	pCi/L	07/28/17 14:31	15262-20-1	
Total Radium	Total Radium Calculation	**1.07 ± 0.584 (1.06)**	pCi/L	08/02/17 11:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0277 Plant McDonough
Pace Project No.: 30224002

QC Batch: 265165 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30224002001, 30224002002, 30224002003, 30224002004, 30224002005, 30224002006

METHOD BLANK: 1306528 Matrix: Water
Associated Lab Samples: 30224002001, 30224002002, 30224002003, 30224002004, 30224002005, 30224002006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0806 ± 0.263 (0.593) C:80% T:100%	pCi/L	07/28/17 11:27	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0277 Plant McDonough
Pace Project No.: 30224002

QC Batch: 265166 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30224002007, 30224002008, 30224002009, 30224002010

METHOD BLANK: 1306529 Matrix: Water
Associated Lab Samples: 30224002007, 30224002008, 30224002009, 30224002010

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	

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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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0277 Plant McDonough
Pace Project No.: 30224002

QC Batch: 265161 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30224002007, 30224002008, 30224002009, 30224002010

METHOD BLANK: 1306524 Matrix: Water
Associated Lab Samples: 30224002007, 30224002008, 30224002009, 30224002010

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	

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: AAG0277 Plant McDonough
Pace Project No.: 30224002

QC Batch: 265160 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30224002001, 30224002002, 30224002003, 30224002004, 30224002005, 30224002006

METHOD BLANK: 1306523 Matrix: Water
Associated Lab Samples: 30224002001, 30224002002, 30224002003, 30224002004, 30224002005, 30224002006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0171 ± 0.0541 (0.175) C:91% T:NA	pCi/L	07/25/17 10:10	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: AAG0277 Plant McDonough
Pace Project No.: 30224002

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.

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAG0277 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 8/4/2017

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

WO#: 30224002

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	DGWA-70A	G	7/11/2017 10:15	AAG0277-01	GW	2	X	001
2	DGWA-71	G	7/11/2017 12:15	AAG0277-02	GW	2	X	002
3	DGWA-2	G	7/11/2017 10:05	AAG0277-03	GW	2	X	003
4	DGWC-4	G	7/11/2017 9:45	AAG0277-04	GW	4	X	004
5	DGWC-5	G	7/11/2017 11:35	AAG0277-05	GW	2	X	005
6	DGWC-8	G	7/11/2017 14:35	AAG0277-06	GW	2	X	006
7	DGWC-9	G	7/11/2017 14:05	AAG0277-07	GW	2	X	007
8	FD-1	G	7/11/2017 0:00	AAG0277-08	GW	2	X	008
9	FB-1	G	7/11/2017 9:45	AAG0277-09	W	2	X	009
10	EB-1	G	7/11/2017 15:05	AAG0277-10	W	2	X	010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	7/12/17		7/13/17 1015	
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

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:							P	P	P								
PRESERVATION:							3	7	3								
07/11/17	1015	GW		x	DGWA-70A	4	1	1	2							1	
07/11/17	1215	GW		x	DGWA-71	4	1	1	2							2	
07/11/17	1005	GW		x	DGWA-2	4	1	1	2							3	
07/11/17	0945	GW		x	DGWC-4	4	1	1	4							4	Extra Radium
07/11/17	1135	GW		x	DGWC-5	4	1	1	2							5	
07/11/17	1435	GW		x	DGWC-8	4	1	1	2							6	
07/11/17	1405	GW		x	DGWC-9	4	1	1	2							7	30224002
07/11/17	--	GW		x	FD-1	4	1	1	2							8	
07/11/17	0945	W		x	FB-1	4	1	1	2							9	
07/11/17	1505	W		x	EB-1	4	1	1	2							10	

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

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

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 7/11/17 1600

RELINQUISHED BY: Daniel
DATE/TIME: 7/12/17 10:00

RECEIVED BY: Mike Nowlen
DATE/TIME: 7/12/17 1000

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Adamman
DATE/TIME: 07/12/17 1330

SAMPLE SHIPPED VIA: UPS FED-EX UPS COURIER CLIENT OTHER FS
Custody Seal: Intact Broken Not Present (N/A) # of Coolers
Cooler ID:

pH checked: Yes No NA
Ice: Yes No NA
Temperature: 2.1 Min: 2.1 Max:

FOR LAB USE ONLY
LAB #: AAG0277
Entered into LIMS:
Tracking #:

Sample Condition Upon Receipt Pittsburgh

30224002

Face Analytical

Client Name: PACE - GA Project #

Label ZH
LIMS Login AM

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

Tracking #: 741366571247

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: ZH 7/13/17

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. ZH 7/13/17
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			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:	✓			10.
-Pace Containers Used:		✓		
Containers Intact:	✓			11.
Orthophosphate field filtered				12.
Organic Samples checked for dechlorination:			✓	13.
Filtered volume received for Dissolved tests			✓	14.
All containers have been checked for preservation.	✓			15. PH<2
All containers needing preservation are found to be in compliance with EPA recommendation.	✓			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed ZH Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	16.
Trip Blank Present:			✓	17.
Trip Blank Custody Seals Present			✓	
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: ZH Date: 7/13/17

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.

PACE Analytical Services, Inc
QC Sheet Drinking Water

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test: Ra-226
Analyst: JC2
Date: 7/20/2017
Worklist: 36691
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1306523
MB concentration:	-0.017
M/B Counting Uncertainty:	0.054
MB MDC:	0.175
MB Numerical Performance Indicator:	-0.62
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS36691	LCSD36691
Count Date:	7/25/2017	
Spike I.D.:	17-030	
Spike Concentration (pCi/mL):	80.197	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.503	
Target Conc. (pCi/L, g, F):	15.937	
Uncertainty (Calculated):	1.468	
Result (pCi/L, g, F):	13.249	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.807	
Numerical Performance Indicator:	-3.14	
Percent Recovery:	83.13%	
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:	
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.:	30223998001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30223998001DUP	
Sample Result (pCi/L, g, F):	0.630	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.204	
Sample Duplicate Result (pCi/L, g, F):	0.359	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.155	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	2.076	30223998001
Duplicate RPD:	54.88%	30223998001DUP
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:

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

7/31/17

Sample result$_D$ < 5x MDC, use numerical indicator
< 2 acceptable for DW
< 3 acceptable for all other matrices

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	JC2
Date:	7/20/2017
Worklist:	36692
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1306524
MB concentration:	0.278
M/B 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

	LCSD (Y or N)?	Y
	LCS36692	**LCSD36692**
Count Date:	7/26/2017	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

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:	

Duplicate Sample Assessment

Sample I.D.:	LCS36692	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD36692	
Sample Result (pCi/L, g, F):	12.204	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.770	
Sample Duplicate Result (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	

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:

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

8/3/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	7/24/2017
Worklist:	36694
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1306528
MB concentration:	0.081
M/B Counting Uncertainty:	0.263
MB MDC:	0.593
MB Numerical Performance Indicator:	0.60
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS36694	LCSD36694
Count Date:	7/28/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	23.943	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.800	
Target Conc. (pCi/L, g, F):	5.986	
Uncertainty (Calculated):	0.431	
Result (pCi/L, g, F):	4.848	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.599	
Numerical Performance Indicator:	-3.02	
Percent Recovery:	81.00%	
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:	
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.:	30223998001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30223998001DUP	
Sample Result (pCi/L, g, F):	0.919	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.431	
Sample Duplicate Result (pCi/L, g, F):	1.199	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.426	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.906	30223998001
Duplicate RPD:	26.46%	30223998001DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

8/3/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	7/24/2017
Worklist:	36695
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1306529
MB concentration:	0.044
M/B 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	LCSD (Y or N)?	Y
	LCS36695	**LCSD36695**
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

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:	

Duplicate Sample Assessment		
Sample I.D.:	LCS36695	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD36695	
Sample Result (pCi/L, g, F):	6.410	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.669	
Sample Duplicate Result (pCi/L, g, F):	4.817	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.558	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	3.586	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	27.57%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

8/3/17

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: AAG0338
July 25, 2017
Project: CCR Event
Project #:Plant McDonough

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

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 25, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWA-53	AAG0338-01	Ground Water	07/12/17 07:45	07/13/17 11:45
DGWC-10	AAG0338-02	Ground Water	07/12/17 09:30	07/13/17 11:45
DGWC-11	AAG0338-03	Ground Water	07/12/17 11:20	07/13/17 11:45
DGWC-12	AAG0338-04	Ground Water	07/12/17 12:35	07/13/17 11:45
DGWC-13	AAG0338-05	Ground Water	07/12/17 09:20	07/13/17 11:45
DGWC-14	AAG0338-06	Ground Water	07/12/17 11:25	07/13/17 11:45
DGWC-15	AAG0338-07	Ground Water	07/12/17 13:10	07/13/17 11:45
DGWC-17	AAG0338-08	Ground Water	07/12/17 09:40	07/13/17 11:45
DGWC-19	AAG0338-09	Ground Water	07/12/17 12:25	07/13/17 11:45
DGWC-20	AAG0338-10	Ground Water	07/12/17 14:45	07/13/17 11:45
DGWC-21	AAG0338-11	Ground Water	07/12/17 14:15	07/13/17 11:45
DGWC-23	AAG0338-12	Ground Water	07/12/17 14:05	07/13/17 11:45
FD-2	AAG0338-13	Ground Water	07/12/17 00:00	07/13/17 11:45
FB-2	AAG0338-14	Water	07/12/17 09:15	07/13/17 11:45
EB-2	AAG0338-15	Water	07/12/17 15:05	07/13/17 11:45

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 25, 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.

The TDS by SM 2540 C for sample EB-2 was originally analyzed within the sample holding time but required re-analysis due to possible laboratory contamination. The sample was re-analyzed outside of the sample holding time and the data flagged accordingly.

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

July 25, 2017

Report No.: AAG0338
Client ID: DGWA-53
Date/Time Sampled: 7/12/2017 7:45:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0338-01
Date/Time Received: 7/13/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	218	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
Inorganic Anions											
Chloride	2.3	0.25	0.02	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 11:55	7070416	SLH
Fluoride	0.10	0.30	0.03	mg/L	EPA 300.0	J	1	07/18/17 09:30	07/18/17 11:55	7070416	SLH
Sulfate	10	1.0	0.02	mg/L	EPA 300.0	B-01	1	07/18/17 09:30	07/18/17 11:55	7070416	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:03	7070302	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:03	7070302	CSW
Barium	0.173	0.0500	0.0021	mg/L	EPA 6020B		5	07/14/17 13:20	07/20/17 14:58	7070302	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:03	7070302	CSW
Boron	0.0735	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:03	7070302	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:03	7070302	CSW
Calcium	40.3	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/18/17 23:09	7070302	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:03	7070302	CSW
Cobalt	0.0247	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:03	7070302	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:03	7070302	CSW
Molybdenum	0.0321	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:03	7070302	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:03	7070302	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:03	7070302	CSW
Lithium	0.0075	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/18/17 23:03	7070302	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 12:23	7070373	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 25, 2017

Report No.: AAG0338
Client ID: DGWC-10
Date/Time Sampled: 7/12/2017 9:30:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0338-02
Date/Time Received: 7/13/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	598	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
Inorganic Anions											
Chloride	11	0.25	0.02	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 12:16	7070416	SLH
Fluoride	1.7	0.30	0.03	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 12:16	7070416	SLH
Sulfate	390	10	0.17	mg/L	EPA 300.0	B-01	10	07/18/17 09:30	07/20/17 15:46	7070416	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:26	7070302	CSW
Arsenic	0.0042	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/18/17 23:26	7070302	CSW
Barium	0.0314	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:26	7070302	CSW
Beryllium	0.0046	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:26	7070302	CSW
Boron	3.38	2.00	0.298	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 09:25	7070302	CSW
Cadmium	0.0013	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:26	7070302	CSW
Calcium	86.3	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/18/17 23:32	7070302	CSW
Chromium	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/18/17 23:26	7070302	CSW
Cobalt	0.177	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:26	7070302	CSW
Lead	ND	0.0050	0.0003	mg/L	EPA 6020B		5	07/14/17 13:20	07/20/17 15:04	7070302	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:26	7070302	CSW
Selenium	0.0257	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:26	7070302	CSW
Thallium	0.0005	0.0010	0.0003	mg/L	EPA 6020B	J	5	07/14/17 13:20	07/20/17 15:04	7070302	CSW
Lithium	0.0019	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/18/17 23:26	7070302	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 12:26	7070373	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 25, 2017

Report No.: AAG0338
Client ID: DGWC-11
Date/Time Sampled: 7/12/2017 11:20:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0338-03
Date/Time Received: 7/13/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	382	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
Inorganic Anions											
Chloride	11	0.25	0.02	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 12:37	7070416	SLH
Fluoride	0.03	0.30	0.03	mg/L	EPA 300.0	J	1	07/18/17 09:30	07/18/17 12:37	7070416	SLH
Sulfate	210	10	0.17	mg/L	EPA 300.0	B-01	10	07/18/17 09:30	07/20/17 16:07	7070416	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:38	7070302	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:38	7070302	CSW
Barium	0.0572	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:38	7070302	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:38	7070302	CSW
Boron	1.14	0.400	0.0595	mg/L	EPA 6020B		10	07/14/17 13:20	07/19/17 09:31	7070302	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:38	7070302	CSW
Calcium	50.8	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/18/17 23:43	7070302	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:38	7070302	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:38	7070302	CSW
Lead	ND	0.0010	0.00007	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:38	7070302	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:38	7070302	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:38	7070302	CSW
Thallium	ND	0.0010	0.0003	mg/L	EPA 6020B		5	07/14/17 13:20	07/18/17 23:38	7070302	CSW
Lithium	0.0022	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/18/17 23:38	7070302	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 12:28	7070373	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 25, 2017

Report No.: AAG0338
Client ID: DGWC-12
Date/Time Sampled: 7/12/2017 12:35:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0338-04
Date/Time Received: 7/13/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	594	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
Inorganic Anions											
Chloride	12	0.25	0.02	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 12:57	7070416	SLH
Fluoride	0.20	0.30	0.03	mg/L	EPA 300.0	J	1	07/18/17 09:30	07/18/17 12:57	7070416	SLH
Sulfate	350	10	0.17	mg/L	EPA 300.0	B-01	10	07/18/17 09:30	07/20/17 16:28	7070416	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:49	7070302	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:49	7070302	CSW
Barium	0.0262	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:49	7070302	CSW
Beryllium	0.0002	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/18/17 23:49	7070302	CSW
Boron	7.55	2.00	0.298	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 09:36	7070302	CSW
Cadmium	0.0004	0.0010	0.0001	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/18/17 23:49	7070302	CSW
Calcium	87.0	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/18/17 23:55	7070302	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:49	7070302	CSW
Cobalt	0.0033	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/18/17 23:49	7070302	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:49	7070302	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:49	7070302	CSW
Selenium	0.0019	0.0100	0.0018	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/18/17 23:49	7070302	CSW
Thallium	0.00009	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/18/17 23:49	7070302	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 13:20	07/18/17 23:49	7070302	CSW
Mercury	0.00008	0.00050	0.000041	mg/L	EPA 7470A	J	1	07/20/17 07:45	07/20/17 12:30	7070373	MTC

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Attention: Mr. Joju Abraham

July 25, 2017

Report No.: AAG0338
Client ID: DGWC-13
Date/Time Sampled: 7/12/2017 9:20:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0338-05
Date/Time Received: 7/13/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	312	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
Inorganic Anions											
Chloride	14	0.25	0.02	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 13:18	7070416	SLH
Fluoride	0.13	0.30	0.03	mg/L	EPA 300.0	J	1	07/18/17 09:30	07/18/17 13:18	7070416	SLH
Sulfate	170	10	0.17	mg/L	EPA 300.0	B-01	10	07/18/17 09:30	07/20/17 16:48	7070416	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:00	7070302	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:00	7070302	CSW
Barium	0.0291	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:00	7070302	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:00	7070302	CSW
Boron	0.996	0.400	0.0595	mg/L	EPA 6020B		10	07/14/17 13:20	07/19/17 09:42	7070302	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:00	7070302	CSW
Calcium	47.8	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 00:06	7070302	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:00	7070302	CSW
Cobalt	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:00	7070302	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:00	7070302	CSW
Molybdenum	0.0323	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:00	7070302	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:00	7070302	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:00	7070302	CSW
Lithium	0.0028	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:00	7070302	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 12:33	7070373	MTC

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Attention: Mr. Joju Abraham

July 25, 2017

Report No.: AAG0338
Client ID: DGWC-14
Date/Time Sampled: 7/12/2017 11:25:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0338-06
Date/Time Received: 7/13/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	118	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
Inorganic Anions											
Chloride	2.9	0.25	0.02	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 13:39	7070416	SLH
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 13:39	7070416	SLH
Sulfate	44	1.0	0.02	mg/L	EPA 300.0	B-01	1	07/18/17 09:30	07/18/17 13:39	7070416	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:12	7070302	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:12	7070302	CSW
Barium	0.0585	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:12	7070302	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:12	7070302	CSW
Boron	0.0440	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 09:48	7070302	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:12	7070302	CSW
Calcium	10.5	5.00	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 00:18	7070302	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:12	7070302	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:12	7070302	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:12	7070302	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:12	7070302	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:12	7070302	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:12	7070302	CSW
Lithium	0.0036	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:12	7070302	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 12:40	7070373	MTC

PACE ANALYTICAL SERVICES, LLC.

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2480 Maner Road
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Attention: Mr. Joju Abraham

July 25, 2017

Report No.: AAG0338
Client ID: DGWC-15
Date/Time Sampled: 7/12/2017 1:10:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0338-07
Date/Time Received: 7/13/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	490	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
Inorganic Anions											
Chloride	21	0.25	0.02	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 13:59	7070416	SLH
Fluoride	0.07	0.30	0.03	mg/L	EPA 300.0	J	1	07/18/17 09:30	07/18/17 13:59	7070416	SLH
Sulfate	170	10	0.17	mg/L	EPA 300.0	B-01	10	07/18/17 09:30	07/20/17 17:09	7070416	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:35	7070302	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:35	7070302	CSW
Barium	0.0517	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:35	7070302	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:35	7070302	CSW
Boron	1.49	0.400	0.0595	mg/L	EPA 6020B		10	07/14/17 13:20	07/19/17 09:54	7070302	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:35	7070302	CSW
Calcium	38.4	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 00:40	7070302	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:35	7070302	CSW
Cobalt	0.0020	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:35	7070302	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:35	7070302	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:35	7070302	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:35	7070302	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:35	7070302	CSW
Lithium	0.0060	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:35	7070302	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 12:42	7070373	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 25, 2017

Report No.: AAG0338
Client ID: DGWC-17
Date/Time Sampled: 7/12/2017 9:40:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0338-08
Date/Time Received: 7/13/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	417	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
Inorganic Anions											
Chloride	18	0.25	0.02	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 15:01	7070416	SLH
Fluoride	0.27	0.30	0.03	mg/L	EPA 300.0	J	1	07/18/17 09:30	07/18/17 15:01	7070416	SLH
Sulfate	230	10	0.17	mg/L	EPA 300.0	B-01	10	07/18/17 09:30	07/20/17 17:30	7070416	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:46	7070302	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:46	7070302	CSW
Barium	0.0532	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:46	7070302	CSW
Beryllium	0.0005	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:46	7070302	CSW
Boron	0.620	0.200	0.0298	mg/L	EPA 6020B		5	07/14/17 13:20	07/19/17 09:59	7070302	CSW
Cadmium	0.0002	0.0010	0.0001	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:46	7070302	CSW
Calcium	10.4	5.00	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 00:52	7070302	CSW
Chromium	0.0022	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:46	7070302	CSW
Cobalt	0.0230	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:46	7070302	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:46	7070302	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:46	7070302	CSW
Selenium	0.0072	0.0100	0.0018	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:46	7070302	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:46	7070302	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:46	7070302	CSW
Mercury	0.00005	0.00050	0.000041	mg/L	EPA 7470A	J	1	07/20/17 07:45	07/20/17 12:45	7070373	MTC

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July 25, 2017

Report No.: AAG0338
Client ID: DGWC-19
Date/Time Sampled: 7/12/2017 12:25:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0338-09
Date/Time Received: 7/13/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	360	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
Inorganic Anions											
Chloride	41	0.25	0.02	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 16:45	7070416	SLH
Fluoride	0.34	0.30	0.03	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 16:45	7070416	SLH
Sulfate	250	10	0.17	mg/L	EPA 300.0	B-01	10	07/18/17 09:30	07/20/17 17:50	7070416	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:57	7070302	CSW
Arsenic	0.0016	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:57	7070302	CSW
Barium	0.0212	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:57	7070302	CSW
Beryllium	0.0018	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:57	7070302	CSW
Boron	2.82	2.00	0.298	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 10:05	7070302	CSW
Cadmium	0.0004	0.0010	0.0001	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:57	7070302	CSW
Calcium	70.0	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 01:03	7070302	CSW
Chromium	0.0023	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:57	7070302	CSW
Cobalt	0.0489	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:57	7070302	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:57	7070302	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 00:57	7070302	CSW
Selenium	0.0065	0.0100	0.0018	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:57	7070302	CSW
Thallium	0.0005	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:57	7070302	CSW
Lithium	0.0032	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 00:57	7070302	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 12:47	7070373	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 25, 2017

Report No.: AAG0338
Client ID: DGWC-20
Date/Time Sampled: 7/12/2017 2:45:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0338-10
Date/Time Received: 7/13/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	956	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
Inorganic Anions											
Chloride	18	0.25	0.02	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 17:05	7070416	SLH
Fluoride	0.41	0.30	0.03	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 17:05	7070416	SLH
Sulfate	630	20	0.34	mg/L	EPA 300.0	B-01	20	07/18/17 09:30	07/20/17 18:11	7070416	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:09	7070302	CSW
Arsenic	0.0121	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:09	7070302	CSW
Barium	0.0099	0.0100	0.0004	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 01:09	7070302	CSW
Beryllium	0.0025	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 01:09	7070302	CSW
Boron	6.81	2.00	0.298	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 10:11	7070302	CSW
Cadmium	0.0021	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:09	7070302	CSW
Calcium	100	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 01:15	7070302	CSW
Chromium	ND	0.0500	0.0023	mg/L	EPA 6020B	R-01	5	07/14/17 13:20	07/20/17 15:09	7070302	CSW
Cobalt	0.538	0.500	0.0132	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 01:15	7070302	CSW
Lead	ND	0.0050	0.0003	mg/L	EPA 6020B		5	07/14/17 13:20	07/20/17 15:09	7070302	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:09	7070302	CSW
Selenium	0.0483	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:09	7070302	CSW
Thallium	0.0006	0.0010	0.0003	mg/L	EPA 6020B	J	5	07/14/17 13:20	07/20/17 15:09	7070302	CSW
Lithium	0.0019	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 01:09	7070302	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 12:49	7070373	MTC

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July 25, 2017

Report No.: AAG0338
Client ID: DGWC-21
Date/Time Sampled: 7/12/2017 2:15:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0338-11
Date/Time Received: 7/13/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	505	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
Inorganic Anions											
Chloride	23	0.25	0.02	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 17:26	7070416	SLH
Fluoride	0.04	0.30	0.03	mg/L	EPA 300.0	J	1	07/18/17 09:30	07/18/17 17:26	7070416	SLH
Sulfate	290	10	0.17	mg/L	EPA 300.0	B-01	10	07/18/17 09:30	07/20/17 18:32	7070416	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:20	7070302	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:20	7070302	CSW
Barium	0.0276	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:20	7070302	CSW
Beryllium	0.0001	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 01:20	7070302	CSW
Boron	5.20	2.00	0.298	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 10:40	7070302	CSW
Cadmium	0.0006	0.0010	0.0001	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 01:20	7070302	CSW
Calcium	80.4	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 01:26	7070302	CSW
Chromium	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 01:20	7070302	CSW
Cobalt	0.0092	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 01:20	7070302	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 01:20	7070302	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:20	7070302	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:20	7070302	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:20	7070302	CSW
Lithium	0.0057	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 01:20	7070302	CSW
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	J	1	07/20/17 07:45	07/20/17 12:52	7070373	MTC

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Attention: Mr. Joju Abraham

July 25, 2017

Report No.: AAG0338
Client ID: DGWC-23
Date/Time Sampled: 7/12/2017 2:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0338-12
Date/Time Received: 7/13/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	461	25	10	mg/L	SM 2540 C		1	07/18/17 16:55	07/18/17 16:55	7070410	JPT
Inorganic Anions											
Chloride	16	0.25	0.02	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 17:47	7070416	SLH
Fluoride	0.22	0.30	0.03	mg/L	EPA 300.0	J	1	07/18/17 09:30	07/18/17 17:47	7070416	SLH
Sulfate	220	10	0.17	mg/L	EPA 300.0	B-01	10	07/18/17 09:30	07/20/17 18:52	7070416	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:43	7070302	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:43	7070302	CSW
Barium	0.0186	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:43	7070302	CSW
Beryllium	0.0004	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 01:43	7070302	CSW
Boron	3.74	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:43	7070302	CSW
Cadmium	0.0002	0.0010	0.0001	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 01:43	7070302	CSW
Calcium	70.0	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 01:49	7070302	CSW
Chromium	0.0007	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 01:43	7070302	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:43	7070302	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:43	7070302	CSW
Molybdenum	0.0092	0.0100	0.0010	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 01:43	7070302	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:43	7070302	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:43	7070302	CSW
Lithium	0.0068	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 01:43	7070302	CSW
Mercury	0.00012	0.00050	0.000041	mg/L	EPA 7470A	J	1	07/20/17 07:45	07/20/17 12:54	7070373	MTC

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 25, 2017

Report No.: AAG0338
Client ID: FD-2
Date/Time Sampled: 7/12/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0338-13
Date/Time Received: 7/13/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	108	25	10	mg/L	SM 2540 C		1	07/18/17 16:15	07/18/17 16:15	7070411	JPT
Inorganic Anions											
Chloride	3.0	0.25	0.02	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 18:28	7070416	SLH
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 18:28	7070416	SLH
Sulfate	44	1.0	0.02	mg/L	EPA 300.0	B-01	1	07/18/17 09:30	07/18/17 18:28	7070416	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:55	7070302	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:55	7070302	CSW
Barium	0.0583	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:55	7070302	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:55	7070302	CSW
Boron	0.0564	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:55	7070302	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:55	7070302	CSW
Calcium	10.1	2.50	0.202	mg/L	EPA 6020B		5	07/14/17 13:20	07/19/17 02:06	7070302	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:55	7070302	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:55	7070302	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:55	7070302	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:55	7070302	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:55	7070302	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 01:55	7070302	CSW
Lithium	0.0037	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 01:55	7070302	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 12:56	7070373	MTC

PACE ANALYTICAL SERVICES, LLC.

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 25, 2017

Report No.: AAG0338
Client ID: FB-2
Date/Time Sampled: 7/12/2017 9:15:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAG0338-14
Date/Time Received: 7/13/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	07/18/17 16:15	07/18/17 16:15	7070411	JPT
Inorganic Anions											
Chloride	0.17	0.25	0.02	mg/L	EPA 300.0	J	1	07/18/17 09:30	07/18/17 18:49	7070416	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 18:49	7070416	RLC
Sulfate	0.11	1.0	0.02	mg/L	EPA 300.0	B-01, J	1	07/18/17 09:30	07/18/17 18:49	7070416	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:34	7070326	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:34	7070326	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:34	7070326	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:34	7070326	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:34	7070326	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:34	7070326	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:34	7070326	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:34	7070326	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:34	7070326	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:34	7070326	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:34	7070326	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:34	7070326	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:34	7070326	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:34	7070326	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 12:59	7070373	MTC

PACE ANALYTICAL SERVICES, LLC.

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Attention: Mr. Joju Abraham

July 25, 2017

Report No.: AAG0338
Client ID: EB-2
Date/Time Sampled: 7/12/2017 3:05:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAG0338-15
Date/Time Received: 7/13/2017 11:45:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C	H-02	1	07/21/17 19:20	07/21/17 19:20	7070536	JPT
Inorganic Anions											
Chloride	0.16	0.25	0.02	mg/L	EPA 300.0	J	1	07/18/17 09:30	07/18/17 19:10	7070416	SLH
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	07/18/17 09:30	07/18/17 19:10	7070416	SLH
Sulfate	0.09	1.0	0.02	mg/L	EPA 300.0	B-01, J	1	07/18/17 09:30	07/18/17 19:10	7070416	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:39	7070326	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:39	7070326	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:39	7070326	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:39	7070326	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:39	7070326	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:39	7070326	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:39	7070326	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:39	7070326	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:39	7070326	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:39	7070326	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:39	7070326	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:39	7070326	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:39	7070326	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:39	7070326	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 07:45	07/20/17 13:01	7070373	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 25, 2017

Report No.: AAG0338

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070410 - SM 2540 C											
Blank (7070410-BLK1)						Prepared & Analyzed: 07/18/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7070410-BS1)						Prepared & Analyzed: 07/18/17					
Total Dissolved Solids	380	25	10	mg/L	400.00		95	84-108			
Duplicate (7070410-DUP1)		**Source: AAG0332-17**				Prepared & Analyzed: 07/18/17					
Total Dissolved Solids	14	25	10	mg/L		ND				10	J
Duplicate (7070410-DUP2)		**Source: AAG0338-01**				Prepared & Analyzed: 07/18/17					
Total Dissolved Solids	221	25	10	mg/L		218			1	10	
Batch 7070411 - SM 2540 C											
Blank (7070411-BLK1)						Prepared & Analyzed: 07/18/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7070411-BS1)						Prepared & Analyzed: 07/18/17					
Total Dissolved Solids	430	25	10	mg/L	400.00		108	84-108			
Duplicate (7070411-DUP1)		**Source: AAG0383-06**				Prepared & Analyzed: 07/18/17					
Total Dissolved Solids	1100	25	10	mg/L		1070			3	10	
Duplicate (7070411-DUP2)		**Source: AAG0383-09**				Prepared & Analyzed: 07/18/17					
Total Dissolved Solids	ND	25	10	mg/L		13				10	
Batch 7070536 - SM 2540 C											
Blank (7070536-BLK1)						Prepared & Analyzed: 07/21/17					
Total Dissolved Solids	ND	25	10	mg/L							

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 25, 2017

Report No.: AAG0338

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070536 - SM 2540 C											
LCS (7070536-BS1)						Prepared & Analyzed: 07/21/17					
Total Dissolved Solids	382	25	10	mg/L	400.00		96	84-108			
Duplicate (7070536-DUP1)			**Source: AAG0338-15RE1**			Prepared & Analyzed: 07/21/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7070536-DUP2)			**Source: AAG0505-04**			Prepared & Analyzed: 07/21/17					
Total Dissolved Solids	11	25	10	mg/L		13			17	10	QR-03, J

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Report No.: AAG0338

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070416 - EPA 300.0											
Blank (7070416-BLK1)						Prepared & Analyzed: 07/18/17					
Chloride	ND	0.25	0.02	mg/L							
Fluoride	ND	0.30	0.03	mg/L							
Sulfate	0.03	1.0	0.02	mg/L							J
LCS (7070416-BS1)						Prepared & Analyzed: 07/18/17					
Chloride	10.1	0.25	0.02	mg/L	10.020		101	90-110			
Fluoride	9.80	0.30	0.03	mg/L	10.020		98	90-110			
Sulfate	10.2	1.0	0.02	mg/L	10.050		101	90-110			
Matrix Spike (7070416-MS1)			**Source: AAG0338-07**			Prepared & Analyzed: 07/18/17					
Chloride	29.2	0.25	0.02	mg/L	10.020	21.1	81	90-110			QM-02
Fluoride	10.2	0.30	0.03	mg/L	10.020	0.07	101	90-110			
Sulfate	141	1.0	0.02	mg/L	10.050	145	NR	90-110			QM-02
Matrix Spike (7070416-MS2)			**Source: AAG0338-12**			Prepared & Analyzed: 07/18/17					
Chloride	25.3	0.25	0.02	mg/L	10.020	16.0	93	90-110			
Fluoride	10.9	0.30	0.03	mg/L	10.020	0.22	107	90-110			
Sulfate	163	1.0	0.02	mg/L	10.050	169	NR	90-110			QM-02
Matrix Spike Dup (7070416-MSD1)			**Source: AAG0338-07**			Prepared & Analyzed: 07/18/17					
Chloride	29.2	0.25	0.02	mg/L	10.020	21.1	82	90-110	0.2	15	QM-02
Fluoride	10.3	0.30	0.03	mg/L	10.020	0.07	102	90-110	0.4	15	
Sulfate	141	1.0	0.02	mg/L	10.050	145	NR	90-110	0.3	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
Batch 7070302 - EPA 3005A											
Blank (7070302-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 (7070302-BS1)						Prepared: 07/14/17 Analyzed: 07/18/17					
Antimony	0.104	0.0030	0.0006	mg/L	0.10000		104	80-120			
Arsenic	0.0990	0.0050	0.0005	mg/L	0.10000		99	80-120			
Barium	0.104	0.0100	0.0004	mg/L	0.10000		104	80-120			
Beryllium	0.101	0.0030	0.00009	mg/L	0.10000		101	80-120			
Boron	0.959	0.0400	0.0060	mg/L	1.0000		96	80-120			
Cadmium	0.107	0.0010	0.0001	mg/L	0.10000		107	80-120			
Calcium	1.02	0.500	0.0404	mg/L	1.0000		102	80-120			
Chromium	0.102	0.0100	0.0005	mg/L	0.10000		102	80-120			
Cobalt	0.0971	0.0100	0.0003	mg/L	0.10000		97	80-120			
Copper	0.0989	0.0250	0.0003	mg/L	0.10000		99	80-120			
Lead	0.103	0.0050	0.00007	mg/L	0.10000		103	80-120			
Molybdenum	0.101	0.0100	0.0010	mg/L	0.10000		101	80-120			
Nickel	0.0979	0.0100	0.0005	mg/L	0.10000		98	80-120			
Selenium	0.102	0.0100	0.0018	mg/L	0.10000		102	80-120			
Silver	0.102	0.0100	0.0002	mg/L	0.10000		102	80-120			
Thallium	0.105	0.0010	0.00005	mg/L	0.10000		105	80-120			
Vanadium	0.0994	0.0100	0.0012	mg/L	0.10000		99	80-120			
Zinc	0.103	0.0100	0.0012	mg/L	0.10000		103	80-120			
Lithium	0.102	0.0500	0.0015	mg/L	0.10000		102	80-120			

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Report No.: AAG0338

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070302 - EPA 3005A											
Matrix Spike (7070302-MS1)		**Source: AAG0338-01**			Prepared: 07/14/17 Analyzed: 07/18/17						
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	0.263	0.0500	0.0021	mg/L	0.10000	0.173	89	75-125			
Beryllium	0.0900	0.0030	0.00009	mg/L	0.10000	ND	90	75-125			
Boron	0.938	0.0400	0.0060	mg/L	1.0000	0.0735	86	75-125			
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000	ND	101	75-125			
Calcium	40.6	25.0	2.02	mg/L	1.0000	40.3	27	75-125			QM-02
Chromium	0.0970	0.0100	0.0005	mg/L	0.10000	ND	97	75-125			
Cobalt	0.117	0.0100	0.0003	mg/L	0.10000	0.0247	93	75-125			
Copper	0.0967	0.0250	0.0003	mg/L	0.10000	0.0024	94	75-125			
Lead	0.101	0.0050	0.00007	mg/L	0.10000	ND	101	75-125			
Molybdenum	0.135	0.0100	0.0010	mg/L	0.10000	0.0321	103	75-125			
Nickel	0.105	0.0100	0.0005	mg/L	0.10000	0.0130	92	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	0.0969	0.0100	0.0012	mg/L	0.10000	ND	97	75-125			
Zinc	0.0991	0.0100	0.0012	mg/L	0.10000	0.0019	97	75-125			
Lithium	0.0978	0.0500	0.0015	mg/L	0.10000	0.0075	90	75-125			
Matrix Spike Dup (7070302-MSD1)		**Source: AAG0338-01**			Prepared: 07/14/17 Analyzed: 07/18/17						
Antimony	0.104	0.0030	0.0006	mg/L	0.10000	ND	104	75-125	0.6	20	
Arsenic	0.100	0.0050	0.0005	mg/L	0.10000	ND	100	75-125	2	20	
Barium	0.271	0.0500	0.0021	mg/L	0.10000	0.173	97	75-125	3	20	
Beryllium	0.0857	0.0030	0.00009	mg/L	0.10000	ND	86	75-125	5	20	
Boron	0.898	0.0400	0.0060	mg/L	1.0000	0.0735	82	75-125	4	20	
Cadmium	0.103	0.0010	0.0001	mg/L	0.10000	ND	103	75-125	2	20	
Calcium	39.1	25.0	2.02	mg/L	1.0000	40.3	NR	75-125	4	20	QM-02
Chromium	0.0988	0.0100	0.0005	mg/L	0.10000	ND	99	75-125	2	20	
Cobalt	0.120	0.0100	0.0003	mg/L	0.10000	0.0247	95	75-125	2	20	
Copper	0.0969	0.0250	0.0003	mg/L	0.10000	0.0024	94	75-125	0.2	20	
Lead	0.0989	0.0050	0.00007	mg/L	0.10000	ND	99	75-125	2	20	
Molybdenum	0.133	0.0100	0.0010	mg/L	0.10000	0.0321	101	75-125	2	20	
Nickel	0.109	0.0100	0.0005	mg/L	0.10000	0.0130	96	75-125	3	20	
Selenium	0.100	0.0100	0.0018	mg/L	0.10000	ND	100	75-125	1	20	
Silver	0.0972	0.0100	0.0002	mg/L	0.10000	ND	97	75-125	4	20	
Thallium	0.100	0.0010	0.00005	mg/L	0.10000	ND	100	75-125	3	20	
Vanadium	0.101	0.0100	0.0012	mg/L	0.10000	ND	101	75-125	4	20	
Zinc	0.0996	0.0100	0.0012	mg/L	0.10000	0.0019	98	75-125	0.5	20	
Lithium	0.0950	0.0500	0.0015	mg/L	0.10000	0.0075	87	75-125	3	20	

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July 25, 2017

Report No.: AAG0338

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070302 - EPA 3005A											
Post Spike (7070302-PS1)			**Source: AAG0338-01**			Prepared: 07/14/17 Analyzed: 07/18/17					
Antimony	106			ug/L	100.00	0.342	105	80-120			
Arsenic	100			ug/L	100.00	0.282	100	80-120			
Barium	269			ug/L	100.00	173	96	80-120			
Beryllium	92.0			ug/L	100.00	-0.0015	92	80-120			
Boron	989			ug/L	1000.0	73.5	92	80-120			
Cadmium	105			ug/L	100.00	0.0651	105	80-120			
Calcium	39600			ug/L	1000.0	40300	NR	80-120			QM-02
Chromium	100			ug/L	100.00	0.268	100	80-120			
Cobalt	119			ug/L	100.00	24.7	95	80-120			
Copper	97.6			ug/L	100.00	2.42	95	80-120			
Lead	100			ug/L	100.00	0.0041	100	80-120			
Molybdenum	135			ug/L	100.00	32.1	103	80-120			
Nickel	110			ug/L	100.00	13.0	97	80-120			
Selenium	100			ug/L	100.00	0.118	100	80-120			
Silver	101			ug/L	100.00	0.0109	101	80-120			
Thallium	101			ug/L	100.00	0.0497	101	80-120			
Vanadium	102			ug/L	100.00	-0.118	102	80-120			
Zinc	102			ug/L	100.00	1.92	100	80-120			
Lithium	102			ug/L	100.00	7.52	95	80-120			
Batch 7070326 - EPA 3005A											
Blank (7070326-BLK1)						Prepared & Analyzed: 07/14/17					
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	0.0003	0.0250	0.0003	mg/L							J
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							

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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070326 - EPA 3005A											
Blank (7070326-BLK1)						Prepared & Analyzed: 07/14/17					
Zinc	ND	0.0100	0.0012	mg/L							
Lithium	ND	0.0500	0.0015	mg/L							
LCS (7070326-BS1)						Prepared & Analyzed: 07/14/17					
Antimony	0.104	0.0030	0.0006	mg/L	0.10000		104	80-120			
Arsenic	0.103	0.0050	0.0005	mg/L	0.10000		103	80-120			
Barium	0.0984	0.0100	0.0004	mg/L	0.10000		98	80-120			
Beryllium	0.102	0.0030	0.00009	mg/L	0.10000		102	80-120			
Boron	1.07	0.0400	0.0060	mg/L	1.0000		107	80-120			
Cadmium	0.106	0.0010	0.0001	mg/L	0.10000		106	80-120			
Calcium	1.02	0.500	0.0404	mg/L	1.0000		102	80-120			
Chromium	0.109	0.0100	0.0005	mg/L	0.10000		109	80-120			
Cobalt	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Copper	0.104	0.0250	0.0003	mg/L	0.10000		104	80-120			
Lead	0.104	0.0050	0.00007	mg/L	0.10000		104	80-120			
Molybdenum	0.105	0.0100	0.0010	mg/L	0.10000		105	80-120			
Nickel	0.105	0.0100	0.0005	mg/L	0.10000		105	80-120			
Selenium	0.106	0.0100	0.0018	mg/L	0.10000		106	80-120			
Silver	0.101	0.0100	0.0002	mg/L	0.10000		101	80-120			
Thallium	0.105	0.0010	0.00005	mg/L	0.10000		105	80-120			
Vanadium	0.107	0.0100	0.0012	mg/L	0.10000		107	80-120			
Zinc	0.107	0.0100	0.0012	mg/L	0.10000		107	80-120			
Lithium	0.106	0.0500	0.0015	mg/L	0.10000		106	80-120			
Matrix Spike (7070326-MS1)		**Source: AAG0261-01**				Prepared & Analyzed: 07/14/17					
Antimony	0.108	0.0030	0.0006	mg/L	0.10000	ND	108	75-125			
Arsenic	0.108	0.0050	0.0005	mg/L	0.10000	0.0044	104	75-125			
Barium	0.113	0.0100	0.0004	mg/L	0.10000	0.0137	99	75-125			
Beryllium	0.0933	0.0030	0.00009	mg/L	0.10000	0.0143	79	75-125			
Boron	14.5	2.00	0.298	mg/L	1.0000	15.2	NR	75-125			QM-02
Cadmium	0.106	0.0010	0.0001	mg/L	0.10000	0.0029	104	75-125			
Calcium	133	25.0	2.02	mg/L	1.0000	139	NR	75-125			QM-02
Chromium	0.103	0.0100	0.0005	mg/L	0.10000	0.0012	102	75-125			
Cobalt	0.109	0.0100	0.0003	mg/L	0.10000	0.0121	97	75-125			
Copper	0.0951	0.0250	0.0003	mg/L	0.10000	0.0030	92	75-125			
Lead	0.0904	0.0050	0.00007	mg/L	0.10000	0.0018	89	75-125			
Molybdenum	0.107	0.0100	0.0010	mg/L	0.10000	ND	107	75-125			
Nickel	0.127	0.0100	0.0005	mg/L	0.10000	0.0325	95	75-125			
Selenium	0.118	0.0100	0.0018	mg/L	0.10000	0.0106	107	75-125			
Silver	0.0966	0.0100	0.0002	mg/L	0.10000	ND	97	75-125			

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July 25, 2017

Report No.: AAG0338

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070326 - EPA 3005A											
Matrix Spike (7070326-MS1)		**Source: AAG0261-01**			Prepared & Analyzed: 07/14/17						
Thallium	0.0910	0.0010	0.00005	mg/L	0.10000	0.0002	91	75-125			
Vanadium	0.103	0.0100	0.0012	mg/L	0.10000	ND	103	75-125			
Zinc	0.230	0.0100	0.0012	mg/L	0.10000	0.136	94	75-125			
Lithium	0.0995	0.0500	0.0015	mg/L	0.10000	0.0214	78	75-125			
Matrix Spike Dup (7070326-MSD1)		**Source: AAG0261-01**			Prepared & Analyzed: 07/14/17						
Antimony	0.103	0.0030	0.0006	mg/L	0.10000	ND	103	75-125	5	20	
Arsenic	0.105	0.0050	0.0005	mg/L	0.10000	0.0044	100	75-125	3	20	
Barium	0.108	0.0100	0.0004	mg/L	0.10000	0.0137	94	75-125	4	20	
Beryllium	0.0913	0.0030	0.00009	mg/L	0.10000	0.0143	77	75-125	2	20	
Boron	15.2	2.00	0.298	mg/L	1.0000	15.2	NR	75-125	4	20	QM-02
Cadmium	0.104	0.0010	0.0001	mg/L	0.10000	0.0029	101	75-125	2	20	
Calcium	133	25.0	2.02	mg/L	1.0000	139	NR	75-125	0.1	20	QM-02
Chromium	0.0982	0.0100	0.0005	mg/L	0.10000	0.0012	97	75-125	5	20	
Cobalt	0.105	0.0100	0.0003	mg/L	0.10000	0.0121	93	75-125	4	20	
Copper	0.0916	0.0250	0.0003	mg/L	0.10000	0.0030	89	75-125	4	20	
Lead	0.0864	0.0050	0.00007	mg/L	0.10000	0.0018	85	75-125	5	20	
Molybdenum	0.101	0.0100	0.0010	mg/L	0.10000	ND	101	75-125	5	20	
Nickel	0.122	0.0100	0.0005	mg/L	0.10000	0.0325	90	75-125	4	20	
Selenium	0.114	0.0100	0.0018	mg/L	0.10000	0.0106	103	75-125	4	20	
Silver	0.0928	0.0100	0.0002	mg/L	0.10000	ND	93	75-125	4	20	
Thallium	0.0875	0.0010	0.00005	mg/L	0.10000	0.0002	87	75-125	4	20	
Vanadium	0.0983	0.0100	0.0012	mg/L	0.10000	ND	98	75-125	5	20	
Zinc	0.225	0.0100	0.0012	mg/L	0.10000	0.136	89	75-125	2	20	
Lithium	0.0994	0.0500	0.0015	mg/L	0.10000	0.0214	78	75-125	0.06	20	
Post Spike (7070326-PS1)		**Source: AAG0261-01**			Prepared & Analyzed: 07/14/17						
Antimony	102			ug/L	100.00	0.559	101	80-120			
Arsenic	105			ug/L	100.00	4.41	101	80-120			
Barium	111			ug/L	100.00	13.7	97	80-120			
Beryllium	93.7			ug/L	100.00	14.3	79	80-120			QM-05
Boron	15700			ug/L	1000.0	15200	46	80-120			QM-02
Cadmium	105			ug/L	100.00	2.92	102	80-120			
Calcium	132000			ug/L	1000.0	139000	NR	80-120			QM-02
Chromium	99.8			ug/L	100.00	1.18	99	80-120			
Cobalt	106			ug/L	100.00	12.1	94	80-120			
Copper	91.4			ug/L	100.00	3.03	88	80-120			
Lead	87.7			ug/L	100.00	1.80	86	80-120			
Molybdenum	101			ug/L	100.00	0.0857	101	80-120			
Nickel	122			ug/L	100.00	32.5	90	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

July 25, 2017

Report No.: AAG0338

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070326 - EPA 3005A											
Post Spike (7070326-PS1)			**Source: AAG0261-01**				Prepared & Analyzed: 07/14/17				
Selenium	116			ug/L	100.00	10.6	106	80-120			
Silver	94.6			ug/L	100.00	0.0049	95	80-120			
Thallium	89.4			ug/L	100.00	0.238	89	80-120			
Vanadium	100			ug/L	100.00	-0.224	100	80-120			
Zinc	226			ug/L	100.00	136	90	80-120			
Lithium	104			ug/L	100.00	21.4	82	80-120			
Batch 7070373 - EPA 7470A											
Blank (7070373-BLK1)							Prepared & Analyzed: 07/20/17				
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7070373-BS1)							Prepared & Analyzed: 07/20/17				
Mercury	0.00237	0.00050	0.000041	mg/L	2.5000E-3		95	80-120			
Matrix Spike (7070373-MS1)			**Source: AAG0338-02**				Prepared & Analyzed: 07/20/17				
Mercury	0.00244	0.00050	0.000041	mg/L	2.5000E-3	ND	97	75-125			
Matrix Spike Dup (7070373-MSD1)			**Source: AAG0338-02**				Prepared & Analyzed: 07/20/17				
Mercury	0.00247	0.00050	0.000041	mg/L	2.5000E-3	ND	99	75-125	1	20	
Post Spike (7070373-PS1)			**Source: AAG0338-02**				Prepared & Analyzed: 07/20/17				
Mercury	1.65			ug/L	1.6667	0.0174	98	80-120			

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 25, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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.

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).

H-02 Sample was prepared and/or analyzed outside of the EPA recommended holding time. See Case Narrative.

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.

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla kiurinko@golder.com
REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		P Metals App. III & IV (EPA 6020/7470)	P Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	P Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:			P	P	P		
					PRESERVATION:			3	7	3		
07/12/17	0745	GW		x	DGWA-53	4		1	1	2	1	
07/12/17	0930	GW		x	DGWC-10	4		1	1	4	2	Extra Radium
07/12/17	1120	GW		x	DGWC-11	4		1	1	2	3	
07/12/17	1235	GW		x	DGWC-12	4		1	1	2	4	
07/12/17	0920	GW		x	DGWC-13	4		1	1	2	5	
07/12/17	1125	GW		x	DGWC-14	4		1	1	2	6	
07/12/17	1310	GW		x	DGWC-15	4		1	1	2	7	
07/12/17	0940	GW		x	DGWC-17	4		1	1	2	8	
07/12/17	1225	GW		x	DGWC-19	4		1	1	2	9	
07/12/17	1445	GW		x	DGWC-20	4		1	1	2	10	
07/12/17	1415	GW		X	DGWC-21	4		1	1	2	11	
07/12/17	1405	GW		X	DGWC-23	4		1	1	2	12	
07/12/17	--	GW		X	FD-2	4		1	1	2	13	
07/12/17	0915	W		X	FB-2	4		1	1	2	14	
07/12/17	1505	W		X	EB-2	4		1	1	2	15	

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 7/12/17 1600

RELINQUISHED BY: [signature]
DATE/TIME: 7/13/17 0955

RECEIVED BY: Mike Nguyen
DATE/TIME: 7/13/17 0955

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB: [signature]
DATE/TIME: 07/13/17 1145

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

pH Checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 2.3 Max:
Custody Seal: Intact Broken Not Present (N/A)
# of Coolers: 4
Cooler ID:

FOR LAB USE ONLY
LAB #: AAG0338
Entered Into LIMS: MR
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project # Plant McDonough

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace Other ____

Tracking #: ____

Optional
Proj. Due Date:
Proj. Name:

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

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other ____

Thermometer Used IR-2 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: 7/13/17 MR

Temp should be above freezing to 6°C Comments:

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

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

Person Contacted: ____ Date/Time: ____

Comments/ Resolution: ____

Project Manager Review: ____ **Date:** ____

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

PACE ANALYTICAL SERVICES, LLC.

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 10:29:20AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 07/13/17 11:45

Work Order: AAG0338
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 15 **#Containers:** 62

Minimum Temp(C): 2.3 **Maximum Temp(C):** 2.3 **Custody Seal(s) Used:** N/A

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	N/A
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

August 04, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAG0338 Plant McDonough
Pace Project No.: 30224181

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

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

CERTIFICATIONS

Project: AAG0338 Plant McDonough
Pace Project No.: 30224181

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

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

SAMPLE SUMMARY

Project: AAG0338 Plant McDonough
Pace Project No.: 30224181

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30224181001	**DGWA-53**	Water	07/12/17 07:45	07/14/17 10:20
30224181002	**DGWC-10**	Water	07/12/17 09:30	07/14/17 10:20
30224181003	**DGWC-11**	Water	07/12/17 11:20	07/14/17 10:20
30224181004	**DGWC-12**	Water	07/12/17 12:35	07/14/17 10:20
30224181005	**DGWC-13**	Water	07/12/17 09:20	07/14/17 10:20
30224181006	**DGWC-14**	Water	07/12/17 11:25	07/14/17 10:20
30224181007	**DGWC-15**	Water	07/12/17 13:10	07/14/17 10:20
30224181008	**DGWC-17**	Water	07/12/17 09:40	07/14/17 10:20
30224181009	**DGWC-19**	Water	07/12/17 12:25	07/14/17 10:20
30224181010	**DGWC-20**	Water	07/12/17 14:45	07/14/17 10:20
30224181011	**DGWC-21**	Water	07/12/17 14:15	07/14/17 10:20
30224181012	**DGWC-23**	Water	07/12/17 14:05	07/14/17 10:20
30224181013	**FD-2**	Water	07/12/17 00:00	07/14/17 10:20
30224181014	**FB-2**	Water	07/12/17 09:15	07/14/17 10:20
30224181015	**EB-2**	Water	07/12/17 15:05	07/14/17 10:20

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

SAMPLE ANALYTE COUNT

Project: AAG0338 Plant McDonough
Pace Project No.: 30224181

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30224181001	**DGWA-53**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224181002	**DGWC-10**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224181003	**DGWC-11**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224181004	**DGWC-12**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224181005	**DGWC-13**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224181006	**DGWC-14**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224181007	**DGWC-15**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224181008	**DGWC-17**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224181009	**DGWC-19**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224181010	**DGWC-20**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224181011	**DGWC-21**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224181012	**DGWC-23**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224181013	**FD-2**	EPA 9315	JC2	1

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: AAG0338 Plant McDonough
Pace Project No.: 30224181

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224181014	**FB-2**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224181015	**EB-2**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0338 Plant McDonough
Pace Project No.: 30224181

Sample: DGWA-53 **Lab ID: 30224181001** Collected: 07/12/17 07:45 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	**2.03 ± 0.453 (0.197) C:86% T:NA**	pCi/L	07/25/17 08:44	13982-63-3	
Radium-228	EPA 9320	**2.34 ± 0.622 (0.615) C:75% T:91%**	pCi/L	08/01/17 15:20	15262-20-1	
Total Radium	Total Radium Calculation	**4.37 ± 1.08 (0.812)**	pCi/L	08/04/17 11:43	7440-14-4	

Sample: DGWC-10 **Lab ID: 30224181002** Collected: 07/12/17 09:30 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	**0.253 ± 0.136 (0.176) C:88% T:NA**	pCi/L	07/25/17 08:44	13982-63-3	
Radium-228	EPA 9320	**0.578 ± 0.325 (0.576) C:80% T:85%**	pCi/L	08/01/17 15:20	15262-20-1	
Total Radium	Total Radium Calculation	**0.831 ± 0.461 (0.752)**	pCi/L	08/04/17 11:43	7440-14-4	

Sample: DGWC-11 **Lab ID: 30224181003** Collected: 07/12/17 11:20 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	**0.101 ± 0.120 (0.249) C:89% T:NA**	pCi/L	07/25/17 08:44	13982-63-3	
Radium-228	EPA 9320	**0.749 ± 0.421 (0.750) C:75% T:71%**	pCi/L	08/01/17 15:20	15262-20-1	
Total Radium	Total Radium Calculation	**0.850 ± 0.541 (0.999)**	pCi/L	08/04/17 11:43	7440-14-4	

Sample: DGWC-12 **Lab ID: 30224181004** Collected: 07/12/17 12:35 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	**0.0323 ± 0.0874 (0.212) C:87% T:NA**	pCi/L	07/25/17 08:44	13982-63-3	
Radium-228	EPA 9320	**0.506 ± 0.361 (0.698) C:80% T:82%**	pCi/L	08/01/17 15:20	15262-20-1	
Total Radium	Total Radium Calculation	**0.538 ± 0.448 (0.910)**	pCi/L	08/04/17 11:43	7440-14-4	

Sample: DGWC-13 **Lab ID: 30224181005** Collected: 07/12/17 09:20 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	**0.578 ± 0.215 (0.185) C:84% T:NA**	pCi/L	07/31/17 08:58	13982-63-3	
Radium-228	EPA 9320	**0.786 ± 0.416 (0.746) C:81% T:81%**	pCi/L	08/01/17 16:09	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0338 Plant McDonough
Pace Project No.: 30224181

Sample: DGWC-13 **Lab ID: 30224181005** Collected: 07/12/17 09:20 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	**1.36 ± 0.631 (0.931)**	pCi/L	08/04/17 11:43	7440-14-4	

Sample: DGWC-14 **Lab ID: 30224181006** Collected: 07/12/17 11:25 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	**0.357 ± 0.172 (0.219) C:86% T:NA**	pCi/L	07/31/17 08:58	13982-63-3	
Radium-228	EPA 9320	**0.674 ± 0.448 (0.864) C:80% T:76%**	pCi/L	08/01/17 16:09	15262-20-1	
Total Radium	Total Radium Calculation	**1.03 ± 0.620 (1.08)**	pCi/L	08/04/17 11:43	7440-14-4	

Sample: DGWC-15 **Lab ID: 30224181007** Collected: 07/12/17 13:10 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	**0.584 ± 0.212 (0.162) C:89% T:NA**	pCi/L	07/31/17 08:58	13982-63-3	
Radium-228	EPA 9320	**-0.0433 ± 0.401 (0.938) C:80% T:70%**	pCi/L	08/01/17 16:09	15262-20-1	
Total Radium	Total Radium Calculation	**0.584 ± 0.613 (1.10)**	pCi/L	08/04/17 11:43	7440-14-4	

Sample: DGWC-17 **Lab ID: 30224181008** Collected: 07/12/17 09:40 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	**0.362 ± 0.178 (0.208) C:76% T:NA**	pCi/L	07/31/17 08:58	13982-63-3	
Radium-228	EPA 9320	**-0.115 ± 0.370 (0.878) C:76% T:80%**	pCi/L	08/01/17 16:09	15262-20-1	
Total Radium	Total Radium Calculation	**0.362 ± 0.548 (1.09)**	pCi/L	08/04/17 11:43	7440-14-4	

Sample: DGWC-19 **Lab ID: 30224181009** 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	**0.260 ± 0.176 (0.298) C:77% T:NA**	pCi/L	07/31/17 08:58	13982-63-3	
Radium-228	EPA 9320	**0.0232 ± 0.385 (0.884) C:80% T:76%**	pCi/L	08/01/17 16:10	15262-20-1	
Total Radium	Total Radium Calculation	**0.283 ± 0.561 (1.18)**	pCi/L	08/04/17 11:43	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0338 Plant McDonough
Pace Project No.: 30224181

Sample: DGWC-20 **Lab ID: 30224181010** Collected: 07/12/17 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	**0.345 ± 0.172 (0.224) C:86% T:NA**	pCi/L	07/31/17 08:58	13982-63-3	
Radium-228	EPA 9320	**0.565 ± 0.460 (0.920) C:75% T:69%**	pCi/L	08/01/17 16:10	15262-20-1	
Total Radium	Total Radium Calculation	**0.910 ± 0.632 (1.14)**	pCi/L	08/04/17 11:43	7440-14-4	

Sample: DGWC-21 **Lab ID: 30224181011** Collected: 07/12/17 14:15 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	**0.195 ± 0.142 (0.222) C:71% T:NA**	pCi/L	07/31/17 08:58	13982-63-3	
Radium-228	EPA 9320	**1.02 ± 0.560 (0.989) C:75% T:76%**	pCi/L	08/01/17 18:42	15262-20-1	
Total Radium	Total Radium Calculation	**1.22 ± 0.702 (1.21)**	pCi/L	08/04/17 11:43	7440-14-4	

Sample: DGWC-23 **Lab ID: 30224181012** Collected: 07/12/17 14:05 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	**0.243 ± 0.154 (0.226) C:78% T:NA**	pCi/L	07/31/17 08:58	13982-63-3	
Radium-228	EPA 9320	**0.460 ± 0.482 (1.00) C:78% T:79%**	pCi/L	08/01/17 18:42	15262-20-1	
Total Radium	Total Radium Calculation	**0.703 ± 0.636 (1.23)**	pCi/L	08/04/17 11:43	7440-14-4	

Sample: FD-2 **Lab ID: 30224181013** 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	**0.259 ± 0.109 (0.126) C:76% T:NA**	pCi/L	07/31/17 11:48	13982-63-3	
Radium-228	EPA 9320	**-0.133 ± 0.433 (1.04) C:82% T:70%**	pCi/L	08/01/17 18:42	15262-20-1	
Total Radium	Total Radium Calculation	**0.259 ± 0.542 (1.17)**	pCi/L	08/04/17 11:43	7440-14-4	

Sample: FB-2 **Lab ID: 30224181014** Collected: 07/12/17 09:15 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	**0.260 ± 0.103 (0.105) C:86% T:NA**	pCi/L	07/31/17 11:48	13982-63-3	
Radium-228	EPA 9320	**0.556 ± 0.405 (0.762) C:73% T:82%**	pCi/L	08/01/17 18:42	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0338 Plant McDonough
Pace Project No.: 30224181

Sample: FB-2 **Lab ID: 30224181014** Collected: 07/12/17 09:15 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	**0.816 ± 0.508 (0.867)**	pCi/L	08/04/17 11:43	7440-14-4	

Sample: EB-2 **Lab ID: 30224181015** Collected: 07/12/17 15:05 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	**0.136 ± 0.0779 (0.115) C:90% T:NA**	pCi/L	07/31/17 11:48	13982-63-3	
Radium-228	EPA 9320	**0.403 ± 0.421 (0.869) C:81% T:79%**	pCi/L	08/01/17 18:42	15262-20-1	
Total Radium	Total Radium Calculation	**0.539 ± 0.499 (0.984)**	pCi/L	08/04/17 11:43	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0338 Plant McDonough
Pace Project No.: 30224181

QC Batch: 265655 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30224181005, 30224181006, 30224181007, 30224181008, 30224181009, 30224181010, 30224181011, 30224181012, 30224181013, 30224181014, 30224181015

METHOD BLANK: 1308235 Matrix: Water
Associated Lab Samples: 30224181005, 30224181006, 30224181007, 30224181008, 30224181009, 30224181010, 30224181011, 30224181012, 30224181013, 30224181014, 30224181015

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.129 ± 0.100 (0.150) C:93% T:NA	pCi/L	07/31/17 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.

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0338 Plant McDonough
Pace Project No.: 30224181

QC Batch: 265163 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30224181001, 30224181002, 30224181003, 30224181004

METHOD BLANK: 1306527 Matrix: Water
Associated Lab Samples: 30224181001, 30224181002, 30224181003, 30224181004

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	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0338 Plant McDonough
Pace Project No.: 30224181

QC Batch: 265168 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30224181001, 30224181002, 30224181003, 30224181004

METHOD BLANK: 1306532 Matrix: Water
Associated Lab Samples: 30224181001, 30224181002, 30224181003, 30224181004

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	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0338 Plant McDonough
Pace Project No.: 30224181

QC Batch: 265651 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30224181005, 30224181006, 30224181007, 30224181008, 30224181009, 30224181010, 30224181011, 30224181012, 30224181013, 30224181014, 30224181015

METHOD BLANK: 1308224 Matrix: Water
Associated Lab Samples: 30224181005, 30224181006, 30224181007, 30224181008, 30224181009, 30224181010, 30224181011, 30224181012, 30224181013, 30224181014, 30224181015

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.141 ± 0.341 (0.757) C:82% T:84%	pCi/L	08/01/17 16:09	

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

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

QUALIFIERS

Project: AAG0338 Plant McDonough
Pace Project No.: 30224181

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.

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAG0338 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 8/7/2017

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 HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	DGWA-53	G	7/12/2017 7:45	AAG0338-01	GW	2	X	001
2	DGWC-10	G	7/12/2017 9:30	AAG0338-02	GW	4	X	002
3	DGWC-11	G	7/12/2017 11:20	AAG0338-03	GW	2	X	003
4	DGWC-12	G	7/12/2017 12:35	AAG0338-04	GW	2	X	004
5	DGWC-13	G	7/12/2017 9:20	AAG0338-05	GW	2	X	005
6	DGWC-14	G	7/12/2017 11:25	AAG0338-06	GW	2	X	006
7	DGWC-15	G	7/12/2017 13:10	AAG0338-07	GW	2	X	007
8	DGWC-17	G	7/12/2017 9:40	AAG0338-08	GW	2	X	008
9	DGWC-19	G	7/12/2017 12:25	AAG0338-09	GW	2	X	009
10	DGWC-20	G	7/12/2017 14:45	AAG0338-10	GW	2	X	010

WO#: 30224181

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	7/13/17		7/14/17 1020	
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

Pace Analytical
www.pacelabs.com

Workorder: AAG0338 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 8/7/2017

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 HNO3	Requested Analysis: Radium 226, 228, Total	3022418 1 LAB USE ONLY
11	DGWC-21	G	7/12/2017 14:15	AAG0338-11	GW	2	X	011
12	DGWC-23	G	7/12/2017 14:05	AAG0338-12	GW	2	X	012
13	FD-2	G	7/12/2017 0:00	AAG0338-13	GW	2	X	013
14	FB-2	G	7/12/2017 9:15	AAG0338-14	W	2	X	014
15	EB-2	G	7/12/2017 15:05	AAG0338-15	W	2	X	015
16								
17								
18								
19								
20								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	7/13/17		7/14/17 1020	
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

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
		CONTAINER TYPE:					P	P	P	
		PRESERVATION:					3	7	3	
07/12/17	0745	GW		x	DGWA-53	4	1	1	2	1
07/12/17	0930	GW		x	DGWC-10	4	1	1	4	2
07/12/17	1120	GW		x	DGWC-11	4	1	1	2	3
07/12/17	1235	GW		x	DGWC-12	4	1	1	2	4
07/12/17	0920	GW		x	DGWC-13	4	1	1	2	5
07/12/17	1125	GW		x	DGWC-14	4	1	1	2	6
07/12/17	1310	GW		x	DGWC-15	4	1	1	2	7
07/12/17	0940	GW		x	DGWC-17	4	1	1	2	8
~~07/12/17~~	~~1225~~	~~GW~~		~~x~~	~~DGWC-19~~	~~4~~	~~1~~	~~1~~	~~2~~	~~9~~
07/12/17	1445	GW		x	DGWC-20	4	1	1	2	10
07/12/17	1415	GW		X	DGWC-21	4	1	1	2	11
07/12/17	1405	GW		X	DGWC-23	4	1	1	2	12
07/12/17	–	GW		X	FD-2	4	1	1	2	13
07/12/17	0915	W		X	FB-2	4	1	1	2	14
07/12/17	1505	W		X	EB-2	4	1	1	2	15

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

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

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

REMARKS/ADDITIONAL INFORMATION
Extra Radium
30224181

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 7/12/17 1600

RELINQUISHED BY:
DATE/TIME: 7/13/17 0955

RECEIVED BY: Mike Nguyen
DATE/TIME: 7/13/17 0955

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: MDahman
DATE/TIME: 07/13/17 1145

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

pH Checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 2 Max: 3
Custody Seal: Intact Broken Not Present (N/A)
# of Coolers: 4
Cooler ID:

FOR LAB USE ONLY
LAB #: AAG0338
Entered into LIMS: MR
Tracking #:

30224181

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project # Plant McDonough

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

Optional: Proj. Due Date: Proj. Name:

Tracking #: _____

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

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

Thermometer Used IR-2 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: 7/13/17 MR

Temp should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

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

F-ALLC003rev.3, 11September2006

Sample Condition Upon Receipt Pittsburgh

30224181

Pace Analytical

Client Name: PACE-GA Project #

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

Label ZH
LIMS Login AM

Tracking #: 741366571590

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:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:	✓			4. AM 7-14-17
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			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.
Orthophosphate field filtered				12.
Organic Samples checked for dechlorination:			✓	13.
Filtered volume received for Dissolved tests			✓	14.
All containers have been checked for preservation. All containers needing preservation are found to be in compliance with EPA recommendation. exceptions: VOA, coliform, TOC, O&G, Phenolics	✓			15. PH<2 Initial when completed ZH Date/time of preservation Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	16.
Trip Blank Present:			✓	17.
Trip Blank Custody Seals Present			✓	
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: ZH Date: 7/14/17

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: 7/20/2017
Worklist: 36693
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1306527
MB concentration:	0.040
M/B 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

	LCSD (Y or N)?	N
	LCS36693	LCSD36693
Count Date:	7/25/2017	
Spike I.D.:	17-030	
Spike Concentration (pCi/mL):	80.197	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.503	
Target Conc. (pCi/L, g, F):	15.943	
Uncertainty (Calculated):	1.469	
Result (pCi/L, g, F):	13.192	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.829	
Numerical Performance Indicator:	-3.20	
Percent Recovery:	82.75%	
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:	
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.:	30224181002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
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	30224181002
Duplicate RPD:	19.39%	30224181002DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:

8/4/17

Quality Control Sample Performance Assessment

Test: Ra-226
Analyst: JC2
Date: 7/27/2017
Worklist: 36805
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1308235
MB concentration:	0.129
M/B Counting Uncertainty:	0.099
MB MDC:	0.150
MB Numerical Performance Indicator:	2.56
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS36805	LCSD36805
Count Date:	8/1/2017	
Spike I.D.:	17-030	
Spike Concentration (pCi/mL):	80.197	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.512	
Target Conc. (pCi/L, g, F):	15.671	
Uncertainty (Calculated):	1.444	
Result (pCi/L, g, F):	12.371	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.808	
Numerical Performance Indicator:	-3.91	
Percent Recovery:	78.94%	
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:	
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.:	30224380002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30224380002DUP	
Sample Result (pCi/L, g, F):	0.291	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.115	
Sample Duplicate Result (pCi/L, g, F):	0.341	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.158	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.502	30224380002
Duplicate RPD:	15.83%	30224380002DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:

8/4/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	7/25/2017
Worklist:	36696
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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	LCSD (Y or N)?	Y
	LCS36696	LCSD36696
Count Date:	8/1/2017	8/1/2017
Spike I.D.:	17-005	17-005
Spike Concentration (pCi/mL):	23.911	23.911
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.817	0.819
Target Conc. (pCi/L, g, F):	5.852	5.841
Uncertainty (Calculated):	0.421	0.421
Result (pCi/L, g, F):	6.753	6.574
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.741	0.691
Numerical Performance Indicator:	2.07	1.78
Percent Recovery:	115.38%	112.55%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	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:	

Duplicate Sample Assessment		
Sample I.D.:	LCS36696	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD36696	
Sample Result (pCi/L, g, F):	6.753	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.741	
Sample Duplicate Result (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	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	2.48%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

8/4/17

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	VAL
Date:	7/26/2017
Worklist:	36801
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1308224
MB concentration:	0.141
M/B Counting Uncertainty:	0.340
MB MDC:	0.757
MB Numerical Performance Indicator:	0.81
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS36801	LCSD36801
Count Date:	8/1/2017	8/1/2017
Spike I.D.:	17-005	17-005
Spike Concentration (pCi/mL):	23.910	23.910
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.802	0.802
Target Conc. (pCi/L, g, F):	5.966	5.965
Uncertainty (Calculated):	0.430	0.429
Result (pCi/L, g, F):	6.314	6.521
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.746	0.679
Numerical Performance Indicator:	0.79	1.36
Percent Recovery:	105.83%	109.33%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

Duplicate Sample Assessment		
Sample I.D.:	LCS36801	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD36801	
Sample Result (pCi/L, g, F):	6.314	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.746	
Sample Duplicate Result (pCi/L, g, F):	6.521	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.679	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-0.404	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	3.25%	
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:	
(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:

8/4/17

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: AAG0388
July 26, 2017
Project: CCR Event
Project #:Plant McDonough

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

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

July 26, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWC-22	AAG0388-01	Ground Water	07/13/17 08:55	07/14/17 09:55
DGWC-37	AAG0388-02	Ground Water	07/13/17 09:05	07/14/17 09:55
DGWC-38	AAG0388-03	Ground Water	07/13/17 10:30	07/14/17 09:55
DGWC-39	AAG0388-04	Ground Water	07/13/17 11:45	07/14/17 09:55
DGWC-40	AAG0388-05	Ground Water	07/13/17 13:45	07/14/17 09:55
DGWC-42	AAG0388-06	Ground Water	07/13/17 10:30	07/14/17 09:55
DGWC-47	AAG0388-07	Ground Water	07/13/17 15:10	07/14/17 09:55
DGWC-48	AAG0388-08	Ground Water	07/13/17 12:35	07/14/17 09:55
DGWC-67	AAG0388-09	Ground Water	07/13/17 10:45	07/14/17 09:55
DGWC-68A	AAG0388-10	Ground Water	07/13/17 13:25	07/14/17 09:55
DGWC-69	AAG0388-11	Ground Water	07/13/17 14:45	07/14/17 09:55
FD-3	AAG0388-12	Ground Water	07/13/17 00:00	07/14/17 09:55
FB-3	AAG0388-13	Water	07/13/17 08:30	07/14/17 09:55
EB-3	AAG0388-14	Water	07/13/17 14:27	07/14/17 09:55

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 26, 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.

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

July 26, 2017

Report No.: AAG0388
Client ID: DGWC-22
Date/Time Sampled: 7/13/2017 8:55:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0388-01
Date/Time Received: 7/14/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	492	25	10	mg/L	SM 2540 C		1	07/20/17 18:53	07/20/17 18:53	7070489	JPT
Inorganic Anions											
Chloride	29	0.25	0.02	mg/L	EPA 300.0		1	07/20/17 16:43	07/21/17 07:44	7070516	RLC
Fluoride	0.09	0.30	0.03	mg/L	EPA 300.0	J	1	07/20/17 16:43	07/21/17 07:44	7070516	RLC
Sulfate	300	10	0.17	mg/L	EPA 300.0		10	07/20/17 16:43	07/23/17 03:07	7070516	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 19:50	7070414	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 19:50	7070414	CSW
Barium	0.0376	0.0100	0.0004	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 19:50	7070414	CSW
Beryllium	0.0002	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 19:50	7070414	CSW
Boron	3.85	0.0400	0.0060	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 19:50	7070414	CSW
Cadmium	0.0005	0.0010	0.0001	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 19:50	7070414	CSW
Calcium	67.2	25.0	2.02	mg/L	EPA 6020B		50	07/18/17 10:03	07/20/17 19:56	7070414	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 19:50	7070414	CSW
Cobalt	0.0106	0.0100	0.0003	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 19:50	7070414	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 19:50	7070414	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 19:50	7070414	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 19:50	7070414	CSW
Thallium	0.00007	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 19:50	7070414	CSW
Lithium	0.0044	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 19:50	7070414	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/21/17 09:49	7070381	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

July 26, 2017

Report No.: AAG0388
Client ID: DGWC-37
Date/Time Sampled: 7/13/2017 9:05:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0388-02
Date/Time Received: 7/14/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	312	25	10	mg/L	SM 2540 C		1	07/20/17 18:53	07/20/17 18:53	7070489	JPT
Inorganic Anions											
Chloride	6.5	0.25	0.02	mg/L	EPA 300.0		1	07/20/17 16:43	07/21/17 08:05	7070516	RLC
Fluoride	0.06	0.30	0.03	mg/L	EPA 300.0	J	1	07/20/17 16:43	07/21/17 08:05	7070516	RLC
Sulfate	200	10	0.17	mg/L	EPA 300.0		10	07/20/17 16:43	07/23/17 04:30	7070516	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:13	7070414	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:13	7070414	CSW
Barium	0.110	0.0100	0.0004	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:13	7070414	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:13	7070414	CSW
Boron	2.10	0.400	0.0595	mg/L	EPA 6020B		10	07/18/17 10:03	07/25/17 16:33	7070414	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:13	7070414	CSW
Calcium	64.1	25.0	2.02	mg/L	EPA 6020B		50	07/18/17 10:03	07/20/17 20:19	7070414	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:13	7070414	CSW
Cobalt	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:13	7070414	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:13	7070414	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:13	7070414	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:13	7070414	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:13	7070414	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:13	7070414	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/21/17 09:51	7070381	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 26, 2017

Report No.: AAG0388
Client ID: DGWC-38
Date/Time Sampled: 7/13/2017 10:30:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0388-03
Date/Time Received: 7/14/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	504	25	10	mg/L	SM 2540 C		1	07/20/17 18:53	07/20/17 18:53	7070489	JPT
Inorganic Anions											
Chloride	7.5	0.25	0.02	mg/L	EPA 300.0		1	07/20/17 16:43	07/21/17 08:26	7070516	RLC
Fluoride	0.13	0.30	0.03	mg/L	EPA 300.0	J	1	07/20/17 16:43	07/21/17 08:26	7070516	RLC
Sulfate	270	10	0.17	mg/L	EPA 300.0		10	07/20/17 16:43	07/23/17 04:51	7070516	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:25	7070414	CSW
Arsenic	0.0005	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:25	7070414	CSW
Barium	0.0332	0.0100	0.0004	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:25	7070414	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:25	7070414	CSW
Boron	3.09	2.00	0.298	mg/L	EPA 6020B		50	07/18/17 10:03	07/25/17 16:39	7070414	CSW
Cadmium	0.0002	0.0010	0.0001	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:25	7070414	CSW
Calcium	90.8	25.0	2.02	mg/L	EPA 6020B		50	07/18/17 10:03	07/20/17 20:30	7070414	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:25	7070414	CSW
Cobalt	0.0016	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:25	7070414	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:25	7070414	CSW
Molybdenum	0.0012	0.0100	0.0010	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:25	7070414	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:25	7070414	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:25	7070414	CSW
Lithium	0.0032	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:25	7070414	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/21/17 09:54	7070381	MTC

PACE ANALYTICAL SERVICES, LLC.

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Attention: Mr. Joju Abraham

July 26, 2017

Report No.: AAG0388
Client ID: DGWC-39
Date/Time Sampled: 7/13/2017 11:45:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0388-04
Date/Time Received: 7/14/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	508	25	10	mg/L	SM 2540 C		1	07/20/17 18:53	07/20/17 18:53	7070489	JPT
Inorganic Anions											
Chloride	8.4	0.25	0.02	mg/L	EPA 300.0		1	07/20/17 16:43	07/21/17 08:48	7070516	RLC
Fluoride	0.14	0.30	0.03	mg/L	EPA 300.0	J	1	07/20/17 16:43	07/21/17 08:48	7070516	RLC
Sulfate	220	10	0.17	mg/L	EPA 300.0		10	07/20/17 16:43	07/23/17 05:11	7070516	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:36	7070414	CSW
Arsenic	0.0009	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:36	7070414	CSW
Barium	0.0919	0.0100	0.0004	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:36	7070414	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:36	7070414	CSW
Boron	3.41	2.00	0.298	mg/L	EPA 6020B		50	07/18/17 10:03	07/25/17 16:45	7070414	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:36	7070414	CSW
Calcium	95.0	25.0	2.02	mg/L	EPA 6020B		50	07/18/17 10:03	07/20/17 20:42	7070414	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:36	7070414	CSW
Cobalt	0.0063	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:36	7070414	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:36	7070414	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:36	7070414	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:36	7070414	CSW
Thallium	0.00009	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:36	7070414	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:36	7070414	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/21/17 10:01	7070381	MTC

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 26, 2017

Report No.: AAG0388
Client ID: DGWC-40
Date/Time Sampled: 7/13/2017 1:45:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0388-05
Date/Time Received: 7/14/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	386	25	10	mg/L	SM 2540 C		1	07/20/17 18:53	07/20/17 18:53	7070489	JPT
Inorganic Anions											
Chloride	21	0.25	0.02	mg/L	EPA 300.0		1	07/20/17 16:43	07/21/17 09:09	7070516	RLC
Fluoride	0.20	0.30	0.03	mg/L	EPA 300.0	J	1	07/20/17 16:43	07/21/17 09:09	7070516	RLC
Sulfate	220	10	0.17	mg/L	EPA 300.0		10	07/20/17 16:43	07/23/17 05:32	7070516	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:48	7070414	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:48	7070414	CSW
Barium	0.0170	0.0100	0.0004	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:48	7070414	CSW
Beryllium	0.0030	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:48	7070414	CSW
Boron	0.933	0.400	0.0595	mg/L	EPA 6020B		10	07/18/17 10:03	07/25/17 16:50	7070414	CSW
Cadmium	0.0008	0.0010	0.0001	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:48	7070414	CSW
Calcium	46.2	25.0	2.02	mg/L	EPA 6020B		50	07/18/17 10:03	07/20/17 20:53	7070414	CSW
Chromium	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:48	7070414	CSW
Cobalt	0.0394	0.0100	0.0003	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:48	7070414	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:48	7070414	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:48	7070414	CSW
Selenium	0.0025	0.0100	0.0018	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:48	7070414	CSW
Thallium	0.00006	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:48	7070414	CSW
Lithium	0.0023	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:48	7070414	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/21/17 10:03	7070381	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 26, 2017

Report No.: AAG0388
Client ID: DGWC-42
Date/Time Sampled: 7/13/2017 10:30:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0388-06
Date/Time Received: 7/14/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	641	25	10	mg/L	SM 2540 C		1	07/20/17 18:53	07/20/17 18:53	7070489	JPT
Inorganic Anions											
Chloride	33	0.25	0.02	mg/L	EPA 300.0		1	07/20/17 16:43	07/21/17 09:51	7070516	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	07/20/17 16:43	07/21/17 09:51	7070516	RLC
Sulfate	370	50	0.85	mg/L	EPA 300.0		50	07/20/17 16:43	07/23/17 05:53	7070516	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:59	7070414	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:59	7070414	CSW
Barium	0.0210	0.0100	0.0004	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:59	7070414	CSW
Beryllium	0.0025	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:59	7070414	CSW
Boron	1.03	0.400	0.0595	mg/L	EPA 6020B		10	07/18/17 10:03	07/25/17 16:56	7070414	CSW
Cadmium	0.0008	0.0010	0.0001	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:59	7070414	CSW
Calcium	52.3	25.0	2.02	mg/L	EPA 6020B		50	07/18/17 10:03	07/20/17 21:05	7070414	CSW
Chromium	0.0008	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:59	7070414	CSW
Cobalt	0.0481	0.0100	0.0003	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:59	7070414	CSW
Lead	0.0004	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:59	7070414	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:59	7070414	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 20:59	7070414	CSW
Thallium	0.00009	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:59	7070414	CSW
Lithium	0.0116	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 20:59	7070414	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/21/17 10:06	7070381	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

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July 26, 2017

Report No.: AAG0388
Client ID: DGWC-47
Date/Time Sampled: 7/13/2017 3:10:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0388-07
Date/Time Received: 7/14/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	441	25	10	mg/L	SM 2540 C		1	07/20/17 18:53	07/20/17 18:53	7070489	JPT
Inorganic Anions											
Chloride	5.7	0.25	0.02	mg/L	EPA 300.0		1	07/20/17 16:43	07/21/17 11:16	7070516	RLC
Fluoride	0.84	0.30	0.03	mg/L	EPA 300.0		1	07/20/17 16:43	07/21/17 11:16	7070516	RLC
Sulfate	270	10	0.17	mg/L	EPA 300.0		10	07/20/17 16:43	07/23/17 06:13	7070516	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:22	7070414	CSW
Arsenic	0.0018	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 21:22	7070414	CSW
Barium	0.0165	0.0100	0.0004	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:22	7070414	CSW
Beryllium	0.0098	0.0030	0.0005	mg/L	EPA 6020B		5	07/18/17 10:03	07/25/17 17:02	7070414	CSW
Boron	0.280	0.200	0.0298	mg/L	EPA 6020B		5	07/18/17 10:03	07/25/17 17:02	7070414	CSW
Cadmium	0.0017	0.0010	0.0001	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:22	7070414	CSW
Calcium	52.5	25.0	2.02	mg/L	EPA 6020B		50	07/18/17 10:03	07/20/17 21:28	7070414	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:22	7070414	CSW
Cobalt	0.396	0.0100	0.0003	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:22	7070414	CSW
Lead	0.0007	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 21:22	7070414	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:22	7070414	CSW
Selenium	0.0068	0.0100	0.0018	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 21:22	7070414	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 21:22	7070414	CSW
Lithium	0.0743	0.0500	0.0075	mg/L	EPA 6020B		5	07/18/17 10:03	07/25/17 17:02	7070414	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/21/17 10:08	7070381	MTC

PACE ANALYTICAL SERVICES, LLC.

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July 26, 2017

Report No.: AAG0388
Client ID: DGWC-48
Date/Time Sampled: 7/13/2017 12:35:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0388-08
Date/Time Received: 7/14/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	789	25	10	mg/L	SM 2540 C		1	07/20/17 18:53	07/20/17 18:53	7070489	JPT
Inorganic Anions											
Chloride	15	0.25	0.02	mg/L	EPA 300.0		1	07/20/17 16:43	07/21/17 11:37	7070516	RLC
Fluoride	1.1	0.30	0.03	mg/L	EPA 300.0		1	07/20/17 16:43	07/21/17 11:37	7070516	RLC
Sulfate	500	10	0.17	mg/L	EPA 300.0		10	07/20/17 16:43	07/23/17 06:34	7070516	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:33	7070414	CSW
Arsenic	0.0012	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 21:33	7070414	CSW
Barium	0.0140	0.0100	0.0004	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:33	7070414	CSW
Beryllium	0.0106	0.0030	0.0005	mg/L	EPA 6020B		5	07/18/17 10:03	07/25/17 17:07	7070414	CSW
Boron	0.972	0.200	0.0298	mg/L	EPA 6020B		5	07/18/17 10:03	07/25/17 17:07	7070414	CSW
Cadmium	0.0033	0.0010	0.0001	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:33	7070414	CSW
Calcium	102	25.0	2.02	mg/L	EPA 6020B		50	07/18/17 10:03	07/20/17 21:39	7070414	CSW
Chromium	0.0007	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 21:33	7070414	CSW
Cobalt	0.531	0.0100	0.0003	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:33	7070414	CSW
Lead	0.0020	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 21:33	7070414	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:33	7070414	CSW
Selenium	0.0062	0.0100	0.0018	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 21:33	7070414	CSW
Thallium	0.00008	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 21:33	7070414	CSW
Lithium	0.143	0.0500	0.0075	mg/L	EPA 6020B		5	07/18/17 10:03	07/25/17 17:07	7070414	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/21/17 10:10	7070381	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 26, 2017

Report No.: AAG0388
Client ID: DGWC-67
Date/Time Sampled: 7/13/2017 10:45:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0388-09
Date/Time Received: 7/14/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	275	25	10	mg/L	SM 2540 C		1	07/20/17 18:53	07/20/17 18:53	7070489	JPT
Inorganic Anions											
Chloride	5.2	0.25	0.02	mg/L	EPA 300.0		1	07/20/17 16:43	07/21/17 11:59	7070516	RLC
Fluoride	0.03	0.30	0.03	mg/L	EPA 300.0	J	1	07/20/17 16:43	07/21/17 11:59	7070516	RLC
Sulfate	110	5.0	0.08	mg/L	EPA 300.0		5	07/20/17 16:43	07/23/17 06:55	7070516	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:45	7070414	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:45	7070414	CSW
Barium	0.102	0.0100	0.0004	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:45	7070414	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:45	7070414	CSW
Boron	3.46	2.00	0.298	mg/L	EPA 6020B		50	07/18/17 10:03	07/25/17 17:13	7070414	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:45	7070414	CSW
Calcium	43.7	25.0	2.02	mg/L	EPA 6020B		50	07/18/17 10:03	07/20/17 21:50	7070414	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:45	7070414	CSW
Cobalt	0.0037	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 21:45	7070414	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:45	7070414	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:45	7070414	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:45	7070414	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:45	7070414	CSW
Lithium	0.0044	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 21:45	7070414	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/21/17 10:13	7070381	MTC

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 26, 2017

Report No.: AAG0388
Client ID: DGWC-68A
Date/Time Sampled: 7/13/2017 1:25:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0388-10
Date/Time Received: 7/14/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	246	25	10	mg/L	SM 2540 C		1	07/20/17 18:53	07/20/17 18:53	7070489	JPT
Inorganic Anions											
Chloride	4.4	0.25	0.02	mg/L	EPA 300.0		1	07/20/17 16:44	07/20/17 23:00	7070517	RLC
Fluoride	0.12	0.30	0.03	mg/L	EPA 300.0	J	1	07/20/17 16:44	07/20/17 23:00	7070517	RLC
Sulfate	49	1.0	0.02	mg/L	EPA 300.0		1	07/20/17 16:44	07/20/17 23:00	7070517	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:56	7070414	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:56	7070414	CSW
Barium	0.0859	0.0100	0.0004	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:56	7070414	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:56	7070414	CSW
Boron	1.97	0.200	0.0298	mg/L	EPA 6020B		5	07/18/17 10:03	07/25/17 17:19	7070414	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:56	7070414	CSW
Calcium	52.3	25.0	2.02	mg/L	EPA 6020B		50	07/18/17 10:03	07/20/17 22:02	7070414	CSW
Chromium	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 21:56	7070414	CSW
Cobalt	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 21:56	7070414	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:56	7070414	CSW
Molybdenum	0.211	0.0100	0.0010	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:56	7070414	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:56	7070414	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:56	7070414	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 21:56	7070414	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/21/17 10:15	7070381	MTC

PACE ANALYTICAL SERVICES, LLC.

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 26, 2017

Report No.: AAG0388
Client ID: DGWC-69
Date/Time Sampled: 7/13/2017 2:45:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0388-11
Date/Time Received: 7/14/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	122	25	10	mg/L	SM 2540 C		1	07/20/17 19:30	07/20/17 19:30	7070490	JPT
Inorganic Anions											
Chloride	4.7	0.25	0.02	mg/L	EPA 300.0		1	07/20/17 16:44	07/20/17 23:21	7070517	RLC
Fluoride	0.13	0.30	0.03	mg/L	EPA 300.0	J	1	07/20/17 16:44	07/20/17 23:21	7070517	RLC
Sulfate	17	1.0	0.02	mg/L	EPA 300.0		1	07/20/17 16:44	07/20/17 23:21	7070517	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:08	7070414	CSW
Arsenic	0.0029	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 22:08	7070414	CSW
Barium	0.0985	0.0100	0.0004	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:08	7070414	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:08	7070414	CSW
Boron	0.323	0.0400	0.0060	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:08	7070414	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:08	7070414	CSW
Calcium	17.6	5.00	2.02	mg/L	EPA 6020B		50	07/18/17 10:03	07/20/17 22:13	7070414	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:08	7070414	CSW
Cobalt	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 22:08	7070414	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:08	7070414	CSW
Molybdenum	0.0053	0.0100	0.0010	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 22:08	7070414	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:08	7070414	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:08	7070414	CSW
Lithium	0.0029	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 22:08	7070414	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/21/17 10:17	7070381	MTC

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 26, 2017

Report No.: AAG0388
Client ID: FD-3
Date/Time Sampled: 7/13/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAG0388-12
Date/Time Received: 7/14/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	606	25	10	mg/L	SM 2540 C		1	07/20/17 19:30	07/20/17 19:30	7070490	JPT
Inorganic Anions											
Chloride	34	0.25	0.02	mg/L	EPA 300.0		1	07/20/17 16:44	07/20/17 23:42	7070517	RLC
Fluoride	0.11	0.30	0.03	mg/L	EPA 300.0	J	1	07/20/17 16:44	07/20/17 23:42	7070517	RLC
Sulfate	380	10	0.17	mg/L	EPA 300.0		10	07/20/17 16:44	07/21/17 14:06	7070517	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:30	7070414	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:30	7070414	CSW
Barium	0.0199	0.0100	0.0004	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:30	7070414	CSW
Beryllium	0.0027	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/25/17 17:25	7070414	CSW
Boron	0.987	0.0400	0.0060	mg/L	EPA 6020B		1	07/18/17 10:03	07/25/17 17:25	7070414	CSW
Cadmium	0.0008	0.0010	0.0001	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 22:30	7070414	CSW
Calcium	51.5	25.0	2.02	mg/L	EPA 6020B		50	07/18/17 10:03	07/20/17 22:36	7070414	CSW
Chromium	0.0008	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 22:30	7070414	CSW
Cobalt	0.0445	0.0100	0.0003	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:30	7070414	CSW
Lead	0.0004	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 22:30	7070414	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:30	7070414	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:30	7070414	CSW
Thallium	0.00009	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/20/17 22:30	7070414	CSW
Lithium	0.0114	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/18/17 10:03	07/25/17 17:25	7070414	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/21/17 10:20	7070381	MTC

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 26, 2017

Report No.: AAG0388
Client ID: FB-3
Date/Time Sampled: 7/13/2017 8:30:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAG0388-13
Date/Time Received: 7/14/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	07/20/17 19:30	07/20/17 19:30	7070490	JPT
Inorganic Anions											
Chloride	0.09	0.25	0.02	mg/L	EPA 300.0	J	1	07/20/17 16:44	07/21/17 00:02	7070517	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	07/20/17 16:44	07/21/17 00:02	7070517	RLC
Sulfate	0.66	1.0	0.02	mg/L	EPA 300.0	J	1	07/20/17 16:44	07/21/17 00:02	7070517	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:42	7070414	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:42	7070414	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:42	7070414	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:42	7070414	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:42	7070414	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:42	7070414	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:42	7070414	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:42	7070414	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:42	7070414	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:42	7070414	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:42	7070414	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:42	7070414	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:42	7070414	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:42	7070414	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/21/17 10:22	7070381	MTC

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Attention: Mr. Joju Abraham

July 26, 2017

Report No.: AAG0388
Client ID: EB-3
Date/Time Sampled: 7/13/2017 2:27:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAG0388-14
Date/Time Received: 7/14/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	07/20/17 19:30	07/20/17 19:30	7070490	JPT
Inorganic Anions											
Chloride	0.08	0.25	0.02	mg/L	EPA 300.0	J	1	07/20/17 16:44	07/21/17 00:23	7070517	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	07/20/17 16:44	07/21/17 00:23	7070517	RLC
Sulfate	0.10	1.0	0.02	mg/L	EPA 300.0	J	1	07/20/17 16:44	07/21/17 00:23	7070517	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:48	7070414	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:48	7070414	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:48	7070414	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:48	7070414	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:48	7070414	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:48	7070414	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:48	7070414	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:48	7070414	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:48	7070414	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:48	7070414	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:48	7070414	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:48	7070414	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:48	7070414	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/18/17 10:03	07/20/17 22:48	7070414	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/21/17 10:33	7070381	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 26, 2017

Report No.: AAG0388

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070489 - SM 2540 C											
Blank (7070489-BLK1)						Prepared & Analyzed: 07/20/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7070489-BS1)						Prepared & Analyzed: 07/20/17					
Total Dissolved Solids	406	25	10	mg/L	400.00		102	84-108			
Duplicate (7070489-DUP1)		**Source: AAG0383-14**				Prepared & Analyzed: 07/20/17					
Total Dissolved Solids	2280	25	10	mg/L		2280			0.2	10	
Duplicate (7070489-DUP2)		**Source: AAG0387-07**				Prepared & Analyzed: 07/20/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Batch 7070490 - SM 2540 C											
Blank (7070490-BLK1)						Prepared & Analyzed: 07/20/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7070490-BS1)						Prepared & Analyzed: 07/20/17					
Total Dissolved Solids	379	25	10	mg/L	400.00		95	84-108			
Duplicate (7070490-DUP1)		**Source: AAG0435-01**				Prepared & Analyzed: 07/20/17					
Total Dissolved Solids	117	25	10	mg/L		121			3	10	
Duplicate (7070490-DUP2)		**Source: AAG0436-08**				Prepared & Analyzed: 07/20/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 26, 2017

Report No.: AAG0388

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070516 - EPA 300.0											
Blank (7070516-BLK1)						Prepared: 07/20/17 Analyzed: 07/21/17					
Chloride	ND	0.25	0.02	mg/L							
Fluoride	ND	0.30	0.03	mg/L							
Sulfate	ND	1.0	0.02	mg/L							
LCS (7070516-BS1)						Prepared: 07/20/17 Analyzed: 07/21/17					
Chloride	10.4	0.25	0.02	mg/L	10.020		103	90-110			
Fluoride	10.3	0.30	0.03	mg/L	10.020		103	90-110			
Sulfate	10.5	1.0	0.02	mg/L	10.050		104	90-110			
Matrix Spike (7070516-MS1)		**Source: AAG0387-05**				Prepared: 07/20/17 Analyzed: 07/21/17					
Chloride	15.4	0.25	0.02	mg/L	10.020	5.39	100	90-110			
Fluoride	10.3	0.30	0.03	mg/L	10.020	ND	102	90-110			
Sulfate	125	1.0	0.02	mg/L	10.050	129	NR	90-110			QM-02
Matrix Spike (7070516-MS2)		**Source: AAG0388-05**				Prepared: 07/20/17 Analyzed: 07/21/17					
Chloride	30.0	0.25	0.02	mg/L	10.020	21.2	87	90-110			QM-02
Fluoride	12.0	0.30	0.03	mg/L	10.020	0.20	117	90-110			QM-05
Sulfate	170	1.0	0.02	mg/L	10.050	178	NR	90-110			QM-02
Matrix Spike Dup (7070516-MSD1)		**Source: AAG0387-05**				Prepared: 07/20/17 Analyzed: 07/21/17					
Chloride	15.4	0.25	0.02	mg/L	10.020	5.39	100	90-110	0.2	15	
Fluoride	10.1	0.30	0.03	mg/L	10.020	ND	101	90-110	1	15	
Sulfate	125	1.0	0.02	mg/L	10.050	129	NR	90-110	0.3	15	QM-02
Batch 7070517 - EPA 300.0											
Blank (7070517-BLK1)						Prepared & Analyzed: 07/20/17					
Chloride	ND	0.25	0.02	mg/L							
Fluoride	ND	0.30	0.03	mg/L							
Sulfate	ND	1.0	0.02	mg/L							

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July 26, 2017

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Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070517 - EPA 300.0											
LCS (7070517-BS1)						Prepared & Analyzed: 07/20/17					
Chloride	10.3	0.25	0.02	mg/L	10.020		102	90-110			
Fluoride	10.1	0.30	0.03	mg/L	10.020		101	90-110			
Sulfate	10.4	1.0	0.02	mg/L	10.050		104	90-110			
Matrix Spike (7070517-MS1)		**Source: AAG0434-02**				Prepared & Analyzed: 07/20/17					
Chloride	39.3	0.25	0.02	mg/L	10.020	32.7	66	90-110			QM-02
Fluoride	10.5	0.30	0.03	mg/L	10.020	0.20	102	90-110			
Sulfate	99.0	1.0	0.02	mg/L	10.050	99.3	NR	90-110			QM-02
Matrix Spike Dup (7070517-MSD1)		**Source: AAG0434-02**				Prepared & Analyzed: 07/20/17					
Chloride	39.2	0.25	0.02	mg/L	10.020	32.7	65	90-110	0.2	15	QM-02
Fluoride	10.5	0.30	0.03	mg/L	10.020	0.20	103	90-110	0.3	15	
Sulfate	98.8	1.0	0.02	mg/L	10.050	99.3	NR	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
Batch 7070381 - EPA 7470A											
Blank (7070381-BLK1)						Prepared: 07/20/17 Analyzed: 07/21/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7070381-BS1)						Prepared: 07/20/17 Analyzed: 07/21/17					
Mercury	0.00224	0.00050	0.000041	mg/L	2.5000E-3		89	80-120			
Matrix Spike (7070381-MS1)		**Source: AAG0388-02**				Prepared: 07/20/17 Analyzed: 07/21/17					
Mercury	0.00216	0.00050	0.000041	mg/L	2.5000E-3	ND	86	75-125			
Matrix Spike Dup (7070381-MSD1)		**Source: AAG0388-02**				Prepared: 07/20/17 Analyzed: 07/21/17					
Mercury	0.00214	0.00050	0.000041	mg/L	2.5000E-3	ND	86	75-125	0.6	20	
Post Spike (7070381-PS1)		**Source: AAG0388-02**				Prepared: 07/20/17 Analyzed: 07/21/17					
Mercury	1.53			ug/L	1.6667	0.00632	91	80-120			
Batch 7070414 - EPA 3005A											
Blank (7070414-BLK1)						Prepared: 07/18/17 Analyzed: 07/20/17					
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	0.0004	0.0250	0.0003	mg/L							J
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							

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July 26, 2017

Report No.: AAG0388

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070414 - EPA 3005A											
LCS (7070414-BS1)						Prepared: 07/18/17 Analyzed: 07/20/17					
Antimony	0.102	0.0030	0.0006	mg/L	0.10000		102	80-120			
Arsenic	0.101	0.0050	0.0005	mg/L	0.10000		101	80-120			
Barium	0.102	0.0100	0.0004	mg/L	0.10000		102	80-120			
Beryllium	0.105	0.0030	0.00009	mg/L	0.10000		105	80-120			
Boron	1.11	0.0400	0.0060	mg/L	1.0000		111	80-120			
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000		101	80-120			
Calcium	1.05	0.500	0.0404	mg/L	1.0000		105	80-120			
Chromium	0.108	0.0100	0.0005	mg/L	0.10000		108	80-120			
Cobalt	0.104	0.0100	0.0003	mg/L	0.10000		104	80-120			
Copper	0.100	0.0250	0.0003	mg/L	0.10000		100	80-120			
Lead	0.103	0.0050	0.00007	mg/L	0.10000		103	80-120			
Molybdenum	0.104	0.0100	0.0010	mg/L	0.10000		104	80-120			
Nickel	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Selenium	0.102	0.0100	0.0018	mg/L	0.10000		102	80-120			
Silver	0.104	0.0100	0.0002	mg/L	0.10000		104	80-120			
Thallium	0.102	0.0010	0.00005	mg/L	0.10000		102	80-120			
Vanadium	0.107	0.0100	0.0012	mg/L	0.10000		107	80-120			
Zinc	0.103	0.0100	0.0012	mg/L	0.10000		103	80-120			
Lithium	0.107	0.0500	0.0015	mg/L	0.10000		107	80-120			
Matrix Spike (7070414-MS1)			**Source: AAG0387-10**			Prepared: 07/18/17 Analyzed: 07/20/17					
Antimony	0.101	0.0030	0.0006	mg/L	0.10000	ND	101	75-125			
Arsenic	0.106	0.0050	0.0005	mg/L	0.10000	0.0011	105	75-125			
Barium	0.119	0.0100	0.0004	mg/L	0.10000	0.0365	83	75-125			
Beryllium	0.0931	0.0030	0.00009	mg/L	0.10000	ND	93	75-125			
Boron	2.53	0.0400	0.0060	mg/L	1.0000	1.62	91	75-125			
Cadmium	0.103	0.0010	0.0001	mg/L	0.10000	ND	103	75-125			
Calcium	84.8	25.0	2.02	mg/L	1.0000	83.7	108	75-125			
Chromium	0.104	0.0100	0.0005	mg/L	0.10000	ND	104	75-125			
Cobalt	0.130	0.0100	0.0003	mg/L	0.10000	0.0265	104	75-125			
Copper	0.0959	0.0250	0.0003	mg/L	0.10000	ND	96	75-125			
Lead	0.0983	0.0050	0.00007	mg/L	0.10000	ND	98	75-125			
Molybdenum	0.107	0.0100	0.0010	mg/L	0.10000	0.0015	105	75-125			
Nickel	0.107	0.0100	0.0005	mg/L	0.10000	0.0054	101	75-125			
Selenium	0.108	0.0100	0.0018	mg/L	0.10000	ND	108	75-125			
Silver	0.0956	0.0100	0.0002	mg/L	0.10000	ND	96	75-125			
Thallium	0.101	0.0010	0.00005	mg/L	0.10000	ND	101	75-125			
Vanadium	0.110	0.0100	0.0012	mg/L	0.10000	ND	110	75-125			
Zinc	0.106	0.0100	0.0012	mg/L	0.10000	0.0040	102	75-125			
Lithium	0.107	0.0500	0.0015	mg/L	0.10000	0.0104	96	75-125			

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July 26, 2017

Report No.: AAG0388

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070414 - EPA 3005A											
Matrix Spike Dup (7070414-MSD1)		**Source: AAG0387-10**			Prepared: 07/18/17 Analyzed: 07/20/17						
Antimony	0.104	0.0030	0.0006	mg/L	0.10000	ND	104	75-125	3	20	
Arsenic	0.104	0.0050	0.0005	mg/L	0.10000	0.0011	103	75-125	2	20	
Barium	0.122	0.0100	0.0004	mg/L	0.10000	0.0365	86	75-125	2	20	
Beryllium	0.0866	0.0030	0.00009	mg/L	0.10000	ND	87	75-125	7	20	
Boron	2.45	0.0400	0.0060	mg/L	1.0000	1.62	83	75-125	3	20	
Cadmium	0.0971	0.0010	0.0001	mg/L	0.10000	ND	97	75-125	6	20	
Calcium	89.3	25.0	2.02	mg/L	1.0000	83.7	557	75-125	5	20	QM-02
Chromium	0.103	0.0100	0.0005	mg/L	0.10000	ND	103	75-125	0.9	20	
Cobalt	0.127	0.0100	0.0003	mg/L	0.10000	0.0265	100	75-125	3	20	
Copper	0.0921	0.0250	0.0003	mg/L	0.10000	ND	92	75-125	4	20	
Lead	0.0944	0.0050	0.00007	mg/L	0.10000	ND	94	75-125	4	20	
Molybdenum	0.107	0.0100	0.0010	mg/L	0.10000	0.0015	106	75-125	0.8	20	
Nickel	0.103	0.0100	0.0005	mg/L	0.10000	0.0054	98	75-125	3	20	
Selenium	0.107	0.0100	0.0018	mg/L	0.10000	ND	107	75-125	0.3	20	
Silver	0.0963	0.0100	0.0002	mg/L	0.10000	ND	96	75-125	0.7	20	
Thallium	0.0964	0.0010	0.00005	mg/L	0.10000	ND	96	75-125	5	20	
Vanadium	0.107	0.0100	0.0012	mg/L	0.10000	ND	107	75-125	3	20	
Zinc	0.101	0.0100	0.0012	mg/L	0.10000	0.0040	97	75-125	5	20	
Lithium	0.101	0.0500	0.0015	mg/L	0.10000	0.0104	90	75-125	6	20	
Post Spike (7070414-PS1)		**Source: AAG0387-10**			Prepared: 07/18/17 Analyzed: 07/20/17						
Antimony	102			ug/L	100.00	0.433	101	80-120			
Arsenic	104			ug/L	100.00	1.05	102	80-120			
Barium	122			ug/L	100.00	36.5	86	80-120			
Beryllium	88.6			ug/L	100.00	0.0154	89	80-120			
Boron	2520			ug/L	1000.0	1620	90	80-120			
Cadmium	99.5			ug/L	100.00	0.0284	99	80-120			
Calcium	83200			ug/L	1000.0	83700	NR	80-120			QM-02
Chromium	101			ug/L	100.00	0.357	101	80-120			
Cobalt	123			ug/L	100.00	26.5	97	80-120			
Copper	92.0			ug/L	100.00	0.184	92	80-120			
Lead	94.2			ug/L	100.00	0.0118	94	80-120			
Molybdenum	109			ug/L	100.00	1.54	107	80-120			
Nickel	102			ug/L	100.00	5.37	96	80-120			
Selenium	105			ug/L	100.00	0.612	104	80-120			
Silver	95.9			ug/L	100.00	0.0028	96	80-120			
Thallium	95.6			ug/L	100.00	0.0057	96	80-120			
Vanadium	107			ug/L	100.00	0.726	107	80-120			
Zinc	103			ug/L	100.00	3.98	99	80-120			
Lithium	104			ug/L	100.00	10.4	94	80-120			

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July 26, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
								P	P	P								
								3	7	3								
07/13/17	0855	GW		x	DGWC-22	4		1	1	2							1	
07/13/17	0905	GW		x	DGWC-37	4		1	1	4							2	Extra Radium
07/13/17	1030	GW		x	DGWC-38	4		1	1	2							3	
07/13/17	1145	GW		x	DGWC-39	4		1	1	2							4	
07/13/17	1345	GW		x	DGWC-40	4		1	1	2							5	
07/13/17	1030	GW		x	DGWC-42	4		1	1	2							6	
07/13/17	1510	GW		x	DGWC-47	4		1	1	2							7	
07/13/17	1235	GW		x	DGWC-48	4		1	1	2							8	
07/13/17	1045	GW		x	DGWC-67	4		1	1	2							9	
07/13/17	1325	GW		x	DGWC-68A	4		1	1	2							10	
07/13/17	1445	GW		X	DGWC-69	4		1	1	2							11	
07/13/17	--	GW		X	FD-3	4		1	1	2							12	
07/13/17	0830	W		X	FB-3	4		1	1	2							13	
07/13/17	1427	W		X	EB-3	4		1	1	2							14	

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 7/13/17 1600
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY: Mike Nguyen
DATE/TIME: 7/14/17 0916
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Rahman
DATE/TIME: 07/14/17 0955
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS

Ice: Yes No NA
Temperature: Min: 2.3 Max:
Custody Seal: Intact Broken Not Present (NA)
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AAG0388
Entered into LIMS: MR
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project # AAG10388

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

Optional: Proj. Due Date: Proj. Name:

Tracking #: _____

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

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

Thermometer Used: IR-2 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: 7/14/17 MR

Temp should be above freezing to 6°C Comments:

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

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

F-ALLC003rev.3, 11September2006

PACE ANALYTICAL SERVICES, LLC.

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

LOG-IN CHECKLIST **Printed: 7/17/2017 11:50:58AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 07/14/17 09:55

Work Order: AAG0388
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 14 **#Containers:** 58

Minimum Temp(C): 2.3 **Maximum Temp(C):** 2.3 **Custody Seal(s) Used:** N/A

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	N/A
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

August 07, 2017

Ms. Lauren Petty
GA Power
42 Inverness Center Parkway
Birmingham, AL 35242

RE: Project: AAG0388 Plant McDonough
Pace Project No.: 30224380

Dear Ms. Petty:
Enclosed are the analytical results for sample(s) received by the laboratory on July 17, 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

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

CERTIFICATIONS

Project: AAG0388 Plant McDonough
Pace Project No.: 30224380

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

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: AAG0388 Plant McDonough
Pace Project No.: 30224380

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30224380001	**DGWC-22**	Water	07/13/17 08:55	07/17/17 09:30
30224380002	**DGWC-37**	Water	07/13/17 09:05	07/17/17 09:30
30224380003	**DGWC-38**	Water	07/13/17 10:30	07/17/17 09:30
30224380004	**DGWC-39**	Water	07/13/17 11:45	07/17/17 09:30
30224380005	**DGWC-40**	Water	07/13/17 13:45	07/17/17 09:30
30224380006	**DGWC-42**	Water	07/13/17 10:30	07/17/17 09:30
30224380007	**DGWC-47**	Water	07/13/17 15:10	07/17/17 09:30
30224380008	**DGWC-48**	Water	07/13/17 12:35	07/17/17 09:30
30224380009	**DGWC-67**	Water	07/13/17 10:45	07/17/17 09:30
30224380010	**DGWC-68A**	Water	07/13/17 13:25	07/17/17 09:30
30224380011	**DGWC-69**	Water	07/13/17 14:45	07/17/17 09:30
30224380012	**FD-3**	Water	07/13/17 00:00	07/17/17 09:30
30224380013	**FB-3**	Water	07/13/17 08:30	07/17/17 09:30
30224380014	**EB-3**	Water	07/13/17 14:27	07/17/17 09:30

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Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: AAG0388 Plant McDonough
Pace Project No.: 30224380

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30224380001	DGWC-22	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224380002	DGWC-37	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224380003	DGWC-38	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224380004	DGWC-39	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224380005	DGWC-40	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224380006	DGWC-42	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224380007	DGWC-47	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224380008	DGWC-48	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224380009	DGWC-67	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224380010	DGWC-68A	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224380011	DGWC-69	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224380012	FD-3	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224380013	FB-3	EPA 9315	JC2	1

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SAMPLE ANALYTE COUNT

Project: AAG0388 Plant McDonough
Pace Project No.: 30224380

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224380014	**EB-3**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0388 Plant McDonough
Pace Project No.: 30224380

Sample: DGWC-22 **Lab ID: 30224380001** Collected: 07/13/17 08:55 Received: 07/17/17 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	**0.463 ± 0.148 (0.135) C:79% T:NA**	pCi/L	07/31/17 11:48	13982-63-3	
Radium-228	EPA 9320	**0.675 ± 0.470 (0.893) C:79% T:77%**	pCi/L	08/01/17 18:42	15262-20-1	
Total Radium	Total Radium Calculation	**1.14 ± 0.618 (1.03)**	pCi/L	08/04/17 11:48	7440-14-4	

Sample: DGWC-37 **Lab ID: 30224380002** Collected: 07/13/17 09:05 Received: 07/17/17 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	**0.291 ± 0.123 (0.153) C:76% T:NA**	pCi/L	07/31/17 11:48	13982-63-3	
Radium-228	EPA 9320	**0.440 ± 0.492 (1.03) C:78% T:83%**	pCi/L	08/01/17 18:42	15262-20-1	
Total Radium	Total Radium Calculation	**0.731 ± 0.615 (1.18)**	pCi/L	08/04/17 11:48	7440-14-4	

Sample: DGWC-38 **Lab ID: 30224380003** Collected: 07/13/17 10:30 Received: 07/17/17 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	**0.429 ± 0.185 (0.167) C:71% T:NA**	pCi/L	08/01/17 08:22	13982-63-3	
Radium-228	EPA 9320	**0.683 ± 0.432 (0.805) C:81% T:87%**	pCi/L	08/01/17 18:42	15262-20-1	
Total Radium	Total Radium Calculation	**1.11 ± 0.617 (0.972)**	pCi/L	08/04/17 11:48	7440-14-4	

Sample: DGWC-39 **Lab ID: 30224380004** Collected: 07/13/17 11:45 Received: 07/17/17 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	**0.216 ± 0.142 (0.204) C:66% T:NA**	pCi/L	08/01/17 08:22	13982-63-3	
Radium-228	EPA 9320	**0.301 ± 0.405 (0.864) C:82% T:83%**	pCi/L	08/01/17 18:43	15262-20-1	
Total Radium	Total Radium Calculation	**0.517 ± 0.547 (1.07)**	pCi/L	08/04/17 11:48	7440-14-4	

Sample: DGWC-40 **Lab ID: 30224380005** Collected: 07/13/17 13:45 Received: 07/17/17 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	**0.251 ± 0.137 (0.181) C:87% T:NA**	pCi/L	08/01/17 08:22	13982-63-3	
Radium-228	EPA 9320	**0.712 ± 0.521 (1.02) C:77% T:79%**	pCi/L	08/01/17 18:43	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0388 Plant McDonough
Pace Project No.: 30224380

Sample: DGWC-40 **Lab ID: 30224380005** Collected: 07/13/17 13:45 Received: 07/17/17 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.963 ± 0.658 (1.20)**	pCi/L	08/04/17 11:48	7440-14-4	

Sample: DGWC-42 **Lab ID: 30224380006** Collected: 07/13/17 10:30 Received: 07/17/17 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	**0.366 ± 0.168 (0.206) C:84% T:NA**	pCi/L	08/01/17 08:22	13982-63-3	
Radium-228	EPA 9320	**0.711 ± 0.529 (1.02) C:80% T:68%**	pCi/L	08/01/17 18:43	15262-20-1	
Total Radium	Total Radium Calculation	**1.08 ± 0.697 (1.23)**	pCi/L	08/04/17 11:48	7440-14-4	

Sample: DGWC-47 **Lab ID: 30224380007** Collected: 07/13/17 15:10 Received: 07/17/17 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	**0.542 ± 0.202 (0.159) C:78% T:NA**	pCi/L	08/01/17 08:22	13982-63-3	
Radium-228	EPA 9320	**1.83 ± 0.603 (0.771) C:80% T:86%**	pCi/L	08/01/17 18:43	15262-20-1	
Total Radium	Total Radium Calculation	**2.37 ± 0.805 (0.930)**	pCi/L	08/04/17 11:48	7440-14-4	

Sample: DGWC-48 **Lab ID: 30224380008** Collected: 07/13/17 12:35 Received: 07/17/17 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	**0.380 ± 0.158 (0.158) C:91% T:NA**	pCi/L	08/01/17 08:22	13982-63-3	
Radium-228	EPA 9320	**1.40 ± 0.551 (0.823) C:77% T:85%**	pCi/L	08/01/17 18:43	15262-20-1	
Total Radium	Total Radium Calculation	**1.78 ± 0.709 (0.981)**	pCi/L	08/04/17 11:48	7440-14-4	

Sample: DGWC-67 **Lab ID: 30224380009** Collected: 07/13/17 10:45 Received: 07/17/17 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	**0.387 ± 0.185 (0.257) C:79% T:NA**	pCi/L	08/01/17 08:22	13982-63-3	
Radium-228	EPA 9320	**-0.325 ± 0.456 (1.14) C:85% T:62%**	pCi/L	08/01/17 18:43	15262-20-1	
Total Radium	Total Radium Calculation	**0.387 ± 0.641 (1.40)**	pCi/L	08/04/17 11:48	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0388 Plant McDonough
Pace Project No.: 30224380

Sample: DGWC-68A **Lab ID: 30224380010** Collected: 07/13/17 13:25 Received: 07/17/17 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	**0.304 ± 0.141 (0.152) C:85% T:NA**	pCi/L	08/02/17 07:39	13982-63-3	
Radium-228	EPA 9320	**-0.363 ± 0.250 (0.653) C:84% T:88%**	pCi/L	08/01/17 15:15	15262-20-1	
Total Radium	Total Radium Calculation	**0.304 ± 0.391 (0.805)**	pCi/L	08/04/17 11:48	7440-14-4	

Sample: DGWC-69 **Lab ID: 30224380011** Collected: 07/13/17 14:45 Received: 07/17/17 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	**0.729 ± 0.223 (0.164) C:89% T:NA**	pCi/L	08/02/17 07:39	13982-63-3	
Radium-228	EPA 9320	**0.407 ± 0.396 (0.815) C:80% T:80%**	pCi/L	08/01/17 15:15	15262-20-1	
Total Radium	Total Radium Calculation	**1.14 ± 0.619 (0.979)**	pCi/L	08/04/17 11:48	7440-14-4	

Sample: FD-3 **Lab ID: 30224380012** Collected: 07/13/17 00:00 Received: 07/17/17 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	**0.313 ± 0.151 (0.192) C:84% T:NA**	pCi/L	08/02/17 07:39	13982-63-3	
Radium-228	EPA 9320	**0.306 ± 0.346 (0.726) C:84% T:81%**	pCi/L	08/01/17 15:15	15262-20-1	
Total Radium	Total Radium Calculation	**0.619 ± 0.497 (0.918)**	pCi/L	08/04/17 11:48	7440-14-4	

Sample: FB-3 **Lab ID: 30224380013** Collected: 07/13/17 08:30 Received: 07/17/17 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	**0.186 ± 0.109 (0.135) C:90% T:NA**	pCi/L	08/02/17 07:39	13982-63-3	
Radium-228	EPA 9320	**-0.276 ± 0.495 (1.18) C:79% T:68%**	pCi/L	08/01/17 15:15	15262-20-1	
Total Radium	Total Radium Calculation	**0.186 ± 0.604 (1.32)**	pCi/L	08/04/17 11:48	7440-14-4	

Sample: EB-3 **Lab ID: 30224380014** Collected: 07/13/17 14:27 Received: 07/17/17 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	**0.117 ± 0.0949 (0.157) C:87% T:NA**	pCi/L	08/02/17 07:39	13982-63-3	
Radium-228	EPA 9320	**0.0970 ± 0.343 (0.775) C:82% T:79%**	pCi/L	08/01/17 15:16	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0388 Plant McDonough
Pace Project No.: 30224380

Sample: EB-3 **Lab ID: 30224380014** Collected: 07/13/17 14:27 Received: 07/17/17 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.214 ± 0.438 (0.932)**	pCi/L	08/04/17 11:48	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0388 Plant McDonough
Pace Project No.: 30224380

QC Batch: 265655 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30224380001, 30224380002, 30224380003, 30224380004, 30224380005, 30224380006, 30224380007, 30224380008, 30224380009

METHOD BLANK: 1308235 Matrix: Water
Associated Lab Samples: 30224380001, 30224380002, 30224380003, 30224380004, 30224380005, 30224380006, 30224380007, 30224380008, 30224380009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.129 ± 0.100 (0.150) C:93% T:NA	pCi/L	07/31/17 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: AAG0388 Plant McDonough
Pace Project No.: 30224380

QC Batch: 265656 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30224380010, 30224380011, 30224380012, 30224380013, 30224380014

METHOD BLANK: 1308237 Matrix: Water
Associated Lab Samples: 30224380010, 30224380011, 30224380012, 30224380013, 30224380014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.258 ± 0.127 (0.131) C:87% T:NA	pCi/L	08/02/17 07:39	

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

Pace Analytical Services, LLC
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(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0388 Plant McDonough
Pace Project No.: 30224380

QC Batch: 265651 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30224380001, 30224380002, 30224380003, 30224380004, 30224380005, 30224380006, 30224380007, 30224380008, 30224380009

METHOD BLANK: 1308224 Matrix: Water
Associated Lab Samples: 30224380001, 30224380002, 30224380003, 30224380004, 30224380005, 30224380006, 30224380007, 30224380008, 30224380009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.141 ± 0.341 (0.757) C:82% T:84%	pCi/L	08/01/17 16:09	

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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(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0388 Plant McDonough
Pace Project No.: 30224380

QC Batch: 265652 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30224380010, 30224380011, 30224380012, 30224380013, 30224380014

METHOD BLANK: 1308225 Matrix: Water
Associated Lab Samples: 30224380010, 30224380011, 30224380012, 30224380013, 30224380014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.363 ± 0.362 (0.747) C:83% T:76%	pCi/L	08/01/17 15:15	

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

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

QUALIFIERS

Project: AAG0388 Plant McDonough
Pace Project No.: 30224380

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.

WO#:30224380

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAG0388 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 8/8/2017

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 HNO3	Requested Analysis Radium 226, 228, Total	LAB USE ONLY
1	DGWC-22	G	7/13/2017 8:55	AAG0388-01	GW	2	X	001
2	DGWC-37	G	7/13/2017 9:05	AAG0388-02	GW	4	X	002
3	DGWC-38	G	7/13/2017 10:30	AAG0388-03	GW	2	X	003
4	DGWC-39	G	7/13/2017 11:45	AAG0388-04	GW	2	X	004
5	DGWC-40	G	7/13/2017 13:45	AAG0388-05	GW	2	X	005
6	DGWC-42	G	7/13/2017 10:30	AAG0388-06	GW	2	X	006
7	DGWC-47	G	7/13/2017 15:10	AAG0388-07	GW	2	X	007
8	DGWC-48	G	7/13/2017 12:35	AAG0388-08	GW	2	X	008
9	DGWC-67	G	7/13/2017 10:45	AAG0388-09	GW	2	X	009
10	DGWC-68A	G	7/13/2017 13:25	AAG0388-10	GW	2	X	010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	7/14/17	[illegible]	7-12-17	0930
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.

30224380

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAG0388 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 8/8/2017

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 HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
11	DGWC-69	G	7/13/2017 14:45	AAG0388-11	GW	2	X	011
12	FD-3	G	7/13/2017 0:00	AAG0388-12	GW	2	X	012
13	FB-3	G	7/13/2017 8:30	AAG0388-13	W	2	X	013
14	EB-3	G	7/13/2017 14:27	AAG0388-14	W	2	X	~~00~~ 014
15								BM
16								7-17-17
17								
18								
19								
20								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	7/14/17	Ashleybell Pace	7-17-17/0930	
2					
3					

Cooler Temperature on Receipt 1N17 °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

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

30224380

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)								LAB ID NUMBER
CONTAINER TYPE:								P	P	P								
PRESERVATION:								3	7	3								
07/13/17	0855	GW		x	DGWC-22	4		1	1	2								1
07/13/17	0905	GW		x	DGWC-37	4		1	1	4								2
07/13/17	1030	GW		x	DGWC-38	4		1	1	2								3
07/13/17	1145	GW		x	DGWC-39	4		1	1	2								4
07/13/17	1345	GW		x	DGWC-40	4		1	1	2								5
07/13/17	1030	GW		x	DGWC-42	4		1	1	2								6
07/13/17	1510	GW		x	DGWC-47	4		1	1	2								7
07/13/17	1235	GW		x	DGWC-48	4		1	1	2								8
07/13/17	1045	GW		x	DGWC-67	4		1	1	2								9
07/13/17	1325	GW		x	DGWC-68A	4		1	1	2								10
07/13/17	1445	GW		X	DGWC-69	4		1	1	2								11
07/13/17	–	GW		X	FD-3	4		1	1	2								12
07/13/17	0830	W		X	FB-3	4		1	1	2								13
07/13/17	1427	W		X	EB-3	4		1	1	2								14

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 7/13/17 1600

RECEIVED BY: Mike Nguyen
DATE/TIME: 7/14/17 0916

RECEIVED BY LAB: MRahman
DATE/TIME: 07/14/17 0955

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 2.3 Max:

RELINQUISHED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS
Custody Seal: Intact Broken Not Present NA
# of Coolers
Cooler ID:

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

2 Extra Radium

FOR LAB USE ONLY
LAB #: AAG0388
Entered into LIMS: MR
Tracking #:

30224380

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project # AAG10388

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace Other ____

Optional: Proj. Due Date: Proj. Name:

Tracking #: ____

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

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other ____

Thermometer Used IR-2 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: 7/14/17 MR

Temp should be above freezing to 6°C

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

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

Person Contacted: ____ Date/Time: ____

Comments/ Resolution: ____

Project Manager Review: ____ **Date:** ____

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

F-ALLC003rev.3, 11September2006

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

30224380

Client Name: Pace, GA Project #

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

Label AM

LIMS Login BLM

Tracking #: 7413 6657 2151

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: AM 7-17-17

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: -Includes date/time/ID Matrix: WT	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.
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. All containers needing preservation are found to be in compliance with EPA recommendation. exceptions: VOA, coliform, TOC, O&G, Phenolics	X X			15. pH<2 Initial when completed AM 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: AM Date: 7-17-17

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

Pace Analytical™
www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	VAL
Date:	7/26/2017
Worklist:	36801
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1308224
MB concentration:	0.141
M/B Counting Uncertainty:	0.340
MB MDC:	0.757
MB Numerical Performance Indicator:	0.81
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS36801	LCSD36801
Count Date:	8/1/2017	8/1/2017
Spike I.D.:	17-005	17-005
Spike Concentration (pCi/mL):	23.910	23.910
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.802	0.802
Target Conc. (pCi/L, g, F):	5.966	5.965
Uncertainty (Calculated):	0.430	0.429
Result (pCi/L, g, F):	6.314	6.521
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.746	0.679
Numerical Performance Indicator:	0.79	1.36
Percent Recovery:	105.83%	109.33%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

Duplicate Sample Assessment		
Sample I.D.:	LCS36801	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD36801	
Sample Result (pCi/L, g, F):	6.314	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.746	
Sample Duplicate Result (pCi/L, g, F):	6.521	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.679	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-0.404	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	3.25%	
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:	
(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:

8/7/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	VAL
Date:	7/26/2017
Worklist:	36802
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1308225
MB concentration:	0.363
M/B Counting Uncertainty:	0.356
MB MDC:	0.747
MB Numerical Performance Indicator:	2.00
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS36802	LCSD36802
Count Date:	8/1/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	23.910	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.809	
Target Conc. (pCi/L, g, F):	5.912	
Uncertainty (Calculated):	0.426	
Result (pCi/L, g, F):	5.066	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.651	
Numerical Performance Indicator:	-2.13	
Percent Recovery:	85.68%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Sample Matrix Spike Control Assessment	
Sample Collection Date:	7/13/2017
Sample I.D.	30224381008
Sample MS I.D.	30224381008MS
Sample MSD I.D.	
Spike I.D.:	17-005
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	24.062
Spike Volume Used in MS (mL):	0.30
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	0.814
MS Target Conc.(pCi/L, g, F):	8.865
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	0.638
Sample Result:	0.094
Sample Result Counting Uncertainty (pCi/L, g, F):	0.295
Sample Matrix Spike Result:	9.451
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	0.859
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	0.869
MSD Numerical Performance Indicator:	
MS Percent Recovery:	105.55%
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	N/A
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	Pass
MSD Status vs Recovery:	

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 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?	See Below ##	
Duplicate Numerical Performance Indicator:		
Duplicate RPD:		
Duplicate Status vs Numerical Indicator:		
Duplicate Status vs RPD:		

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:	

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

Comments:

8/7/17

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	JC2
Date:	7/27/2017
Worklist:	36805
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1308235
MB concentration:	0.129
M/B Counting Uncertainty:	0.099
MB MDC:	0.150
MB Numerical Performance Indicator:	2.56
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS36805	LCSD36805
Count Date:	8/1/2017	
Spike I.D.:	17-030	
Spike Concentration (pCi/mL):	80.197	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.512	
Target Conc. (pCi/L, g, F):	15.671	
Uncertainty (Calculated):	1.444	
Result (pCi/L, g, F):	12.371	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.808	
Numerical Performance Indicator:	-3.91	
Percent Recovery:	78.94%	
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:	
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

		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30224380002	
Duplicate Sample I.D.	30224380002DUP	
Sample Result (pCi/L, g, F):	0.291	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.115	
Sample Duplicate Result (pCi/L, g, F):	0.341	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.158	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.502	30224380002
Duplicate RPD:	15.83%	30224380002DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:

8/7/17

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Test:	Ra-226
Analyst:	JC2
Date:	7/27/2017
Worklist:	36806
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1308237
MB concentration:	0.258
M/B Counting Uncertainty:	0.122
MB MDC:	0.131
MB Numerical Performance Indicator:	4.15
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS36806	LCSD36806
Count Date:	8/1/2017	
Spike I.D.:	17-030	
Spike Concentration (pCi/mL):	80.197	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.510	
Target Conc. (pCi/L, g, F):	15.726	
Uncertainty (Calculated):	1.449	
Result (pCi/L, g, F):	13.513	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.592	
Numerical Performance Indicator:	-2.77	
Percent Recovery:	85.92%	
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:	
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.:	30224381007	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30224381007DUP	
Sample Result (pCi/L, g, F):	0.481	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.165	
Sample Duplicate Result (pCi/L, g, F):	0.436	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.118	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.440	30224381007
Duplicate RPD:	9.91%	30224381007DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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

8/7/17

LABORATORY ANALYTICAL DATA

August 2017

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: AAH0318
August 16, 2017
Project: CCR Event
Project #:Plant McDonough

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

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

August 16, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWA-70A	AAH0318-01	Ground Water	08/08/17 10:16	08/09/17 09:55
DGWC-68A	AAH0318-02	Ground Water	08/08/17 13:06	08/09/17 09:55
FB-1	AAH0318-03	Water	08/08/17 10:55	08/09/17 09:55
EB-1	AAH0318-04	Water	08/08/17 11:10	08/09/17 09:55
FD-1	AAH0318-05	Ground Water	08/08/17 00:00	08/09/17 09:55

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

August 16, 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.

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

August 16, 2017

Report No.: AAH0318
Client ID: DGWA-70A
Date/Time Sampled: 08/08/2017 10:16:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAH0318-01
Date/Time Received: 08/09/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	53	25	10	mg/L	SM 2540 C		1	08/10/17 16:35	08/10/17 16:35	7080277	JPT
Inorganic Anions											
Chloride	2.2	0.25	0.02	mg/L	EPA 300.0	B-01	1	08/15/17 10:06	08/15/17 12:46	7080386	SLH
Fluoride	0.04	0.30	0.03	mg/L	EPA 300.0	J	1	08/15/17 10:06	08/15/17 12:46	7080386	SLH
Sulfate	1.5	1.0	0.02	mg/L	EPA 300.0		1	08/15/17 10:06	08/15/17 12:46	7080386	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:12	7080271	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:12	7080271	CSW
Barium	0.0277	0.0100	0.0004	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:12	7080271	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:12	7080271	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:12	7080271	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:12	7080271	CSW
Calcium	5.20	2.50	0.202	mg/L	EPA 6020B		5	08/11/17 13:05	08/15/17 13:59	7080271	CSW
Chromium	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	08/11/17 13:05	08/14/17 16:12	7080271	CSW
Cobalt	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	08/11/17 13:05	08/14/17 16:12	7080271	CSW
Lead	0.00007	0.0050	0.00007	mg/L	EPA 6020B	J	1	08/11/17 13:05	08/14/17 16:12	7080271	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:12	7080271	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:12	7080271	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:12	7080271	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:12	7080271	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	08/15/17 08:40	08/15/17 15:16	7080360	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

Attention: Mr. Joju Abraham

August 16, 2017

Report No.: AAH0318
Client ID: DGWC-68A
Date/Time Sampled: 08/08/2017 1:06:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAH0318-02
Date/Time Received: 08/09/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	278	25	10	mg/L	SM 2540 C		1	08/10/17 16:35	08/10/17 16:35	7080277	JPT
Inorganic Anions											
Chloride	4.2	0.25	0.02	mg/L	EPA 300.0	B-01	1	08/15/17 10:06	08/15/17 13:48	7080386	SLH
Fluoride	0.11	0.30	0.03	mg/L	EPA 300.0	J	1	08/15/17 10:06	08/15/17 13:48	7080386	SLH
Sulfate	48	1.0	0.02	mg/L	EPA 300.0		1	08/15/17 10:06	08/15/17 13:48	7080386	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:23	7080271	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:23	7080271	CSW
Barium	0.0852	0.0100	0.0004	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:23	7080271	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:23	7080271	CSW
Boron	2.10	2.00	0.298	mg/L	EPA 6020B		50	08/11/17 13:05	08/14/17 16:29	7080271	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:23	7080271	CSW
Calcium	46.3	25.0	2.02	mg/L	EPA 6020B		50	08/11/17 13:05	08/14/17 16:29	7080271	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:23	7080271	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:23	7080271	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:23	7080271	CSW
Molybdenum	0.207	0.0100	0.0010	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:23	7080271	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:23	7080271	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:23	7080271	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:23	7080271	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	08/15/17 08:40	08/15/17 15:18	7080360	MTC

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

August 16, 2017

Report No.: AAH0318
Client ID: FB-1
Date/Time Sampled: 08/08/2017 10:55:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAH0318-03
Date/Time Received: 08/09/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	08/10/17 16:35	08/10/17 16:35	7080277	JPT
Inorganic Anions											
Chloride	0.08	0.25	0.02	mg/L	EPA 300.0	B-01, J	1	08/15/17 10:06	08/15/17 14:08	7080386	SLH
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	08/15/17 10:06	08/15/17 14:08	7080386	SLH
Sulfate	0.06	1.0	0.02	mg/L	EPA 300.0	J	1	08/15/17 10:06	08/15/17 14:08	7080386	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:34	7080271	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:34	7080271	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:34	7080271	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:34	7080271	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:34	7080271	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:34	7080271	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:34	7080271	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:34	7080271	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:34	7080271	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:34	7080271	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:34	7080271	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:34	7080271	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:34	7080271	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:34	7080271	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	08/15/17 08:40	08/15/17 15:21	7080360	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

August 16, 2017

Report No.: AAH0318
Client ID: EB-1
Date/Time Sampled: 08/08/2017 11:10:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAH0318-04
Date/Time Received: 08/09/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	08/10/17 16:35	08/10/17 16:35	7080277	JPT
Inorganic Anions											
Chloride	0.08	0.25	0.02	mg/L	EPA 300.0	B-01, J	1	08/15/17 10:06	08/15/17 14:29	7080386	SLH
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	08/15/17 10:06	08/15/17 14:29	7080386	SLH
Sulfate	0.05	1.0	0.02	mg/L	EPA 300.0	J	1	08/15/17 10:06	08/15/17 14:29	7080386	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:40	7080271	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:40	7080271	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:40	7080271	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:40	7080271	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:40	7080271	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:40	7080271	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:40	7080271	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:40	7080271	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:40	7080271	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	08/11/17 13:05	08/14/17 16:40	7080271	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:40	7080271	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:40	7080271	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:40	7080271	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:40	7080271	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	08/15/17 08:40	08/15/17 15:23	7080360	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

August 16, 2017

Report No.: AAH0318
Client ID: FD-1
Date/Time Sampled: 08/08/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAH0318-05
Date/Time Received: 08/09/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	50	25	10	mg/L	SM 2540 C		1	08/10/17 16:35	08/10/17 16:35	7080277	JPT
Inorganic Anions											
Chloride	2.1	0.25	0.02	mg/L	EPA 300.0	B-01	1	08/15/17 10:06	08/15/17 14:50	7080386	SLH
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	08/15/17 10:06	08/15/17 14:50	7080386	SLH
Sulfate	1.4	1.0	0.02	mg/L	EPA 300.0		1	08/15/17 10:06	08/15/17 14:50	7080386	SLH
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:46	7080271	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:46	7080271	CSW
Barium	0.0278	0.0100	0.0004	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:46	7080271	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:46	7080271	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:46	7080271	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:46	7080271	CSW
Calcium	4.99	0.500	0.0404	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:46	7080271	CSW
Chromium	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	08/11/17 13:05	08/14/17 16:46	7080271	CSW
Cobalt	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	08/11/17 13:05	08/14/17 16:46	7080271	CSW
Lead	0.00007	0.0050	0.00007	mg/L	EPA 6020B	J	1	08/11/17 13:05	08/14/17 16:46	7080271	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:46	7080271	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:46	7080271	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:46	7080271	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	08/11/17 13:05	08/14/17 16:46	7080271	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	08/15/17 08:40	08/15/17 15:30	7080360	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

August 16, 2017

Report No.: AAH0318

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7080277 - SM 2540 C											
Blank (7080277-BLK1)						Prepared & Analyzed: 08/10/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7080277-BS1)						Prepared & Analyzed: 08/10/17					
Total Dissolved Solids	407	25	10	mg/L	400.00		102	84-108			
Duplicate (7080277-DUP1)		**Source: AAH0318-05**				Prepared & Analyzed: 08/10/17					
Total Dissolved Solids	44	25	10	mg/L		50			13	10	QR-03

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August 16, 2017

Report No.: AAH0318

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7080386 - EPA 300.0											
Blank (7080386-BLK1)						Prepared & Analyzed: 08/15/17					
Chloride	0.05	0.25	0.02	mg/L							J
Fluoride	ND	0.30	0.03	mg/L							
Sulfate	ND	1.0	0.02	mg/L							
LCS (7080386-BS1)						Prepared & Analyzed: 08/15/17					
Chloride	10.2	0.25	0.02	mg/L	10.020		102	90-110			
Fluoride	10.1	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			
Matrix Spike (7080386-MS1)		**Source: AAH0318-01**				Prepared & Analyzed: 08/15/17					
Chloride	12.3	0.25	0.02	mg/L	10.020	2.22	100	90-110			
Fluoride	10.3	0.30	0.03	mg/L	10.020	0.04	102	90-110			
Sulfate	11.8	1.0	0.02	mg/L	10.050	1.46	103	90-110			
Matrix Spike Dup (7080386-MSD1)		**Source: AAH0318-01**				Prepared & Analyzed: 08/15/17					
Chloride	12.3	0.25	0.02	mg/L	10.020	2.22	100	90-110	0.1	15	
Fluoride	10.3	0.30	0.03	mg/L	10.020	0.04	103	90-110	0.4	15	
Sulfate	11.7	1.0	0.02	mg/L	10.050	1.46	102	90-110	0.1	15	

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August 16, 2017

Report No.: AAH0318

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7080271 - EPA 3005A											
Blank (7080271-BLK1)						Prepared: 08/11/17 Analyzed: 08/14/17					
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 (7080271-BS1)						Prepared: 08/11/17 Analyzed: 08/14/17					
Antimony	0.103	0.0030	0.0006	mg/L	0.10000		103	80-120			
Arsenic	0.0991	0.0050	0.0005	mg/L	0.10000		99	80-120			
Barium	0.0989	0.0100	0.0004	mg/L	0.10000		99	80-120			
Beryllium	0.104	0.0030	0.00009	mg/L	0.10000		104	80-120			
Boron	0.992	0.0400	0.0060	mg/L	1.0000		99	80-120			
Cadmium	0.102	0.0010	0.0001	mg/L	0.10000		102	80-120			
Calcium	0.939	0.500	0.0404	mg/L	1.0000		94	80-120			
Chromium	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Cobalt	0.100	0.0100	0.0003	mg/L	0.10000		100	80-120			
Copper	0.103	0.0250	0.0003	mg/L	0.10000		103	80-120			
Lead	0.0971	0.0050	0.00007	mg/L	0.10000		97	80-120			
Molybdenum	0.0999	0.0100	0.0010	mg/L	0.10000		100	80-120			
Nickel	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			
Selenium	0.0935	0.0100	0.0018	mg/L	0.10000		94	80-120			
Silver	0.0976	0.0100	0.0002	mg/L	0.10000		98	80-120			
Thallium	0.0988	0.0010	0.00005	mg/L	0.10000		99	80-120			
Vanadium	0.101	0.0100	0.0012	mg/L	0.10000		101	80-120			
Zinc	0.103	0.0100	0.0012	mg/L	0.10000		103	80-120			
Lithium	0.101	0.0500	0.0015	mg/L	0.10000		101	80-120			

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August 16, 2017

Report No.: AAH0318

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7080271 - EPA 3005A											
Matrix Spike (7080271-MS1)		**Source: AAH0231-02**			Prepared: 08/11/17 Analyzed: 08/14/17						
Antimony	0.104	0.0030	0.0006	mg/L	0.10000	ND	104	75-125			
Arsenic	0.101	0.0050	0.0005	mg/L	0.10000	0.0009	100	75-125			
Barium	0.136	0.0100	0.0004	mg/L	0.10000	0.0345	102	75-125			
Beryllium	0.104	0.0030	0.00009	mg/L	0.10000	ND	104	75-125			
Boron	1.06	0.0400	0.0060	mg/L	1.0000	0.0598	100	75-125			
Cadmium	0.0990	0.0010	0.0001	mg/L	0.10000	ND	99	75-125			
Calcium	36.3	0.500	0.0404	mg/L	1.0000	37.1	NR	75-125			QM-02
Chromium	0.107	0.0100	0.0005	mg/L	0.10000	0.0008	106	75-125			
Cobalt	0.105	0.0100	0.0003	mg/L	0.10000	ND	105	75-125			
Copper	0.106	0.0250	0.0003	mg/L	0.10000	ND	106	75-125			
Lead	0.0970	0.0050	0.00007	mg/L	0.10000	0.00008	97	75-125			
Molybdenum	0.105	0.0100	0.0010	mg/L	0.10000	ND	105	75-125			
Nickel	0.105	0.0100	0.0005	mg/L	0.10000	0.0007	105	75-125			
Selenium	0.0975	0.0100	0.0018	mg/L	0.10000	ND	97	75-125			
Silver	0.0965	0.0100	0.0002	mg/L	0.10000	ND	97	75-125			
Thallium	0.0999	0.0010	0.00005	mg/L	0.10000	ND	100	75-125			
Vanadium	0.106	0.0100	0.0012	mg/L	0.10000	ND	106	75-125			
Zinc	0.109	0.0100	0.0012	mg/L	0.10000	0.0062	103	75-125			
Lithium	0.117	0.0500	0.0015	mg/L	0.10000	0.0136	104	75-125			
Matrix Spike Dup (7080271-MSD1)		**Source: AAH0231-02**			Prepared: 08/11/17 Analyzed: 08/14/17						
Antimony	0.103	0.0030	0.0006	mg/L	0.10000	ND	103	75-125	2	20	
Arsenic	0.0993	0.0050	0.0005	mg/L	0.10000	0.0009	98	75-125	2	20	
Barium	0.132	0.0100	0.0004	mg/L	0.10000	0.0345	97	75-125	3	20	
Beryllium	0.0941	0.0030	0.00009	mg/L	0.10000	ND	94	75-125	10	20	
Boron	0.996	0.0400	0.0060	mg/L	1.0000	0.0598	94	75-125	6	20	
Cadmium	0.0997	0.0010	0.0001	mg/L	0.10000	ND	100	75-125	0.7	20	
Calcium	36.5	0.500	0.0404	mg/L	1.0000	37.1	NR	75-125	0.6	20	QM-02
Chromium	0.104	0.0100	0.0005	mg/L	0.10000	0.0008	103	75-125	3	20	
Cobalt	0.105	0.0100	0.0003	mg/L	0.10000	ND	105	75-125	0.7	20	
Copper	0.103	0.0250	0.0003	mg/L	0.10000	ND	103	75-125	2	20	
Lead	0.0936	0.0050	0.00007	mg/L	0.10000	0.00008	93	75-125	4	20	
Molybdenum	0.101	0.0100	0.0010	mg/L	0.10000	ND	101	75-125	4	20	
Nickel	0.104	0.0100	0.0005	mg/L	0.10000	0.0007	103	75-125	1	20	
Selenium	0.0968	0.0100	0.0018	mg/L	0.10000	ND	97	75-125	0.7	20	
Silver	0.0948	0.0100	0.0002	mg/L	0.10000	ND	95	75-125	2	20	
Thallium	0.0972	0.0010	0.00005	mg/L	0.10000	ND	97	75-125	3	20	
Vanadium	0.104	0.0100	0.0012	mg/L	0.10000	ND	104	75-125	2	20	
Zinc	0.103	0.0100	0.0012	mg/L	0.10000	0.0062	96	75-125	6	20	
Lithium	0.105	0.0500	0.0015	mg/L	0.10000	0.0136	92	75-125	11	20	

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

August 16, 2017

Report No.: AAH0318

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7080271 - EPA 3005A											
Post Spike (7080271-PS1)			**Source: AAH0231-02**			Prepared: 08/11/17 Analyzed: 08/14/17					
Antimony	98.6			ug/L	100.00	0.410	98	80-120			
Arsenic	98.8			ug/L	100.00	0.934	98	80-120			
Barium	134			ug/L	100.00	34.5	99	80-120			
Beryllium	98.6			ug/L	100.00	0.0136	99	80-120			
Boron	1030			ug/L	1000.0	59.8	97	80-120			
Cadmium	99.2			ug/L	100.00	0.0038	99	80-120			
Calcium	38600			ug/L	1000.0	37100	149	80-120			QM-02
Chromium	102			ug/L	100.00	0.764	101	80-120			
Cobalt	101			ug/L	100.00	0.218	101	80-120			
Copper	99.8			ug/L	100.00	0.0724	100	80-120			
Lead	94.5			ug/L	100.00	0.0801	94	80-120			
Molybdenum	103			ug/L	100.00	0.464	103	80-120			
Nickel	99.4			ug/L	100.00	0.693	99	80-120			
Selenium	97.1			ug/L	100.00	-0.344	97	80-120			
Silver	96.5			ug/L	100.00	0.0217	96	80-120			
Thallium	98.3			ug/L	100.00	0.0150	98	80-120			
Vanadium	102			ug/L	100.00	-0.327	102	80-120			
Zinc	103			ug/L	100.00	6.21	97	80-120			
Lithium	110			ug/L	100.00	13.6	96	80-120			
Batch 7080360 - EPA 7470A											
Blank (7080360-BLK1)						Prepared & Analyzed: 08/15/17					
Mercury	ND	0.00050	0.000036	mg/L							
LCS (7080360-BS1)						Prepared & Analyzed: 08/15/17					
Mercury	0.00246	0.00050	0.000036	mg/L	2.5000E-3		98	80-120			

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August 16, 2017

Report No.: AAH0318

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7080360 - EPA 7470A											
Matrix Spike (7080360-MS1)		**Source: AAH0318-01**				Prepared & Analyzed: 08/15/17					
Mercury	0.00243	0.00050	0.000036	mg/L	2.5000E-3	ND	97	75-125			
Matrix Spike Dup (7080360-MSD1)		**Source: AAH0318-01**				Prepared & Analyzed: 08/15/17					
Mercury	0.00245	0.00050	0.000036	mg/L	2.5000E-3	ND	98	75-125	0.7	20	
Post Spike (7080360-PS1)		**Source: AAH0318-01**				Prepared & Analyzed: 08/15/17					
Mercury	1.72			ug/L	1.6667	0.00466	103	80-120			

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August 16, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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-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.

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August 16, 2017

Report Notes

The sample type was not listed on the COC. MMR

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P								
PRESERVATION:								3	7	3								
08/08/17	1016	GW			DGWA-70A	6		1	1	4							1	Extra Radium
08/08/17	1306	GW			DGWC-68A	4		1	1	2							2	
08/08/17	1055	W			FB-1	4		1	1	2							3	
08/08/17	1110	W			EB-1	4		1	1	2							4	
08/08/17	--	GW			FD-1	4		1	1	2							5	

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Kristen Jurinko Golder
DATE/TIME: 8/9/17 0920
RELINQUISHED BY:
DATE/TIME: 8/9/17 0920

RECEIVED BY: Mike Nguyen
DATE/TIME: 8/9/17 0920
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB:
DATE/TIME: 08/09/17 0955
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS

Checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 1.3 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AAH0318
Entered into LIMS: MR
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project # AAH6318

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

Optional: Proj. Due Date: Proj. Name:

Tracking #: _____

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

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

Thermometer Used IR-4 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: 8/9/17 MR

Temp should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time _____

Comments/ Resolution: _____

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

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

F-ALL-C-030rev.3, 11Sept

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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(770) 734-4200 FAX (770) 734-4201

LOG-IN CHECKLIST **Printed: 8/10/2017 11:40:23AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 08/09/17 09:55

Work Order: AAH0318
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 5 **#Containers:** 22

Minimum Temp(C): 1.3 **Maximum Temp(C):** 1.3 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	NO
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:

The sample type was not listed on the COC. MMR

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

September 01, 2017

Ms. Lauren Petty
GA Power
42 Inverness Center Parkway
Birmingham, AL 35242

RE: Project: AAH0318 Plant McDonough
Pace Project No.: 30226784

Dear Ms. Petty:
Enclosed are the analytical results for sample(s) received by the laboratory on August 10, 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

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

CERTIFICATIONS

Project: AAH0318 Plant McDonough
Pace Project No.: 30226784

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

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

SAMPLE SUMMARY

Project: AAH0318 Plant McDonough
Pace Project No.: 30226784

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30226784001	**DGWA-70A**	Water	08/08/17 10:16	08/10/17 10:05
30226784002	**DGWC-68A**	Water	08/08/17 13:06	08/10/17 10:05
30226784003	**FB-1**	Water	08/08/17 10:55	08/10/17 10:05
30226784004	**EB-1**	Water	08/08/17 11:10	08/10/17 10:05
30226784005	**FD-1**	Water	08/08/17 00:00	08/10/17 10:05

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Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: AAH0318 Plant McDonough
Pace Project No.: 30226784

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30226784001	**DGWA-70A**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30226784002	**DGWC-68A**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30226784003	**FB-1**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30226784004	**EB-1**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30226784005	**FD-1**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAH0318 Plant McDonough
Pace Project No.: 30226784

Sample: DGWA-70A **Lab ID: 30226784001** Collected: 08/08/17 10:16 Received: 08/10/17 10:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.448 ± 0.294 (0.507) C:92% T:NA**	pCi/L	08/18/17 08:15	13982-63-3	
Radium-228	EPA 9320	**1.03 ± 0.405 (0.597) C:75% T:88%**	pCi/L	08/22/17 15:57	15262-20-1	
Total Radium	Total Radium Calculation	**1.48 ± 0.699 (1.10)**	pCi/L	08/31/17 13:41	7440-14-4	

Sample: DGWC-68A **Lab ID: 30226784002** Collected: 08/08/17 13:06 Received: 08/10/17 10:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.503 ± 0.263 (0.325) C:89% T:NA**	pCi/L	08/18/17 08:15	13982-63-3	
Radium-228	EPA 9320	**0.892 ± 0.538 (1.03) C:74% T:86%**	pCi/L	08/22/17 16:00	15262-20-1	
Total Radium	Total Radium Calculation	**1.40 ± 0.801 (1.36)**	pCi/L	08/31/17 13:41	7440-14-4	

Sample: FB-1 **Lab ID: 30226784003** Collected: 08/08/17 10:55 Received: 08/10/17 10:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.255 ± 0.218 (0.395) C:91% T:NA**	pCi/L	08/18/17 08:15	13982-63-3	
Radium-228	EPA 9320	**0.797 ± 0.416 (0.753) C:75% T:96%**	pCi/L	08/22/17 16:00	15262-20-1	
Total Radium	Total Radium Calculation	**1.05 ± 0.634 (1.15)**	pCi/L	08/31/17 13:41	7440-14-4	

Sample: EB-1 **Lab ID: 30226784004** Collected: 08/08/17 11:10 Received: 08/10/17 10:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.166 ± 0.207 (0.435) C:89% T:NA**	pCi/L	08/18/17 08:15	13982-63-3	
Radium-228	EPA 9320	**0.492 ± 0.451 (0.931) C:79% T:88%**	pCi/L	08/22/17 16:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.658 ± 0.658 (1.37)**	pCi/L	08/31/17 13:41	7440-14-4	

Sample: FD-1 **Lab ID: 30226784005** Collected: 08/08/17 00:00 Received: 08/10/17 10:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.127 ± 0.171 (0.360) C:91% T:NA**	pCi/L	08/18/17 08:15	13982-63-3	
Radium-228	EPA 9320	**0.752 ± 0.420 (0.751) C:80% T:73%**	pCi/L	08/25/17 11:56	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAH0318 Plant McDonough
Pace Project No.: 30226784

Sample: FD-1 **Lab ID: 30226784005** Collected: 08/08/17 00:00 Received: 08/10/17 10:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.879 ± 0.591 (1.11)**	pCi/L	08/31/17 13:41	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAH0318 Plant McDonough
Pace Project No.: 30226784

QC Batch: 268401 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30226784001, 30226784002, 30226784003, 30226784004, 30226784005

METHOD BLANK: 1321110 Matrix: Water
Associated Lab Samples: 30226784001, 30226784002, 30226784003, 30226784004, 30226784005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.207 ± 0.167 (0.268) C:98% T:NA	pCi/L	08/18/17 08:15	

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

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAH0318 Plant McDonough
Pace Project No.: 30226784

QC Batch: 268400 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30226784001, 30226784002, 30226784003, 30226784004, 30226784005

METHOD BLANK: 1321109 Matrix: Water
Associated Lab Samples: 30226784001, 30226784002, 30226784003, 30226784004, 30226784005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.758 ± 0.377 (0.651) C:78% T:88%	pCi/L	08/22/17 15:56	

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

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

QUALIFIERS

Project: AAH0318 Plant McDonough
Pace Project No.: 30226784

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.

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAH0318 Workorder Name: Plant McDonough Owner Received Date: Results Requested By: 9/1/2017

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

WO#:30226784

30226784

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	DGWA-70A	G	8/8/2017 10:16	AAH0318-01	GW	4	X	001
2	DGWC-68A	G	8/8/2017 13:06	AAH0318-02	GW	2	X	002
3	FB-1	G	8/8/2017 10:55	AAH0318-03	W	2	X	003
4	EB-1	G	8/8/2017 11:10	AAH0318-04	W	2	X	004
5	FD-1	G	8/8/2017 0:00	AAH0318-05	GW	2	X	005
6								
7								
8								
9								
10								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	8/9/17	C. Carney	8/10/17	1005
2					
3					

Cooler Temperature on Receipt NW °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

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 228 & 226 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:							P	P	P		
PRESERVATION:							3	7	3		
08/08/17	1016	GW			DGWA-70A	6	1	1	4	1	Extra Radium
08/08/17	1306	GW			DGWC-68A	4	1	1	2	2	
08/08/17	1055	W			FB-1	4	1	1	2	3	
08/08/17	1110	W			EB-1	4	1	1	2	4	30226784
08/08/17	–	GW			FD-1	4	1	1	2	5	

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

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

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

SAMPLED BY AND TITLE: Kristen Jurinko Golder
DATE/TIME: 8/9/17 0920

RECEIVED BY: Mike Nguyen
DATE/TIME: 8/9/17 0920

RELINQUISHED BY:
DATE/TIME: 8/9/17 0920

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB:
DATE/TIME: 08/09/17 0955

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

Unbroken: Yes No NA
Ice: Yes No NA
Temperature: Min: 1.3 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AATH0318
Entered into LIMS: MB
Tracking #:

30226784

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project # AA46318

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

Optional: Proj. Due Date: _____ Proj. Name: _____

Tracking #: _____

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

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

Thermometer Used IR-4 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.3 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Date and initials of person examining contents: 8/9/17 MK

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

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

Person Contacted: _____ Date/Time _____

Comments/ Resolution: _____

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

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

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: PACE GA Project # 30226784

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

Label COC

Tracking #: 7413665 7624

LIMS Login AMV

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: COC 8/10/17

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 Matrix: WT	✓			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.
Orthophosphate field filtered			✓	12.
Organic Samples checked for dechlorination:			✓	13.
Filtered volume received for Dissolved tests			✓	14.
All containers have been checked for preservation. All containers needing preservation are found to be in compliance with EPA recommendation. exceptions: VOA, coliform, TOC, O&G, Phenolics	✓			15. pH<2
				Initial when completed: COC Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	16.
Trip Blank Present:		✓		17.
Trip Blank Custody Seals Present			✓	
Rad Aqueous Samples Screened > 0.5 mrem/hr			✓	Initial when completed: COC Date: 8/10/17

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.

LABORATORY ANALYTICAL DATA

October – November 2017

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: AAJ0865
November 08, 2017
Project: CCR Event
Project #:Plant McDonough

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

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 08, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWA-70A	AAJ0865-01	Ground Water	10/24/17 15:40	10/25/17 13:20
DGWA-71	AAJ0865-02	Ground Water	10/24/17 13:35	10/25/17 13:20
DGWA-2	AAJ0865-03	Ground Water	10/24/17 10:30	10/25/17 13:20
DGWC-4	AAJ0865-04	Ground Water	10/24/17 15:50	10/25/17 13:20
DGWA-53	AAJ0865-05	Ground Water	10/24/17 13:00	10/25/17 13:20
DGWC-8	AAJ0865-06	Ground Water	10/24/17 10:25	10/25/17 13:20
DGWC-9	AAJ0865-07	Ground Water	10/24/17 12:45	10/25/17 13:20
FD-1	AAJ0865-08	Ground Water	10/24/17 00:00	10/25/17 13:20
FB-1	AAJ0865-09	Water	10/24/17 12:30	10/25/17 13:20
EB-1	AAJ0865-10	Water	10/24/17 16:40	10/25/17 13:20
DGWC-10	AAJ0865-11	Ground Water	10/24/17 14:30	10/25/17 13:20
DGWC-11	AAJ0865-12	Ground Water	10/24/17 16:30	10/25/17 13:20

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

Attention: Mr. Joju Abraham

November 08, 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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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0865
Client ID: DGWA-70A
Date/Time Sampled: 10/24/2017 3:40:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0865-01
Date/Time Received: 10/25/2017 1:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	49	25	10	mg/L	SM 2540 C		1	10/27/17 09:55	10/27/17 09:55	7100820	JPT
Inorganic Anions											
Chloride	2.4	0.25	0.02	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 13:03	7100870	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 13:03	7100870	RLC
Sulfate	1.4	1.0	0.02	mg/L	EPA 300.0	B-01	1	10/30/17 11:06	10/30/17 13:03	7100870	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:14	7100806	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:14	7100806	KLH
Barium	0.0333	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:14	7100806	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:14	7100806	KLH
Boron	0.0082	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 17:14	7100806	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:14	7100806	KLH
Calcium	4.93	2.50	0.202	mg/L	EPA 6020B		5	10/27/17 08:35	11/06/17 20:03	7100806	KLH
Chromium	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 17:14	7100806	KLH
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:14	7100806	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:14	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:14	7100806	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:14	7100806	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:14	7100806	KLH
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:14	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/31/17 13:05	10/31/17 15:56	7100899	MTC

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Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0865
Client ID: DGWA-71
Date/Time Sampled: 10/24/2017 1:35:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0865-02
Date/Time Received: 10/25/2017 1:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	117	25	10	mg/L	SM 2540 C		1	10/27/17 09:55	10/27/17 09:55	7100820	JPT
Inorganic Anions											
Chloride	3.2	0.25	0.02	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 13:24	7100870	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 13:24	7100870	RLC
Sulfate	9.6	1.0	0.02	mg/L	EPA 300.0	B-01	1	10/30/17 11:06	10/30/17 13:24	7100870	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:39	7100806	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:39	7100806	KLH
Barium	0.0313	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:39	7100806	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:39	7100806	KLH
Boron	0.0083	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 17:39	7100806	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:39	7100806	KLH
Calcium	6.86	5.00	2.02	mg/L	EPA 6020B		50	10/27/17 08:35	11/03/17 17:45	7100806	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:39	7100806	KLH
Cobalt	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 17:39	7100806	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:39	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:39	7100806	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:39	7100806	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:39	7100806	KLH
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:39	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/31/17 13:05	10/31/17 15:58	7100899	MTC

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November 08, 2017

Report No.: AAJ0865
Client ID: DGWA-2
Date/Time Sampled: 10/24/2017 10:30:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0865-03
Date/Time Received: 10/25/2017 1:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	523	25	10	mg/L	SM 2540 C		1	10/27/17 09:55	10/27/17 09:55	7100820	JPT
Inorganic Anions											
Chloride	4.4	0.25	0.02	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 13:45	7100870	RLC
Fluoride	0.43	0.30	0.03	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 13:45	7100870	RLC
Sulfate	260	25	0.42	mg/L	EPA 300.0	B-01	25	10/30/17 11:06	11/02/17 05:24	7100870	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:50	7100806	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:50	7100806	KLH
Barium	0.0206	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:50	7100806	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:50	7100806	KLH
Boron	1.18	0.0400	0.0060	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:50	7100806	KLH
Cadmium	0.0003	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 17:50	7100806	KLH
Calcium	86.0	25.0	2.02	mg/L	EPA 6020B		50	10/27/17 08:35	11/03/17 17:56	7100806	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:50	7100806	KLH
Cobalt	0.0292	0.0100	0.0003	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:50	7100806	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:50	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:50	7100806	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:50	7100806	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:50	7100806	KLH
Lithium	0.0995	0.0500	0.0015	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 17:50	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/31/17 13:05	10/31/17 16:00	7100899	MTC

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0865
Client ID: DGWC-4
Date/Time Sampled: 10/24/2017 3:50:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0865-04
Date/Time Received: 10/25/2017 1:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	229	25	10	mg/L	SM 2540 C		1	10/27/17 09:55	10/27/17 09:55	7100820	JPT
Inorganic Anions											
Chloride	28	0.25	0.02	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 14:07	7100870	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 14:07	7100870	RLC
Sulfate	930	50	0.85	mg/L	EPA 300.0	B-01	50	10/30/17 11:06	11/02/17 05:45	7100870	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:02	7100806	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:02	7100806	KLH
Barium	0.0351	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:02	7100806	KLH
Beryllium	0.0002	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:02	7100806	KLH
Boron	3.82	0.0400	0.0060	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:02	7100806	KLH
Cadmium	0.0007	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:02	7100806	KLH
Calcium	232	125	10.1	mg/L	EPA 6020B		250	10/27/17 08:35	11/06/17 20:09	7100806	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:02	7100806	KLH
Cobalt	0.0017	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:02	7100806	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:02	7100806	KLH
Molybdenum	0.0072	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:02	7100806	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:02	7100806	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:02	7100806	KLH
Lithium	0.0024	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:02	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/31/17 13:05	10/31/17 16:03	7100899	MTC

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November 08, 2017

Report No.: AAJ0865
Client ID: DGWA-53
Date/Time Sampled: 10/24/2017 1:00:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0865-05
Date/Time Received: 10/25/2017 1:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	671	25	10	mg/L	SM 2540 C		1	10/27/17 09:55	10/27/17 09:55	7100820	JPT
Inorganic Anions											
Chloride	2.7	0.25	0.02	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 15:10	7100870	RLC
Fluoride	0.06	0.30	0.03	mg/L	EPA 300.0	J	1	10/30/17 11:06	10/30/17 15:10	7100870	RLC
Sulfate	15	1.0	0.02	mg/L	EPA 300.0	B-01	1	10/30/17 11:06	10/30/17 15:10	7100870	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:13	7100806	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:13	7100806	KLH
Barium	0.109	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:13	7100806	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:13	7100806	KLH
Boron	0.0770	0.0400	0.0060	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:13	7100806	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:13	7100806	KLH
Calcium	30.3	25.0	2.02	mg/L	EPA 6020B		50	10/27/17 08:35	11/03/17 18:19	7100806	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:13	7100806	KLH
Cobalt	0.0267	0.0100	0.0003	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:13	7100806	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:13	7100806	KLH
Molybdenum	0.0227	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:13	7100806	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:13	7100806	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:13	7100806	KLH
Lithium	0.0103	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:13	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/31/17 13:05	10/31/17 16:10	7100899	MTC

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November 08, 2017

Report No.: AAJ0865
Client ID: DGWC-8
Date/Time Sampled: 10/24/2017 10:25:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0865-06
Date/Time Received: 10/25/2017 1:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	468	25	10	mg/L	SM 2540 C		1	10/27/17 09:55	10/27/17 09:55	7100820	JPT
Inorganic Anions											
Chloride	9.9	0.25	0.02	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 15:31	7100870	RLC
Fluoride	0.82	0.30	0.03	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 15:31	7100870	RLC
Sulfate	430	25	0.42	mg/L	EPA 300.0	B-01	25	10/30/17 11:06	11/02/17 06:07	7100870	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:25	7100806	KLH
Arsenic	0.0015	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:25	7100806	KLH
Barium	0.0369	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:25	7100806	KLH
Beryllium	0.0042	0.0030	0.00009	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:25	7100806	KLH
Boron	2.29	0.0400	0.0060	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:25	7100806	KLH
Cadmium	0.0029	0.0010	0.0001	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:25	7100806	KLH
Calcium	78.1	25.0	2.02	mg/L	EPA 6020B		50	10/27/17 08:35	11/03/17 18:30	7100806	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:25	7100806	KLH
Cobalt	0.123	0.0100	0.0003	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:25	7100806	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:25	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:25	7100806	KLH
Selenium	0.0069	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:25	7100806	KLH
Thallium	0.0003	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:25	7100806	KLH
Lithium	0.0072	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:25	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/31/17 13:05	10/31/17 16:12	7100899	MTC

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0865
Client ID: DGWC-9
Date/Time Sampled: 10/24/2017 12:45:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0865-07
Date/Time Received: 10/25/2017 1:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	599	25	10	mg/L	SM 2540 C		1	10/27/17 09:55	10/27/17 09:55	7100820	JPT
Inorganic Anions											
Chloride	6.7	0.25	0.02	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 15:53	7100870	RLC
Fluoride	1.7	0.30	0.03	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 15:53	7100870	RLC
Sulfate	430	25	0.42	mg/L	EPA 300.0	B-01	25	10/30/17 11:06	11/02/17 06:29	7100870	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:48	7100806	KLH
Arsenic	0.0249	0.0050	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:48	7100806	KLH
Barium	0.0148	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:48	7100806	KLH
Beryllium	0.0051	0.0030	0.00009	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:48	7100806	KLH
Boron	1.72	0.0400	0.0060	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:48	7100806	KLH
Cadmium	0.0006	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:48	7100806	KLH
Calcium	92.5	25.0	2.02	mg/L	EPA 6020B		50	10/27/17 08:35	11/06/17 20:21	7100806	KLH
Chromium	ND	0.0500	0.0023	mg/L	EPA 6020B	R-01	5	10/27/17 08:35	11/06/17 20:15	7100806	KLH
Cobalt	0.151	0.0500	0.0013	mg/L	EPA 6020B		5	10/27/17 08:35	11/06/17 20:15	7100806	KLH
Lead	ND	0.0050	0.0003	mg/L	EPA 6020B		5	10/27/17 08:35	11/06/17 20:15	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:48	7100806	KLH
Selenium	0.0653	0.0100	0.0018	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:48	7100806	KLH
Thallium	0.0006	0.0010	0.0003	mg/L	EPA 6020B	J	5	10/27/17 08:35	11/06/17 20:15	7100806	KLH
Lithium	0.0281	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:48	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/31/17 13:05	10/31/17 16:15	7100899	MTC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0865
Client ID: FD-1
Date/Time Sampled: 10/24/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0865-08
Date/Time Received: 10/25/2017 1:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	603	25	10	mg/L	SM 2540 C		1	10/30/17 16:50	10/30/17 16:50	7100873	JPT
Inorganic Anions											
Chloride	9.9	0.25	0.02	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 16:14	7100870	RLC
Fluoride	0.82	0.30	0.03	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 16:14	7100870	RLC
Sulfate	440	25	0.42	mg/L	EPA 300.0	B-01	25	10/30/17 11:06	11/02/17 06:51	7100870	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:59	7100806	KLH
Arsenic	0.0015	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:59	7100806	KLH
Barium	0.0376	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:59	7100806	KLH
Beryllium	0.0044	0.0030	0.00009	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:59	7100806	KLH
Boron	2.32	0.0400	0.0060	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:59	7100806	KLH
Cadmium	0.0029	0.0010	0.0001	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:59	7100806	KLH
Calcium	79.7	25.0	2.02	mg/L	EPA 6020B		50	10/27/17 08:35	11/03/17 19:05	7100806	KLH
Chromium	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:59	7100806	KLH
Cobalt	0.124	0.0100	0.0003	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:59	7100806	KLH
Lead	0.00009	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:59	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 18:59	7100806	KLH
Selenium	0.0067	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:59	7100806	KLH
Thallium	0.0003	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:59	7100806	KLH
Lithium	0.0072	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 18:59	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/31/17 13:05	10/31/17 16:17	7100899	MTC

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Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0865
Client ID: FB-1
Date/Time Sampled: 10/24/2017 12:30:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAJ0865-09
Date/Time Received: 10/25/2017 1:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	10/27/17 09:55	10/27/17 09:55	7100820	JPT
Inorganic Anions											
Chloride	ND	0.25	0.02	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 18:00	7100870	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 18:00	7100870	RLC
Sulfate	ND	1.0	0.02	mg/L	EPA 300.0	B-01	1	10/30/17 11:06	10/30/17 18:00	7100870	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:10	7100806	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:10	7100806	KLH
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:10	7100806	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:10	7100806	KLH
Boron	0.0083	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 19:10	7100806	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:10	7100806	KLH
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:10	7100806	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:10	7100806	KLH
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:10	7100806	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:10	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:10	7100806	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:10	7100806	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:10	7100806	KLH
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:10	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/31/17 13:05	10/31/17 16:19	7100899	MTC

PACE ANALYTICAL SERVICES, LLC.

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0865
Client ID: EB-1
Date/Time Sampled: 10/24/2017 4:40:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAJ0865-10
Date/Time Received: 10/25/2017 1:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	10/30/17 16:50	10/30/17 16:50	7100873	JPT
Inorganic Anions											
Chloride	ND	0.25	0.02	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 18:21	7100870	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 18:21	7100870	RLC
Sulfate	ND	1.0	0.02	mg/L	EPA 300.0	B-01	1	10/30/17 11:06	10/30/17 18:21	7100870	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:16	7100806	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:16	7100806	KLH
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:16	7100806	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:16	7100806	KLH
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:16	7100806	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:16	7100806	KLH
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:16	7100806	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:16	7100806	KLH
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:16	7100806	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:16	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:16	7100806	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:16	7100806	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:16	7100806	KLH
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:16	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/31/17 13:05	10/31/17 16:22	7100899	MTC

PACE ANALYTICAL SERVICES, LLC.

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0865
Client ID: DGWC-10
Date/Time Sampled: 10/24/2017 2:30:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0865-11
Date/Time Received: 10/25/2017 1:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	353	25	10	mg/L	SM 2540 C		1	10/27/17 09:55	10/27/17 09:55	7100820	JPT
Inorganic Anions											
Chloride	11	0.25	0.02	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 18:42	7100870	RLC
Fluoride	2.1	0.30	0.03	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 18:42	7100870	RLC
Sulfate	410	25	0.42	mg/L	EPA 300.0	B-01	25	10/30/17 11:06	11/02/17 07:13	7100870	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:22	7100806	KLH
Arsenic	0.0058	0.0050	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:22	7100806	KLH
Barium	0.0317	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:22	7100806	KLH
Beryllium	0.0048	0.0030	0.00009	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:22	7100806	KLH
Boron	3.45	0.0400	0.0060	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:22	7100806	KLH
Cadmium	0.0014	0.0010	0.0001	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:22	7100806	KLH
Calcium	81.5	25.0	2.02	mg/L	EPA 6020B		50	10/27/17 08:35	11/03/17 19:28	7100806	KLH
Chromium	0.0007	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 19:22	7100806	KLH
Cobalt	0.175	0.0100	0.0003	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:22	7100806	KLH
Lead	ND	0.0050	0.0003	mg/L	EPA 6020B		5	10/27/17 08:35	11/06/17 20:26	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:22	7100806	KLH
Selenium	0.0281	0.0100	0.0018	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:22	7100806	KLH
Thallium	0.0004	0.0010	0.0003	mg/L	EPA 6020B	J	5	10/27/17 08:35	11/06/17 20:26	7100806	KLH
Lithium	0.0022	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 19:22	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/31/17 13:05	10/31/17 16:24	7100899	MTC

PACE ANALYTICAL SERVICES, LLC.

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0865
Client ID: DGWC-11
Date/Time Sampled: 10/24/2017 4:30:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0865-12
Date/Time Received: 10/25/2017 1:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	342	25	10	mg/L	SM 2540 C		1	10/30/17 16:50	10/30/17 16:50	7100873	JPT
Inorganic Anions											
Chloride	12	0.25	0.02	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 19:25	7100870	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/30/17 11:06	10/30/17 19:25	7100870	RLC
Sulfate	210	10	0.17	mg/L	EPA 300.0	B-01	10	10/30/17 11:06	11/02/17 07:34	7100870	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:33	7100806	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:33	7100806	KLH
Barium	0.0596	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:33	7100806	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:33	7100806	KLH
Boron	1.18	0.0400	0.0060	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:33	7100806	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:33	7100806	KLH
Calcium	55.0	25.0	2.02	mg/L	EPA 6020B		50	10/27/17 08:35	11/03/17 19:39	7100806	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:33	7100806	KLH
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:33	7100806	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:33	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:33	7100806	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:33	7100806	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:33	7100806	KLH
Lithium	0.0024	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 19:33	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/31/17 13:05	10/31/17 16:26	7100899	MTC

PACE ANALYTICAL SERVICES, LLC.

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November 08, 2017

Report No.: AAJ0865

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100820 - SM 2540 C											
Blank (7100820-BLK1)						Prepared & Analyzed: 10/27/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7100820-BS1)						Prepared & Analyzed: 10/27/17					
Total Dissolved Solids	389	25	10	mg/L	400.00		97	84-108			
Duplicate (7100820-DUP1)		**Source: AAJ0821-01**				Prepared & Analyzed: 10/27/17					
Total Dissolved Solids	98	25	10	mg/L		91			7	10	
Duplicate (7100820-DUP2)		**Source: AAJ0865-10**				Prepared & Analyzed: 10/27/17					
Total Dissolved Solids	565	25	10	mg/L		10			193	10	QR-03
Batch 7100873 - SM 2540 C											
Blank (7100873-BLK1)						Prepared & Analyzed: 10/30/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7100873-BS1)						Prepared & Analyzed: 10/30/17					
Total Dissolved Solids	391	25	10	mg/L	400.00		98	84-108			
Duplicate (7100873-DUP1)		**Source: AAJ0865-08RE1**				Prepared & Analyzed: 10/30/17					
Total Dissolved Solids	616	25	10	mg/L		603			2	10	

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November 08, 2017

Report No.: AAJ0865

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100870 - EPA 300.0											
Blank (7100870-BLK1)						Prepared & Analyzed: 10/30/17					
Chloride	ND	0.25	0.02	mg/L							
Fluoride	ND	0.30	0.03	mg/L							
Sulfate	0.12	1.0	0.02	mg/L							J
LCS (7100870-BS1)						Prepared & Analyzed: 10/30/17					
Chloride	10.5	0.25	0.02	mg/L	10.020		104	90-110			
Fluoride	10.2	0.30	0.03	mg/L	10.020		102	90-110			
Sulfate	10.4	1.0	0.02	mg/L	10.050		103	90-110			
Matrix Spike (7100870-MS1)		**Source: AAJ0865-04**				Prepared & Analyzed: 10/30/17					
Chloride	35.1	0.25	0.02	mg/L	10.020	27.9	72	90-110			QM-02
Fluoride	10.2	0.30	0.03	mg/L	10.020	ND	102	90-110			
Sulfate	383	1.0	0.02	mg/L	10.050	404	NR	90-110			QM-02
Matrix Spike (7100870-MS2)		**Source: AAJ0865-11**				Prepared & Analyzed: 10/30/17					
Chloride	21.3	0.25	0.02	mg/L	10.020	11.4	99	90-110			
Fluoride	15.3	0.30	0.03	mg/L	10.020	2.09	132	90-110			QM-05
Sulfate	243	1.0	0.02	mg/L	10.050	260	NR	90-110			QM-02
Matrix Spike Dup (7100870-MSD1)		**Source: AAJ0865-04**				Prepared & Analyzed: 10/30/17					
Chloride	35.1	0.25	0.02	mg/L	10.020	27.9	72	90-110	0.01	15	QM-02
Fluoride	10.3	0.30	0.03	mg/L	10.020	ND	103	90-110	0.7	15	
Sulfate	383	1.0	0.02	mg/L	10.050	404	NR	90-110	0.02	15	QM-02

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 08, 2017

Report No.: AAJ0865

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100806 - EPA 3005A											
Blank (7100806-BLK1)						Prepared: 10/27/17 Analyzed: 11/03/17					
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 (7100806-BS1)						Prepared: 10/27/17 Analyzed: 11/03/17					
Antimony	0.101	0.0030	0.0006	mg/L	0.10000		101	80-120			
Arsenic	0.0980	0.0050	0.0005	mg/L	0.10000		98	80-120			
Barium	0.104	0.0100	0.0004	mg/L	0.10000		104	80-120			
Beryllium	0.102	0.0030	0.00009	mg/L	0.10000		102	80-120			
Cadmium	0.104	0.0010	0.0001	mg/L	0.10000		104	80-120			
Chromium	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Cobalt	0.0987	0.0100	0.0003	mg/L	0.10000		99	80-120			
Copper	0.100	0.0250	0.0003	mg/L	0.10000		100	80-120			
Lead	0.0980	0.0050	0.00007	mg/L	0.10000		98	80-120			
Nickel	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			
Selenium	0.0959	0.0100	0.0018	mg/L	0.10000		96	80-120			
Silver	0.101	0.0100	0.0002	mg/L	0.10000		101	80-120			
Thallium	0.101	0.0010	0.00005	mg/L	0.10000		101	80-120			
Vanadium	0.106	0.0100	0.0012	mg/L	0.10000		106	80-120			
Zinc	0.104	0.0100	0.0012	mg/L	0.10000		104	80-120			
Lithium	0.103	0.0500	0.0015	mg/L	0.10000		103	80-120			

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Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0865

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100806 - EPA 3005A											
Matrix Spike (7100806-MS1)		**Source: AAJ0865-01**				Prepared: 10/27/17 Analyzed: 11/03/17					
Antimony	0.0991	0.0030	0.0006	mg/L	0.10000	ND	99	75-125			
Arsenic	0.0963	0.0050	0.0005	mg/L	0.10000	ND	96	75-125			
Barium	0.133	0.0100	0.0004	mg/L	0.10000	0.0333	99	75-125			
Beryllium	0.0962	0.0030	0.00009	mg/L	0.10000	ND	96	75-125			
Cadmium	0.102	0.0010	0.0001	mg/L	0.10000	ND	102	75-125			
Chromium	0.105	0.0100	0.0005	mg/L	0.10000	0.0005	105	75-125			
Cobalt	0.100	0.0100	0.0003	mg/L	0.10000	ND	100	75-125			
Copper	0.0981	0.0250	0.0003	mg/L	0.10000	0.0005	98	75-125			
Lead	0.0966	0.0050	0.00007	mg/L	0.10000	ND	97	75-125			
Nickel	0.0994	0.0100	0.0005	mg/L	0.10000	ND	99	75-125			
Selenium	0.0974	0.0100	0.0018	mg/L	0.10000	ND	97	75-125			
Silver	0.0981	0.0100	0.0002	mg/L	0.10000	ND	98	75-125			
Thallium	0.0996	0.0010	0.00005	mg/L	0.10000	ND	100	75-125			
Vanadium	0.105	0.0100	0.0012	mg/L	0.10000	ND	105	75-125			
Zinc	0.102	0.0100	0.0012	mg/L	0.10000	0.0019	101	75-125			
Lithium	0.0978	0.0500	0.0015	mg/L	0.10000	ND	98	75-125			
Matrix Spike Dup (7100806-MSD1)		**Source: AAJ0865-01**				Prepared: 10/27/17 Analyzed: 11/03/17					
Antimony	0.0985	0.0030	0.0006	mg/L	0.10000	ND	98	75-125	0.7	20	
Arsenic	0.0967	0.0050	0.0005	mg/L	0.10000	ND	97	75-125	0.4	20	
Barium	0.133	0.0100	0.0004	mg/L	0.10000	0.0333	99	75-125	0.04	20	
Beryllium	0.0973	0.0030	0.00009	mg/L	0.10000	ND	97	75-125	1	20	
Cadmium	0.102	0.0010	0.0001	mg/L	0.10000	ND	102	75-125	0.3	20	
Chromium	0.106	0.0100	0.0005	mg/L	0.10000	0.0005	106	75-125	0.8	20	
Cobalt	0.103	0.0100	0.0003	mg/L	0.10000	ND	103	75-125	2	20	
Copper	0.100	0.0250	0.0003	mg/L	0.10000	0.0005	100	75-125	2	20	
Lead	0.0970	0.0050	0.00007	mg/L	0.10000	ND	97	75-125	0.4	20	
Nickel	0.104	0.0100	0.0005	mg/L	0.10000	ND	104	75-125	5	20	
Selenium	0.0944	0.0100	0.0018	mg/L	0.10000	ND	94	75-125	3	20	
Silver	0.0973	0.0100	0.0002	mg/L	0.10000	ND	97	75-125	0.8	20	
Thallium	0.0984	0.0010	0.00005	mg/L	0.10000	ND	98	75-125	1	20	
Vanadium	0.107	0.0100	0.0012	mg/L	0.10000	ND	107	75-125	2	20	
Zinc	0.105	0.0100	0.0012	mg/L	0.10000	0.0019	103	75-125	2	20	
Lithium	0.0958	0.0500	0.0015	mg/L	0.10000	ND	96	75-125	2	20	

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0865

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100806 - EPA 3005A											
Post Spike (7100806-PS1)			**Source: AAJ0865-01**			Prepared: 10/27/17 Analyzed: 11/03/17					
Antimony	98.8			ug/L	100.00	0.162	99	80-120			
Arsenic	98.1			ug/L	100.00	-0.0337	98	80-120			
Barium	135			ug/L	100.00	33.3	102	80-120			
Beryllium	100			ug/L	100.00	0.0526	100	80-120			
Cadmium	104			ug/L	100.00	0.0080	104	80-120			
Chromium	105			ug/L	100.00	0.476	105	80-120			
Cobalt	104			ug/L	100.00	0.208	104	80-120			
Copper	99.6			ug/L	100.00	0.535	99	80-120			
Lead	97.1			ug/L	100.00	0.0337	97	80-120			
Nickel	103			ug/L	100.00	0.356	103	80-120			
Selenium	97.0			ug/L	100.00	0.808	96	80-120			
Silver	99.8			ug/L	100.00	0.0092	100	80-120			
Thallium	98.7			ug/L	100.00	0.0133	99	80-120			
Vanadium	105			ug/L	100.00	0.171	105	80-120			
Zinc	104			ug/L	100.00	1.87	102	80-120			
Lithium	101			ug/L	100.00	0.478	100	80-120			
Batch 7100899 - EPA 7470A											
Blank (7100899-BLK1)						Prepared & Analyzed: 10/31/17					
Mercury	ND	0.00050	0.000036	mg/L							
LCS (7100899-BS1)						Prepared & Analyzed: 10/31/17					
Mercury	0.00217	0.00050	0.000036	mg/L	2.5000E-3		87	80-120			
Matrix Spike (7100899-MS1)			**Source: AAJ0865-02**			Prepared & Analyzed: 10/31/17					
Mercury	0.00233	0.00050	0.000036	mg/L	2.5000E-3	ND	93	75-125			

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0865

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100899 - EPA 7470A											
Matrix Spike Dup (7100899-MSD1)		**Source: AAJ0865-02**				Prepared & Analyzed: 10/31/17					
Mercury	0.00226	0.00050	0.000036	mg/L	2.5000E-3	ND	91	75-125	3	20	
Post Spike (7100899-PS1)		**Source: AAJ0865-02**				Prepared & Analyzed: 10/31/17					
Mercury	1.61			ug/L	1.6667	-0.0345	97	80-120			

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Attention: Mr. Joju Abraham

November 08, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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.

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).

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.

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB ID NUMBER
CONTAINER TYPE:								P	P	P						
PRESERVATION:								3	7	3						
10/24/17	1540	GW		x	DGWA-70A	4		1	1	2						1
10/24/17	1335	GW		x	DGWA-71	4		1	1	4						2
10/24/17	1030	GW		x	DGWA-2	4		1	1	2						3
10/24/17	1550	GW		x	DGWC-4	4		1	1	2						4
10/24/17	1300	GW		x	DGWA-53	4		1	1	2						5
10/24/17	1025	GW		x	DGWC-8	4		1	1	2						6
10/24/17	1245	GW		x	DGWC-9	4		1	1	2						7
10/24/17	--	GW		x	FD-1	4		1	1	2						8
10/24/17	1230	W		x	FB-1	4		1	1	2						9
10/24/17	1640	W		x	EB-1	4		1	1	2						10
10/24/17	1430	GW		x	DGWC-10	4		1	1	2						11
10/24/17	1630	GW		x	DGWC-11	4		1	1	2						12

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

Extra Radium

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 10/25/2017 0930

RECEIVED BY: Mike Nguyen
DATE/TIME: 10/25/17 0930

RECEIVED BY LAB:
DATE/TIME: 10/25/17 1320

RELINQUISHED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

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

Checked: No NA
Ice: Yes No NA
Temperature: Min: 0.6 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AAJ0865
Entered into LIMS: MR
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project # AAJ0865

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

Optional: Proj Due Date: Proj Name:

Tracking #: _____

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

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

Thermometer Used IR-4 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.6 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 10/25/17 MR

Temp should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

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

PACE ANALYTICAL SERVICES, LLC.

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

LOG-IN CHECKLIST **Printed: 10/26/2017 8:38:04AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 10/25/17 13:20

Work Order: AAJ0865
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 12 **#Containers:** 50

Minimum Temp(C): 0.6 **Maximum Temp(C):** 0.6 **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

November 13, 2017

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: AAJ0865 Plant McDonough
Pace Project No.: 30234155

Dear Mr. Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 26, 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

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

CERTIFICATIONS

Project: AAJ0865 Plant McDonough
Pace Project No.: 30234155

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

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

SAMPLE SUMMARY

Project: AAJ0865 Plant McDonough
Pace Project No.: 30234155

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30234155001	**DGWA-70A**	Water	10/24/17 15:40	10/26/17 10:00
30234155002	**DGWA-71**	Water	10/24/17 13:35	10/26/17 10:00
30234155003	**DGWA-2**	Water	10/24/17 10:30	10/26/17 10:00
30234155004	**DGWC-4**	Water	10/24/17 15:50	10/26/17 10:00
30234155005	**DGWA-53**	Water	10/24/17 13:00	10/26/17 10:00
30234155006	**DGWC-8**	Water	10/24/17 10:25	10/26/17 10:00
30234155007	**DGWC-9**	Water	10/24/17 12:45	10/26/17 10:00
30234155008	**FD-1**	Water	10/24/17 00:00	10/26/17 10:00
30234155009	**FB-1**	Water	10/24/17 12:30	10/26/17 10:00
30234155010	**EB-1**	Water	10/24/17 16:40	10/26/17 10:00
30234155011	**DGWC-10**	Water	10/24/17 14:30	10/26/17 10:00
30234155012	**DGWC-11**	Water	10/24/17 16:30	10/26/17 10:00

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: AAJ0865 Plant McDonough
Pace Project No.: 30234155

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30234155001	DGWA-70A	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234155002	DGWA-71	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234155003	DGWA-2	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234155004	DGWC-4	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234155005	DGWA-53	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234155006	DGWC-8	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234155007	DGWC-9	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234155008	FD-1	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234155009	FB-1	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234155010	EB-1	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234155011	DGWC-10	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234155012	DGWC-11	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0865 Plant McDonough
Pace Project No.: 30234155

Sample: DGWA-70A **Lab ID: 30234155001** Collected: 10/24/17 15:40 Received: 10/26/17 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	**0.471 ± 0.259 (0.403) C:89% T:NA**	pCi/L	11/02/17 08:35	13982-63-3	
Radium-228	EPA 9320	**0.00142 ± 0.356 (0.826) C:79% T:80%**	pCi/L	11/03/17 11:11	15262-20-1	
Total Radium	Total Radium Calculation	**0.472 ± 0.615 (1.23)**	pCi/L	11/13/17 13:00	7440-14-4	

Sample: DGWA-71 **Lab ID: 30234155002** Collected: 10/24/17 13:35 Received: 10/26/17 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	**0.278 ± 0.187 (0.280) C:85% T:NA**	pCi/L	11/02/17 08:35	13982-63-3	
Radium-228	EPA 9320	**0.446 ± 0.353 (0.691) C:77% T:77%**	pCi/L	11/03/17 11:12	15262-20-1	
Total Radium	Total Radium Calculation	**0.724 ± 0.540 (0.971)**	pCi/L	11/13/17 13:00	7440-14-4	

Sample: DGWA-2 **Lab ID: 30234155003** Collected: 10/24/17 10:30 Received: 10/26/17 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	**0.604 ± 0.277 (0.370) C:87% T:NA**	pCi/L	11/02/17 08:35	13982-63-3	
Radium-228	EPA 9320	**0.589 ± 0.342 (0.610) C:77% T:84%**	pCi/L	11/03/17 11:12	15262-20-1	
Total Radium	Total Radium Calculation	**1.19 ± 0.619 (0.980)**	pCi/L	11/13/17 13:00	7440-14-4	

Sample: DGWC-4 **Lab ID: 30234155004** Collected: 10/24/17 15:50 Received: 10/26/17 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	**0.882 ± 0.323 (0.352) C:92% T:NA**	pCi/L	11/02/17 08:35	13982-63-3	
Radium-228	EPA 9320	**0.361 ± 0.386 (0.805) C:79% T:78%**	pCi/L	11/03/17 14:26	15262-20-1	
Total Radium	Total Radium Calculation	**1.24 ± 0.709 (1.16)**	pCi/L	11/13/17 13:00	7440-14-4	

Sample: DGWA-53 **Lab ID: 30234155005** Collected: 10/24/17 13:00 Received: 10/26/17 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	**2.28 ± 0.557 (0.276) C:87% T:NA**	pCi/L	11/02/17 08:35	13982-63-3	
Radium-228	EPA 9320	**2.18 ± 0.637 (0.773) C:74% T:84%**	pCi/L	11/03/17 14:26	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0865 Plant McDonough
Pace Project No.: 30234155

Sample: DGWA-53 **Lab ID: 30234155005** Collected: 10/24/17 13:00 Received: 10/26/17 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	**4.46 ± 1.19 (1.05)**	pCi/L	11/13/17 13:00	7440-14-4	

Sample: DGWC-8 **Lab ID: 30234155006** Collected: 10/24/17 10:25 Received: 10/26/17 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	**0.615 ± 0.271 (0.350) C:93% T:NA**	pCi/L	11/02/17 08:35	13982-63-3	
Radium-228	EPA 9320	**-0.0176 ± 0.381 (0.888) C:76% T:76%**	pCi/L	11/03/17 14:26	15262-20-1	
Total Radium	Total Radium Calculation	**0.615 ± 0.652 (1.24)**	pCi/L	11/13/17 13:00	7440-14-4	

Sample: DGWC-9 **Lab ID: 30234155007** Collected: 10/24/17 12:45 Received: 10/26/17 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	**0.565 ± 0.249 (0.291) C:94% T:NA**	pCi/L	11/02/17 08:35	13982-63-3	
Radium-228	EPA 9320	**0.649 ± 0.365 (0.651) C:77% T:79%**	pCi/L	11/03/17 14:27	15262-20-1	
Total Radium	Total Radium Calculation	**1.21 ± 0.614 (0.942)**	pCi/L	11/13/17 13:00	7440-14-4	

Sample: FD-1 **Lab ID: 30234155008** Collected: 10/24/17 00:00 Received: 10/26/17 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	**0.365 ± 0.206 (0.296) C:97% T:NA**	pCi/L	11/02/17 08:36	13982-63-3	
Radium-228	EPA 9320	**0.293 ± 0.330 (0.687) C:74% T:76%**	pCi/L	11/03/17 14:27	15262-20-1	
Total Radium	Total Radium Calculation	**0.658 ± 0.536 (0.983)**	pCi/L	11/13/17 13:00	7440-14-4	

Sample: FB-1 **Lab ID: 30234155009** Collected: 10/24/17 12:30 Received: 10/26/17 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	**0.216 ± 0.178 (0.310) C:85% T:NA**	pCi/L	11/02/17 08:36	13982-63-3	
Radium-228	EPA 9320	**0.502 ± 0.368 (0.709) C:74% T:76%**	pCi/L	11/03/17 14:27	15262-20-1	
Total Radium	Total Radium Calculation	**0.718 ± 0.546 (1.02)**	pCi/L	11/13/17 13:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0865 Plant McDonough
Pace Project No.: 30234155

Sample: EB-1 **Lab ID: 30234155010** Collected: 10/24/17 16:40 Received: 10/26/17 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	**0.223 ± 0.190 (0.340) C:88% T:NA**	pCi/L	11/02/17 08:36	13982-63-3	
Radium-228	EPA 9320	**0.0101 ± 0.322 (0.754) C:75% T:75%**	pCi/L	11/03/17 14:27	15262-20-1	
Total Radium	Total Radium Calculation	**0.233 ± 0.512 (1.09)**	pCi/L	11/13/17 13:00	7440-14-4	

Sample: DGWC-10 **Lab ID: 30234155011** Collected: 10/24/17 14:30 Received: 10/26/17 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	**0.542 ± 0.260 (0.311) C:88% T:NA**	pCi/L	11/02/17 08:36	13982-63-3	
Radium-228	EPA 9320	**0.296 ± 0.374 (0.795) C:80% T:82%**	pCi/L	11/03/17 11:15	15262-20-1	
Total Radium	Total Radium Calculation	**0.838 ± 0.634 (1.11)**	pCi/L	11/13/17 13:00	7440-14-4	

Sample: DGWC-11 **Lab ID: 30234155012** Collected: 10/24/17 16:30 Received: 10/26/17 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	**0.461 ± 0.239 (0.335) C:90% T:NA**	pCi/L	11/02/17 08:36	13982-63-3	
Radium-228	EPA 9320	**0.519 ± 0.431 (0.870) C:75% T:79%**	pCi/L	11/03/17 11:15	15262-20-1	
Total Radium	Total Radium Calculation	**0.980 ± 0.670 (1.21)**	pCi/L	11/13/17 13:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAJ0865 Plant McDonough
Pace Project No.: 30234155

QC Batch: 277201 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30234155001, 30234155002, 30234155003, 30234155004, 30234155005, 30234155006, 30234155007, 30234155008, 30234155009, 30234155010, 30234155011, 30234155012

METHOD BLANK: 1362722 Matrix: Water
Associated Lab Samples: 30234155001, 30234155002, 30234155003, 30234155004, 30234155005, 30234155006, 30234155007, 30234155008, 30234155009, 30234155010, 30234155011, 30234155012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.00112 ± 0.365 (0.847) C:75% T:80%	pCi/L	11/03/17 11:11	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAJ0865 Plant McDonough
Pace Project No.: 30234155

QC Batch: 277200 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30234155001, 30234155002, 30234155003, 30234155004, 30234155005, 30234155006, 30234155007, 30234155008, 30234155009, 30234155010, 30234155011, 30234155012

METHOD BLANK: 1362721 Matrix: Water
Associated Lab Samples: 30234155001, 30234155002, 30234155003, 30234155004, 30234155005, 30234155006, 30234155007, 30234155008, 30234155009, 30234155010, 30234155011, 30234155012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.309 ± 0.184 (0.250) C:92% T:NA	pCi/L	11/02/17 08:35	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: AAJ0865 Plant McDonough
Pace Project No.: 30234155

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.

Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: AAJ0865 Workorder Name: Plant McDonough Owner Received Date: 10/3/2017 Results Requested By: 11/17/2017

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

WO# : 30234155

30234155

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	DGWA-70A	G	10/24/2017 15:40	AAJ0865-01	GW	2	X	001
2	DGWA-71	G	10/24/2017 13:35	AAJ0865-02	GW	4	X	002
3	DGWA-2	G	10/24/2017 10:30	AAJ0865-03	GW	2	X	003
4	DGWC-4	G	10/24/2017 15:50	AAJ0865-04	GW	2	X	004
5	DGWA-53	G	10/24/2017 13:00	AAJ0865-05	GW	2	X	005
6	DGWC-8	G	10/24/2017 10:25	AAJ0865-06	GW	2	X	006
7	DGWC-9	G	10/24/2017 12:45	AAJ0865-07	GW	2	X	007
8	FD-1	G	10/24/2017 0:00	AAJ0865-08	GW	2	X	008
9	FB-1	G	10/24/2017 12:30	AAJ0865-09	W	2	X	009
10	EB-1	G	10/24/2017 16:40	AAJ0865-10	W	2	X	010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	10/25/17	[signature]	10/26/17 1000	
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

Pace Analytical
www.pacelabs.com

Workorder: AAJ0865 Workorder Name: Plant McDonough Owner Received Date: 10/3/2017 Results Requested By: 11/17/2017

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

30234155

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
11	DGWC-10	G	10/24/2017 14:30	AAJ0865-11	GW	2	X	011
12	DGWC-11	G	10/24/2017 16:30	AAJ0865-12	GW	2	X	012
13								
14								
15								
16								
17								
18								
19								
20								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	10/25/17		10/26/17 1000	
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.

30234155

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project # AAJ0865

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

Optional: Proj. Due Date: _____ Proj. Name: _____

Tracking #: _____

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

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

Thermometer Used IR-4 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.6 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 10/25/17 MR

Temp should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

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

F-ALLC003rev.3 11September2006

Pittsburgh Lab Sample Condition Upon Receipt

30234155

Pace Analytical

Client Name: PACE - GA Project #

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

Label: ZH
LIMS Login: BM

Tracking #: 774136659475 2

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: ZH 10/26/17

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 Matrix: WT	✓			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.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous Compliance/NPDES sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. All containers needing preservation are found to be in compliance with EPA recommendation.	✓ ✓			16. OH 2
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: ZH Date/time of preservation: Lot # of added preservative:
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present: Trip Blank Custody Seals Present			✓ ✓	18.
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: ZH Date: 10/26/17

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

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	10/31/2017
Worklist:	38463
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1362721
MB concentration:	0.309
M/B Counting Uncertainty:	0.178
MB MDC:	0.250
MB Numerical Performance Indicator:	3.40
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS38463	**LCSD38463**
Count Date:	11/2/2017	11/2/2017
Spike I.D.:	17-030	17-030
Spike Concentration (pCi/mL):	80.188	80.188
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.508	0.505
Target Conc. (pCi/L, g, F):	15.792	15.890
Uncertainty (Calculated):	1.455	1.464
Result (pCi/L, g, F):	14.140	12.597
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.054	0.947
Numerical Performance Indicator:	-1.80	-3.70
Percent Recovery:	89.53%	79.28%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	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:	

Duplicate Sample Assessment	
Sample I.D.:	LCS38463
Duplicate Sample I.D.	LCSD38463
Sample Result (pCi/L, g, F):	14.140
Sample Result Counting Uncertainty (pCi/L, g, F):	1.054
Sample Duplicate Result (pCi/L, g, F):	12.597
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.947
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	2.133
Duplicate RPD:	11.54%
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.

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:

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

11/13/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JLW
Date:	11/1/2017
Worklist:	38464
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1362722
MB concentration:	-0.001
M/B Counting Uncertainty:	0.365
MB MDC:	0.847
MB Numerical Performance Indicator:	-0.01
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS38464	**LCSD38464**
Count Date:	11/3/2017	
Spike I.D.:	17-033	
Spike Concentration (pCi/mL):	23.122	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.812	
Target Conc. (pCi/L, g, F):	5.695	
Uncertainty (Calculated):	0.410	
Result (pCi/L, g, F):	6.629	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.698	
Numerical Performance Indicator:	2.26	
Percent Recovery:	116.38%	
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:	
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.:	30234155002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30234155002DUP	
Sample Result (pCi/L, g, F):	0.446	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.344	
Sample Duplicate Result (pCi/L, g, F):	0.614	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.377	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.647	30234155002
Duplicate RPD:	31.76%	30234155002DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

11/13/17

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: AAJ0905
November 08, 2017
Project: CCR Event
Project #:Plant McDonough

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

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWC-5	AAJ0905-01	Ground Water	10/25/17 10:30	10/26/17 11:30
DGWC-12	AAJ0905-02	Ground Water	10/25/17 10:35	10/26/17 11:30
DGWC-14	AAJ0905-03	Ground Water	10/25/17 13:45	10/26/17 11:30
DGWC-15	AAJ0905-04	Ground Water	10/25/17 14:15	10/26/17 11:30
DGWC-17	AAJ0905-05	Ground Water	10/25/17 15:40	10/26/17 11:30
DGWC-19	AAJ0905-06	Ground Water	10/25/17 10:10	10/26/17 11:30
DGWC-20	AAJ0905-07	Ground Water	10/25/17 13:30	10/26/17 11:30
FD-2	AAJ0905-08	Ground Water	10/25/17 00:00	10/26/17 11:30
FB-2	AAJ0905-09	Water	10/25/17 10:00	10/26/17 11:30
EB-2	AAJ0905-10	Water	10/25/17 17:20	10/26/17 11:30
DGWC-21	AAJ0905-11	Ground Water	10/25/17 15:15	10/26/17 11:30
DGWC-22	AAJ0905-12	Ground Water	10/25/17 16:35	10/26/17 11:30
DGWC-42	AAJ0905-13	Ground Water	10/25/17 16:25	10/26/17 11:30

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 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.

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0905
Client ID: DGWC-5
Date/Time Sampled: 10/25/2017 10:30:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0905-01
Date/Time Received: 10/26/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	650	25	10	mg/L	SM 2540 C		1	10/30/17 16:20	10/30/17 16:20	7100868	JPT
Inorganic Anions											
Chloride	9.4	0.25	0.02	mg/L	EPA 300.0		1	10/31/17 10:22	10/31/17 23:40	7100894	RLC
Fluoride	1.4	0.30	0.03	mg/L	EPA 300.0		1	10/31/17 10:22	10/31/17 23:40	7100894	RLC
Sulfate	510	50	0.85	mg/L	EPA 300.0	B-01	50	10/31/17 10:22	11/02/17 09:45	7100894	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 13:42	7100837	CSW
Arsenic	0.0119	0.0050	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 13:42	7100837	CSW
Barium	0.0175	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 13:42	7100837	CSW
Beryllium	0.0069	0.0030	0.00009	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 13:42	7100837	CSW
Boron	4.00	0.0400	0.0060	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 13:42	7100837	CSW
Cadmium	0.0006	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 13:42	7100837	CSW
Calcium	95.6	25.0	2.02	mg/L	EPA 6020B		50	10/31/17 11:15	11/06/17 13:48	7100837	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 13:42	7100837	CSW
Cobalt	0.0209	0.0100	0.0003	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 13:42	7100837	CSW
Lead	0.0024	0.0050	0.0003	mg/L	EPA 6020B	J	5	10/31/17 11:15	11/06/17 13:42	7100837	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 13:42	7100837	CSW
Selenium	0.0340	0.0100	0.0018	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 13:42	7100837	CSW
Thallium	ND	0.0020	0.0003	mg/L	EPA 6020B	R-01	5	10/31/17 11:15	11/06/17 13:42	7100837	CSW
Lithium	0.0055	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 13:42	7100837	CSW
Mercury	0.00009	0.00050	0.000036	mg/L	EPA 7470A	J	1	11/02/17 10:45	11/02/17 15:46	7110017	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0905
Client ID: DGWC-12
Date/Time Sampled: 10/25/2017 10:35:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0905-02
Date/Time Received: 10/26/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	571	25	10	mg/L	SM 2540 C		1	10/30/17 16:20	10/30/17 16:20	7100868	JPT
Inorganic Anions											
Chloride	13	0.25	0.02	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 00:00	7100894	RLC
Fluoride	0.60	0.30	0.03	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 00:00	7100894	RLC
Sulfate	400	50	0.85	mg/L	EPA 300.0	B-01	50	10/31/17 10:22	11/02/17 10:07	7100894	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:16	7100837	CSW
Arsenic	0.0006	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 14:16	7100837	CSW
Barium	0.0268	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:16	7100837	CSW
Beryllium	0.0002	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 14:16	7100837	CSW
Boron	9.97	2.00	0.298	mg/L	EPA 6020B		50	10/31/17 11:15	11/06/17 14:21	7100837	CSW
Cadmium	0.0004	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 14:16	7100837	CSW
Calcium	92.1	25.0	2.02	mg/L	EPA 6020B		50	10/31/17 11:15	11/06/17 14:21	7100837	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:16	7100837	CSW
Cobalt	0.0021	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 14:16	7100837	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:16	7100837	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:16	7100837	CSW
Selenium	0.0024	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 14:16	7100837	CSW
Thallium	0.00009	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 14:16	7100837	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:16	7100837	CSW
Mercury	0.00006	0.00050	0.000036	mg/L	EPA 7470A	J	1	11/02/17 10:45	11/02/17 15:49	7110017	MTC

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0905
Client ID: DGWC-14
Date/Time Sampled: 10/25/2017 1:45:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0905-03
Date/Time Received: 10/26/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	88	25	10	mg/L	SM 2540 C		1	10/30/17 16:20	10/30/17 16:20	7100868	JPT
Inorganic Anions											
Chloride	3.5	0.25	0.02	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 01:02	7100894	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 01:02	7100894	RLC
Sulfate	42	1.0	0.02	mg/L	EPA 300.0	B-01	1	10/31/17 10:22	11/01/17 01:02	7100894	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:27	7100837	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:27	7100837	CSW
Barium	0.0563	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:27	7100837	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:27	7100837	CSW
Boron	0.0565	0.0400	0.0060	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:27	7100837	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:27	7100837	CSW
Calcium	9.67	5.00	2.02	mg/L	EPA 6020B		50	10/31/17 11:15	11/06/17 14:33	7100837	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:27	7100837	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:27	7100837	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:27	7100837	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:27	7100837	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:27	7100837	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:27	7100837	CSW
Lithium	0.0032	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 14:27	7100837	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/02/17 10:45	11/02/17 15:51	7110017	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

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0905
Client ID: DGWC-15
Date/Time Sampled: 10/25/2017 2:15:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0905-04
Date/Time Received: 10/26/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	290	25	10	mg/L	SM 2540 C		1	10/30/17 16:20	10/30/17 16:20	7100868	JPT
Inorganic Anions											
Chloride	21	0.25	0.02	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 01:23	7100894	RLC
Fluoride	0.26	0.30	0.03	mg/L	EPA 300.0	J	1	10/31/17 10:22	11/01/17 01:23	7100894	RLC
Sulfate	180	10	0.17	mg/L	EPA 300.0	B-01	10	10/31/17 10:22	11/02/17 10:29	7100894	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:38	7100837	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:38	7100837	CSW
Barium	0.0474	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:38	7100837	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:38	7100837	CSW
Boron	1.47	0.0400	0.0060	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:38	7100837	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:38	7100837	CSW
Calcium	36.2	25.0	2.02	mg/L	EPA 6020B		50	10/31/17 11:15	11/06/17 14:44	7100837	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:38	7100837	CSW
Cobalt	0.0019	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 14:38	7100837	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:38	7100837	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:38	7100837	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:38	7100837	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:38	7100837	CSW
Lithium	0.0061	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 14:38	7100837	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/02/17 10:45	11/02/17 15:53	7110017	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

November 08, 2017

Report No.: AAJ0905
Client ID: DGWC-17
Date/Time Sampled: 10/25/2017 3:40:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0905-05
Date/Time Received: 10/26/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	343	25	10	mg/L	SM 2540 C		1	10/30/17 16:20	10/30/17 16:20	7100868	JPT
Inorganic Anions											
Chloride	19	0.25	0.02	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 01:44	7100894	RLC
Fluoride	0.49	0.30	0.03	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 01:44	7100894	RLC
Sulfate	240	10	0.17	mg/L	EPA 300.0	B-01	10	10/31/17 10:22	11/02/17 10:50	7100894	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:50	7100837	CSW
Arsenic	0.0007	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 14:50	7100837	CSW
Barium	0.0544	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:50	7100837	CSW
Beryllium	0.0005	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 14:50	7100837	CSW
Boron	0.739	0.0400	0.0060	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:50	7100837	CSW
Cadmium	0.0002	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 14:50	7100837	CSW
Calcium	10.9	5.00	2.02	mg/L	EPA 6020B		50	10/31/17 11:15	11/06/17 14:56	7100837	CSW
Chromium	0.0024	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 14:50	7100837	CSW
Cobalt	0.0259	0.0100	0.0003	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:50	7100837	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:50	7100837	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:50	7100837	CSW
Selenium	0.0078	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 14:50	7100837	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 14:50	7100837	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 14:50	7100837	CSW
Mercury	0.00005	0.00050	0.000036	mg/L	EPA 7470A	J	1	11/02/17 10:45	11/02/17 15:56	7110017	MTC

PACE ANALYTICAL SERVICES, LLC.

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0905
Client ID: DGWC-19
Date/Time Sampled: 10/25/2017 10:10:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0905-06
Date/Time Received: 10/26/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	423	25	10	mg/L	SM 2540 C		1	10/30/17 16:20	10/30/17 16:20	7100868	JPT
Inorganic Anions											
Chloride	41	0.25	0.02	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 02:04	7100894	RLC
Fluoride	0.90	0.30	0.03	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 02:04	7100894	RLC
Sulfate	270	10	0.17	mg/L	EPA 300.0	B-01	10	10/31/17 10:22	11/02/17 11:12	7100894	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:56	7100806	KLH
Arsenic	0.0022	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 19:56	7100806	KLH
Barium	0.0210	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:56	7100806	KLH
Beryllium	0.0019	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 19:56	7100806	KLH
Boron	3.19	0.0400	0.0060	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:56	7100806	KLH
Cadmium	0.0004	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 19:56	7100806	KLH
Calcium	77.0	25.0	2.02	mg/L	EPA 6020B		50	10/27/17 08:35	11/03/17 20:02	7100806	KLH
Chromium	0.0024	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 19:56	7100806	KLH
Cobalt	0.0514	0.0100	0.0003	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:56	7100806	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:56	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 19:56	7100806	KLH
Selenium	0.0087	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 19:56	7100806	KLH
Thallium	0.0004	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 19:56	7100806	KLH
Lithium	0.0031	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 19:56	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/02/17 10:45	11/02/17 15:58	7110017	MTC

PACE ANALYTICAL SERVICES, LLC.

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Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0905
Client ID: DGWC-20
Date/Time Sampled: 10/25/2017 1:30:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0905-07
Date/Time Received: 10/26/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	854	25	10	mg/L	SM 2540 C		1	10/30/17 16:20	10/30/17 16:20	7100868	JPT
Inorganic Anions											
Chloride	20	0.25	0.02	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 02:46	7100894	RLC
Fluoride	0.68	0.30	0.03	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 02:46	7100894	RLC
Sulfate	610	50	0.85	mg/L	EPA 300.0	B-01	50	10/31/17 10:22	11/02/17 11:34	7100894	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:07	7100806	KLH
Arsenic	0.0135	0.0050	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:07	7100806	KLH
Barium	0.0096	0.0100	0.0004	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 20:07	7100806	KLH
Beryllium	0.0027	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 20:07	7100806	KLH
Boron	8.94	2.00	0.298	mg/L	EPA 6020B		50	10/27/17 08:35	11/03/17 20:13	7100806	KLH
Cadmium	0.0020	0.0010	0.0001	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:07	7100806	KLH
Calcium	97.3	25.0	2.02	mg/L	EPA 6020B		50	10/27/17 08:35	11/03/17 20:13	7100806	KLH
Chromium	0.0015	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 20:07	7100806	KLH
Cobalt	0.432	0.0100	0.0003	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:07	7100806	KLH
Lead	ND	0.0050	0.0003	mg/L	EPA 6020B		5	10/27/17 08:35	11/03/17 20:07	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:07	7100806	KLH
Selenium	0.0506	0.0100	0.0018	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:07	7100806	KLH
Thallium	0.0005	0.0010	0.0003	mg/L	EPA 6020B	J	5	10/27/17 08:35	11/03/17 20:07	7100806	KLH
Lithium	0.0022	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 20:07	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/02/17 10:45	11/02/17 16:01	7110017	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0905
Client ID: FD-2
Date/Time Sampled: 10/25/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0905-08
Date/Time Received: 10/26/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	588	25	10	mg/L	SM 2540 C		1	10/30/17 16:20	10/30/17 16:20	7100868	JPT
Inorganic Anions											
Chloride	13	0.25	0.02	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 04:29	7100894	RLC
Fluoride	0.18	0.30	0.03	mg/L	EPA 300.0	J	1	10/31/17 10:22	11/01/17 04:29	7100894	RLC
Sulfate	380	50	0.85	mg/L	EPA 300.0	B-01	50	10/31/17 10:22	11/02/17 11:56	7100894	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:19	7100806	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:19	7100806	KLH
Barium	0.0258	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:19	7100806	KLH
Beryllium	0.0002	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 20:19	7100806	KLH
Boron	11.4	2.00	0.298	mg/L	EPA 6020B		50	10/27/17 08:35	11/03/17 20:25	7100806	KLH
Cadmium	0.0005	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 20:19	7100806	KLH
Calcium	92.5	25.0	2.02	mg/L	EPA 6020B		50	10/27/17 08:35	11/03/17 20:25	7100806	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:19	7100806	KLH
Cobalt	0.0021	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 20:19	7100806	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:19	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:19	7100806	KLH
Selenium	0.0021	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 20:19	7100806	KLH
Thallium	0.00009	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 20:19	7100806	KLH
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:19	7100806	KLH
Mercury	0.00009	0.00050	0.000036	mg/L	EPA 7470A	J	1	11/02/17 10:45	11/02/17 16:03	7110017	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0905
Client ID: FB-2
Date/Time Sampled: 10/25/2017 10:00:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAJ0905-09
Date/Time Received: 10/26/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	10/30/17 16:20	10/30/17 16:20	7100868	JPT
Inorganic Anions											
Chloride	0.05	0.25	0.02	mg/L	EPA 300.0	J	1	10/31/17 10:22	11/01/17 04:49	7100894	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 04:49	7100894	RLC
Sulfate	0.04	1.0	0.02	mg/L	EPA 300.0	B-01, J	1	10/31/17 10:22	11/01/17 04:49	7100894	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:30	7100806	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:30	7100806	KLH
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:30	7100806	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:30	7100806	KLH
Boron	0.0279	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 20:30	7100806	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:30	7100806	KLH
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:30	7100806	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:30	7100806	KLH
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:30	7100806	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:30	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:30	7100806	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:30	7100806	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:30	7100806	KLH
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:30	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/02/17 10:45	11/02/17 16:10	7110017	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0905
Client ID: EB-2
Date/Time Sampled: 10/25/2017 5:20:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAJ0905-10
Date/Time Received: 10/26/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	10/30/17 16:20	10/30/17 16:20	7100868	JPT
Inorganic Anions											
Chloride	0.03	0.25	0.02	mg/L	EPA 300.0	J	1	10/31/17 10:22	11/01/17 05:11	7100894	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 05:11	7100894	RLC
Sulfate	ND	1.0	0.02	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 05:11	7100894	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:36	7100806	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:36	7100806	KLH
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:36	7100806	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:36	7100806	KLH
Boron	0.0177	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 20:36	7100806	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:36	7100806	KLH
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:36	7100806	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:36	7100806	KLH
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:36	7100806	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:36	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:36	7100806	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:36	7100806	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:36	7100806	KLH
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:36	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/02/17 10:45	11/02/17 16:12	7110017	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

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0905
Client ID: DGWC-21
Date/Time Sampled: 10/25/2017 3:15:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0905-11
Date/Time Received: 10/26/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	474	25	10	mg/L	SM 2540 C		1	10/30/17 16:20	10/30/17 16:20	7100868	JPT
Inorganic Anions											
Chloride	23	0.25	0.02	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 05:32	7100894	RLC
Fluoride	0.34	0.30	0.03	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 05:32	7100894	RLC
Sulfate	290	20	0.34	mg/L	EPA 300.0	B-01	20	10/31/17 10:22	11/02/17 12:17	7100894	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:42	7100806	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:42	7100806	KLH
Barium	0.0262	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:42	7100806	KLH
Beryllium	0.0002	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 20:42	7100806	KLH
Boron	7.92	2.00	0.298	mg/L	EPA 6020B		50	10/27/17 08:35	11/03/17 20:47	7100806	KLH
Cadmium	0.0005	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 20:42	7100806	KLH
Calcium	75.6	25.0	2.02	mg/L	EPA 6020B		50	10/27/17 08:35	11/03/17 20:47	7100806	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:42	7100806	KLH
Cobalt	0.0092	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 20:42	7100806	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:42	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:42	7100806	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:42	7100806	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 20:42	7100806	KLH
Lithium	0.0060	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 20:42	7100806	KLH
Mercury	0.00005	0.00050	0.000036	mg/L	EPA 7470A	J	1	11/02/17 10:45	11/02/17 16:15	7110017	MTC

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November 08, 2017

Report No.: AAJ0905
Client ID: DGWC-22
Date/Time Sampled: 10/25/2017 4:35:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0905-12
Date/Time Received: 10/26/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	477	25	10	mg/L	SM 2540 C		1	10/30/17 16:20	10/30/17 16:20	7100868	JPT
Inorganic Anions											
Chloride	29	0.25	0.02	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 05:53	7100894	RLC
Fluoride	0.25	0.30	0.03	mg/L	EPA 300.0	J	1	10/31/17 10:22	11/01/17 05:53	7100894	RLC
Sulfate	290	25	0.42	mg/L	EPA 300.0	B-01	25	10/31/17 10:22	11/02/17 12:39	7100894	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 21:05	7100806	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 21:05	7100806	KLH
Barium	0.0384	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 21:05	7100806	KLH
Beryllium	0.0002	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 21:05	7100806	KLH
Boron	3.90	0.0400	0.0060	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 21:05	7100806	KLH
Cadmium	0.0007	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 21:05	7100806	KLH
Calcium	66.8	25.0	2.02	mg/L	EPA 6020B		50	10/27/17 08:35	11/03/17 21:10	7100806	KLH
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 21:05	7100806	KLH
Cobalt	0.0094	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 21:05	7100806	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 21:05	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 21:05	7100806	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 21:05	7100806	KLH
Thallium	0.00007	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 21:05	7100806	KLH
Lithium	0.0042	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 21:05	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/02/17 10:45	11/02/17 16:17	7110017	MTC

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November 08, 2017

Report No.: AAJ0905
Client ID: DGWC-42
Date/Time Sampled: 10/25/2017 4:25:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0905-13
Date/Time Received: 10/26/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	626	25	10	mg/L	SM 2540 C		1	10/30/17 16:20	10/30/17 16:20	7100868	JPT
Inorganic Anions											
Chloride	32	0.25	0.02	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 06:14	7100894	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/31/17 10:22	11/01/17 06:14	7100894	RLC
Sulfate	370	50	0.85	mg/L	EPA 300.0	B-01	50	10/31/17 10:22	11/02/17 13:01	7100894	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 21:16	7100806	KLH
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 21:16	7100806	KLH
Barium	0.0196	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 21:16	7100806	KLH
Beryllium	0.0026	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 21:16	7100806	KLH
Boron	0.982	0.0400	0.0060	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 21:16	7100806	KLH
Cadmium	0.0005	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 21:16	7100806	KLH
Calcium	50.9	25.0	2.02	mg/L	EPA 6020B		50	10/27/17 08:35	11/03/17 21:22	7100806	KLH
Chromium	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 21:16	7100806	KLH
Cobalt	0.0435	0.0100	0.0003	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 21:16	7100806	KLH
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 21:16	7100806	KLH
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 21:16	7100806	KLH
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/27/17 08:35	11/03/17 21:16	7100806	KLH
Thallium	0.00009	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 21:16	7100806	KLH
Lithium	0.0122	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/27/17 08:35	11/03/17 21:16	7100806	KLH
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/02/17 10:45	11/02/17 16:20	7110017	MTC

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November 08, 2017

Report No.: AAJ0905

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100868 - SM 2540 C											
Blank (7100868-BLK1)						Prepared & Analyzed: 10/30/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7100868-BS1)						Prepared & Analyzed: 10/30/17					
Total Dissolved Solids	385	25	10	mg/L	400.00		96	84-108			
Duplicate (7100868-DUP1)		**Source: AAJ0905-09**				Prepared & Analyzed: 10/30/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7100868-DUP2)		**Source: AAJ0905-13**				Prepared & Analyzed: 10/30/17					
Total Dissolved Solids	617	25	10	mg/L		626			1	10	

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Report No.: AAJ0905

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100894 - EPA 300.0											
Blank (7100894-BLK1)						Prepared & Analyzed: 10/31/17					
Chloride	ND	0.25	0.02	mg/L							
Fluoride	ND	0.30	0.03	mg/L							
Sulfate	0.24	1.0	0.02	mg/L							J
LCS (7100894-BS1)						Prepared & Analyzed: 10/31/17					
Chloride	10.6	0.25	0.02	mg/L	10.020		105	90-110			
Fluoride	10.5	0.30	0.03	mg/L	10.020		105	90-110			
Sulfate	10.6	1.0	0.02	mg/L	10.050		105	90-110			
Matrix Spike (7100894-MS1)		**Source: AAJ0905-02**				Prepared: 10/31/17 Analyzed: 11/01/17					
Chloride	23.0	0.25	0.02	mg/L	10.020	12.9	101	90-110			
Fluoride	12.2	0.30	0.03	mg/L	10.020	0.60	115	90-110			QM-05
Sulfate	239	1.0	0.02	mg/L	10.050	252	NR	90-110			QM-02
Matrix Spike (7100894-MS2)		**Source: AAJ0905-06**				Prepared: 10/31/17 Analyzed: 11/01/17					
Chloride	47.3	0.25	0.02	mg/L	10.020	41.4	59	90-110			QM-02
Fluoride	13.0	0.30	0.03	mg/L	10.020	0.90	121	90-110			QM-05
Sulfate	188	1.0	0.02	mg/L	10.050	197	NR	90-110			QM-02
Matrix Spike Dup (7100894-MSD1)		**Source: AAJ0905-02**				Prepared: 10/31/17 Analyzed: 11/01/17					
Chloride	23.0	0.25	0.02	mg/L	10.020	12.9	101	90-110	0.2	15	
Fluoride	12.1	0.30	0.03	mg/L	10.020	0.60	115	90-110	0.6	15	QM-05
Sulfate	239	1.0	0.02	mg/L	10.050	252	NR	90-110	0.06	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
Batch 7100806 - EPA 3005A											
Blank (7100806-BLK1)						Prepared: 10/27/17 Analyzed: 11/03/17					
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 (7100806-BS1)						Prepared: 10/27/17 Analyzed: 11/03/17					
Antimony	0.101	0.0030	0.0006	mg/L	0.10000		101	80-120			
Arsenic	0.0980	0.0050	0.0005	mg/L	0.10000		98	80-120			
Barium	0.104	0.0100	0.0004	mg/L	0.10000		104	80-120			
Beryllium	0.102	0.0030	0.00009	mg/L	0.10000		102	80-120			
Cadmium	0.104	0.0010	0.0001	mg/L	0.10000		104	80-120			
Chromium	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Cobalt	0.0987	0.0100	0.0003	mg/L	0.10000		99	80-120			
Copper	0.100	0.0250	0.0003	mg/L	0.10000		100	80-120			
Lead	0.0980	0.0050	0.00007	mg/L	0.10000		98	80-120			
Nickel	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			
Selenium	0.0959	0.0100	0.0018	mg/L	0.10000		96	80-120			
Silver	0.101	0.0100	0.0002	mg/L	0.10000		101	80-120			
Thallium	0.101	0.0010	0.00005	mg/L	0.10000		101	80-120			
Vanadium	0.106	0.0100	0.0012	mg/L	0.10000		106	80-120			
Zinc	0.104	0.0100	0.0012	mg/L	0.10000		104	80-120			
Lithium	0.103	0.0500	0.0015	mg/L	0.10000		103	80-120			

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Report No.: AAJ0905

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100806 - EPA 3005A											
Matrix Spike (7100806-MS1)		**Source: AAJ0865-01**				Prepared: 10/27/17 Analyzed: 11/03/17					
Antimony	0.0991	0.0030	0.0006	mg/L	0.10000	ND	99	75-125			
Arsenic	0.0963	0.0050	0.0005	mg/L	0.10000	ND	96	75-125			
Barium	0.133	0.0100	0.0004	mg/L	0.10000	0.0333	99	75-125			
Beryllium	0.0962	0.0030	0.00009	mg/L	0.10000	ND	96	75-125			
Cadmium	0.102	0.0010	0.0001	mg/L	0.10000	ND	102	75-125			
Chromium	0.105	0.0100	0.0005	mg/L	0.10000	0.0005	105	75-125			
Cobalt	0.100	0.0100	0.0003	mg/L	0.10000	ND	100	75-125			
Copper	0.0981	0.0250	0.0003	mg/L	0.10000	0.0005	98	75-125			
Lead	0.0966	0.0050	0.00007	mg/L	0.10000	ND	97	75-125			
Nickel	0.0994	0.0100	0.0005	mg/L	0.10000	ND	99	75-125			
Selenium	0.0974	0.0100	0.0018	mg/L	0.10000	ND	97	75-125			
Silver	0.0981	0.0100	0.0002	mg/L	0.10000	ND	98	75-125			
Thallium	0.0996	0.0010	0.00005	mg/L	0.10000	ND	100	75-125			
Vanadium	0.105	0.0100	0.0012	mg/L	0.10000	ND	105	75-125			
Zinc	0.102	0.0100	0.0012	mg/L	0.10000	0.0019	101	75-125			
Lithium	0.0978	0.0500	0.0015	mg/L	0.10000	ND	98	75-125			
Matrix Spike Dup (7100806-MSD1)		**Source: AAJ0865-01**				Prepared: 10/27/17 Analyzed: 11/03/17					
Antimony	0.0985	0.0030	0.0006	mg/L	0.10000	ND	98	75-125	0.7	20	
Arsenic	0.0967	0.0050	0.0005	mg/L	0.10000	ND	97	75-125	0.4	20	
Barium	0.133	0.0100	0.0004	mg/L	0.10000	0.0333	99	75-125	0.04	20	
Beryllium	0.0973	0.0030	0.00009	mg/L	0.10000	ND	97	75-125	1	20	
Cadmium	0.102	0.0010	0.0001	mg/L	0.10000	ND	102	75-125	0.3	20	
Chromium	0.106	0.0100	0.0005	mg/L	0.10000	0.0005	106	75-125	0.8	20	
Cobalt	0.103	0.0100	0.0003	mg/L	0.10000	ND	103	75-125	2	20	
Copper	0.100	0.0250	0.0003	mg/L	0.10000	0.0005	100	75-125	2	20	
Lead	0.0970	0.0050	0.00007	mg/L	0.10000	ND	97	75-125	0.4	20	
Nickel	0.104	0.0100	0.0005	mg/L	0.10000	ND	104	75-125	5	20	
Selenium	0.0944	0.0100	0.0018	mg/L	0.10000	ND	94	75-125	3	20	
Silver	0.0973	0.0100	0.0002	mg/L	0.10000	ND	97	75-125	0.8	20	
Thallium	0.0984	0.0010	0.00005	mg/L	0.10000	ND	98	75-125	1	20	
Vanadium	0.107	0.0100	0.0012	mg/L	0.10000	ND	107	75-125	2	20	
Zinc	0.105	0.0100	0.0012	mg/L	0.10000	0.0019	103	75-125	2	20	
Lithium	0.0958	0.0500	0.0015	mg/L	0.10000	ND	96	75-125	2	20	

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Report No.: AAJ0905

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100806 - EPA 3005A											
Post Spike (7100806-PS1)			**Source: AAJ0865-01**			Prepared: 10/27/17 Analyzed: 11/03/17					
Antimony	98.8			ug/L	100.00	0.162	99	80-120			
Arsenic	98.1			ug/L	100.00	-0.0337	98	80-120			
Barium	135			ug/L	100.00	33.3	102	80-120			
Beryllium	100			ug/L	100.00	0.0526	100	80-120			
Cadmium	104			ug/L	100.00	0.0080	104	80-120			
Chromium	105			ug/L	100.00	0.476	105	80-120			
Cobalt	104			ug/L	100.00	0.208	104	80-120			
Copper	99.6			ug/L	100.00	0.535	99	80-120			
Lead	97.1			ug/L	100.00	0.0337	97	80-120			
Nickel	103			ug/L	100.00	0.356	103	80-120			
Selenium	97.0			ug/L	100.00	0.808	96	80-120			
Silver	99.8			ug/L	100.00	0.0092	100	80-120			
Thallium	98.7			ug/L	100.00	0.0133	99	80-120			
Vanadium	105			ug/L	100.00	0.171	105	80-120			
Zinc	104			ug/L	100.00	1.87	102	80-120			
Lithium	101			ug/L	100.00	0.478	100	80-120			
Batch 7100837 - EPA 3005A											
Blank (7100837-BLK1)						Prepared: 10/31/17 Analyzed: 11/06/17					
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							

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 08, 2017

Report No.: AAJ0905

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100837 - EPA 3005A											
LCS (7100837-BS1)						Prepared: 10/31/17 Analyzed: 11/06/17					
Antimony	0.102	0.0030	0.0006	mg/L	0.10000		102	80-120			
Arsenic	0.0990	0.0050	0.0005	mg/L	0.10000		99	80-120			
Barium	0.0999	0.0100	0.0004	mg/L	0.10000		100	80-120			
Beryllium	0.0988	0.0030	0.00009	mg/L	0.10000		99	80-120			
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000		101	80-120			
Chromium	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Cobalt	0.0993	0.0100	0.0003	mg/L	0.10000		99	80-120			
Copper	0.0999	0.0250	0.0003	mg/L	0.10000		100	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	0.105	0.0100	0.0018	mg/L	0.10000		105	80-120			
Silver	0.0993	0.0100	0.0002	mg/L	0.10000		99	80-120			
Thallium	0.101	0.0010	0.00005	mg/L	0.10000		101	80-120			
Vanadium	0.100	0.0100	0.0012	mg/L	0.10000		100	80-120			
Zinc	0.102	0.0100	0.0012	mg/L	0.10000		102	80-120			
Lithium	0.104	0.0500	0.0015	mg/L	0.10000		104	80-120			
Matrix Spike (7100837-MS1)		**Source: AAJ0956-13**				Prepared: 10/31/17 Analyzed: 11/06/17					
Antimony	0.100	0.0030	0.0006	mg/L	0.10000	ND	100	75-125			
Arsenic	0.210	0.0050	0.0005	mg/L	0.10000	0.114	96	75-125			
Barium	0.224	0.0100	0.0004	mg/L	0.10000	0.136	88	75-125			
Beryllium	0.0914	0.0030	0.00009	mg/L	0.10000	ND	91	75-125			
Cadmium	0.103	0.0010	0.0001	mg/L	0.10000	ND	103	75-125			
Chromium	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125			
Cobalt	0.103	0.0100	0.0003	mg/L	0.10000	0.0031	100	75-125			
Copper	0.0980	0.0250	0.0003	mg/L	0.10000	0.0008	97	75-125			
Lead	0.0986	0.0050	0.00007	mg/L	0.10000	ND	99	75-125			
Nickel	0.103	0.0100	0.0005	mg/L	0.10000	0.0022	101	75-125			
Selenium	0.103	0.0100	0.0018	mg/L	0.10000	ND	103	75-125			
Silver	0.0946	0.0100	0.0002	mg/L	0.10000	ND	95	75-125			
Thallium	0.100	0.0010	0.00005	mg/L	0.10000	ND	100	75-125			
Vanadium	0.102	0.0100	0.0012	mg/L	0.10000	ND	102	75-125			
Zinc	0.102	0.0100	0.0012	mg/L	0.10000	ND	102	75-125			
Lithium	0.0973	0.0500	0.0015	mg/L	0.10000	0.0034	94	75-125			

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

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0905

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100837 - EPA 3005A											
Matrix Spike Dup (7100837-MSD1)		**Source: AAJ0956-13**			Prepared: 10/31/17 Analyzed: 11/06/17						
Antimony	0.102	0.0030	0.0006	mg/L	0.10000	ND	102	75-125	2	20	
Arsenic	0.211	0.0050	0.0005	mg/L	0.10000	0.114	98	75-125	0.7	20	
Barium	0.232	0.0100	0.0004	mg/L	0.10000	0.136	96	75-125	3	20	
Beryllium	0.0904	0.0030	0.00009	mg/L	0.10000	ND	90	75-125	1	20	
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000	ND	101	75-125	2	20	
Chromium	0.0976	0.0100	0.0005	mg/L	0.10000	ND	98	75-125	3	20	
Cobalt	0.0989	0.0100	0.0003	mg/L	0.10000	0.0031	96	75-125	4	20	
Copper	0.0986	0.0250	0.0003	mg/L	0.10000	0.0008	98	75-125	0.6	20	
Lead	0.0974	0.0050	0.00007	mg/L	0.10000	ND	97	75-125	1	20	
Nickel	0.100	0.0100	0.0005	mg/L	0.10000	0.0022	98	75-125	3	20	
Selenium	0.102	0.0100	0.0018	mg/L	0.10000	ND	102	75-125	1	20	
Silver	0.0963	0.0100	0.0002	mg/L	0.10000	ND	96	75-125	2	20	
Thallium	0.0995	0.0010	0.00005	mg/L	0.10000	ND	100	75-125	0.5	20	
Vanadium	0.0972	0.0100	0.0012	mg/L	0.10000	ND	97	75-125	5	20	
Zinc	0.101	0.0100	0.0012	mg/L	0.10000	ND	101	75-125	1	20	
Lithium	0.0965	0.0500	0.0015	mg/L	0.10000	0.0034	93	75-125	0.8	20	
Post Spike (7100837-PS1)		**Source: AAJ0956-13**			Prepared: 10/31/17 Analyzed: 11/06/17						
Antimony	103			ug/L	100.00	0.0615	103	80-120			
Arsenic	213			ug/L	100.00	114	100	80-120			
Barium	228			ug/L	100.00	136	92	80-120			
Beryllium	87.8			ug/L	100.00	0.0619	88	80-120			
Cadmium	101			ug/L	100.00	0.0600	101	80-120			
Chromium	102			ug/L	100.00	0.189	102	80-120			
Cobalt	101			ug/L	100.00	3.05	98	80-120			
Copper	101			ug/L	100.00	0.816	100	80-120			
Lead	96.8			ug/L	100.00	0.0604	97	80-120			
Nickel	103			ug/L	100.00	2.25	101	80-120			
Selenium	104			ug/L	100.00	0.589	104	80-120			
Silver	96.6			ug/L	100.00	0.0063	97	80-120			
Thallium	97.6			ug/L	100.00	0.0036	98	80-120			
Vanadium	102			ug/L	100.00	-0.659	102	80-120			
Zinc	105			ug/L	100.00	0.989	104	80-120			
Lithium	93.2			ug/L	100.00	3.39	90	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

November 08, 2017

Report No.: AAJ0905

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7110017 - EPA 7470A											
Blank (7110017-BLK1)						Prepared & Analyzed: 11/02/17					
Mercury	ND	0.00050	0.000036	mg/L							
LCS (7110017-BS1)						Prepared & Analyzed: 11/02/17					
Mercury	0.00224	0.00050	0.000036	mg/L	2.5000E-3		90	80-120			
Duplicate (7110017-DUP1)			**Source: AAJ0890-02RE1**			Prepared & Analyzed: 11/02/17					
Mercury	0.00067	0.00050	0.000036	mg/L		0.00085			24	20	QR-03
Matrix Spike (7110017-MS1)			**Source: AAJ0905-01**			Prepared & Analyzed: 11/02/17					
Mercury	0.00219	0.00050	0.000036	mg/L	2.5000E-3	0.00009	84	75-125			
Matrix Spike Dup (7110017-MSD1)			**Source: AAJ0905-01**			Prepared & Analyzed: 11/02/17					
Mercury	0.00221	0.00050	0.000036	mg/L	2.5000E-3	0.00009	85	75-125	0.9	20	
Post Spike (7110017-PS1)			**Source: AAJ0905-01**			Prepared & Analyzed: 11/02/17					
Mercury	1.62			ug/L	1.6667	0.0600	94	80-120			

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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.

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).

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.

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com) CC: kiwelco@golder.com

REQUESTED COMPLETION DATE: PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED: Container type: P / P / P / P / B1A; Preservation: 3 / 7 / 3 / B

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App III + IV	Cl, F, SO4 TDS	Radium 226/228						LAB ID NUMBER
10/25/17	1030	GW		X	DGWC-5	4	1	1	2						1
	1035				DGWC-12	4	1	1	2						2
	1345				DGWC-14	4	1	1	2						3
	1415				DGWC-15	6	1	1	4						4
	1540				DGWC-17	4	1	1	2						5
	1010				DGWC-19	4	1	1	2						6
	1330				DGWC-20	4	1	1	2						7
	—				FD-2	4	1	1	2						8
	1000	W			FB-2	4	1	1	2						9
	1720	W			EB-2	4	1	1	2						10
	1515	GW			DGWC-21	4	1	1	2						11
	1635	GW			DGWC-22	4	1	1	2						12

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

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

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Ben Hodges Field Lead — DATE/TIME: 10/26/17 0930

RECEIVED BY: Mike Nguyen — DATE/TIME: 10/26/17 0930

RECEIVED BY LAB: [signature] — DATE/TIME: 10/26/17 1130

RELINQUISHED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

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

Checked: (Yes) No NA — Ice: (Yes) No NA — Temperature: Min: 0.5 Max:

Custody Seal: (Intact) Broken Not Present N/A — # of Coolers — Cooler ID:

FOR LAB USE ONLY — LAB #: AAJ0905 — Entered into LIMS: MR — Tracking #:

Rev. 12/15/2016

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell Dawn.Prell@GaPower.com

CC: Kjurinko@golder.com

REQUESTED COMPLETION DATE:

PO #: lcburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

	Metals App III + IV	Cl, F, SO4 + TDS	Radium 226/228
CONTAINER TYPE:	P	P	P
PRESERVATION:	3	7	3

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App III + IV	Cl, F, SO4 + TDS	Radium 226/228	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
10/25/17	1625	GW		X	DGWC-42	4	1	1	2	13	

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

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

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

SAMPLED BY AND TITLE: [signature] Field Lead — DATE/TIME: 10/26/17 0930

RECEIVED BY: Mike Nguyen — DATE/TIME: 10/26/17 0930

RECEIVED BY LAB: [signature] — DATE/TIME: 10/26/17 1130

RELINQUISHED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

SAMPLE SHIPPED VIA: UPS FED-EX USPS (COURIER) CLIENT OTHER FS — Pace

Checked: (Yes) No NA — Ice: (Yes) No NA — Temperature: Min: 0.5 Max:

Custody Seal: (Intact) Broken Not Present N/A — # of Coolers: — Cooler ID:

FOR LAB USE ONLY
LAB #: AAJ0905
Entered Into LIMS: MR
Tracking #:

Rev. 12/15/2016

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project # AAJ0905

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

Optional: Proj. Due Date: Proj. Name:

Tracking #: _____

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

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

Thermometer Used IR-4 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: 10/26/17 MR

Temp should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

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

PACE ANALYTICAL SERVICES, LLC.

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

LOG-IN CHECKLIST

Printed: 10/26/2017 3:56:26PM

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 10/26/17 11:30

Work Order: AAJ0905
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 13 **#Containers:** 54

Minimum Temp(C): 0.5 **Maximum Temp(C):** 0.5 **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

November 13, 2017

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: AAJ0905 Plant McDonough
Pace Project No.: 30234319

Dear Mr. Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 27, 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

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

CERTIFICATIONS

Project: AAJ0905 Plant McDonough
Pace Project No.: 30234319

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

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

SAMPLE SUMMARY

Project: AAJ0905 Plant McDonough
Pace Project No.: 30234319

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30234319001	**DGWC-5**	Water	10/25/17 10:30	10/27/17 10:15
30234319002	**DGWC-12**	Water	10/25/17 10:35	10/27/17 10:15
30234319003	**DGWC-14**	Water	10/25/17 13:45	10/27/17 10:15
30234319004	**DGWC-15**	Water	10/25/17 14:15	10/27/17 10:15
30234319005	**DGWC-17**	Water	10/25/17 15:40	10/27/17 10:15
30234319006	**DGWC-19**	Water	10/25/17 10:10	10/27/17 10:15
30234319007	**DGWC-20**	Water	10/25/17 13:30	10/27/17 10:15
30234319008	**FD-2**	Water	10/25/17 00:00	10/27/17 10:15
30234319009	**FB-2**	Water	10/25/17 10:00	10/27/17 10:15
30234319010	**EB-2**	Water	10/25/17 17:20	10/27/17 10:15
30234319011	**DGWC-21**	Water	10/25/17 15:15	10/27/17 10:15
30234319012	**DGWC-22**	Water	10/25/17 16:35	10/27/17 10:15
30234319013	**DGWC-42**	Water	10/25/17 16:25	10/27/17 10:15

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SAMPLE ANALYTE COUNT

Project: AAJ0905 Plant McDonough
Pace Project No.: 30234319

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30234319001	DGWC-5	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234319002	DGWC-12	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234319003	DGWC-14	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234319004	DGWC-15	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234319005	DGWC-17	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234319006	DGWC-19	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234319007	DGWC-20	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234319008	FD-2	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234319009	FB-2	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234319010	EB-2	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234319011	DGWC-21	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234319012	DGWC-22	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234319013	DGWC-42	EPA 9315	LAL	1

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SAMPLE ANALYTE COUNT

Project: AAJ0905 Plant McDonough
Pace Project No.: 30234319

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0905 Plant McDonough
Pace Project No.: 30234319

Sample: DGWC-5 **Lab ID: 30234319001** Collected: 10/25/17 10:30 Received: 10/27/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • 1 L was received, client notified and advised to analyze at low volume.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**1.98 ± 0.598 (0.494) C:85% T:NA**	pCi/L	11/02/17 08:37	13982-63-3	
Radium-228	EPA 9320	**0.0791 ± 0.380 (0.862) C:84% T:80%**	pCi/L	11/03/17 11:15	15262-20-1	
Total Radium	Total Radium Calculation	**2.06 ± 0.978 (1.36)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: DGWC-12 **Lab ID: 30234319002** Collected: 10/25/17 10:35 Received: 10/27/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.216 ± 0.164 (0.275) C:92% T:NA**	pCi/L	11/02/17 08:36	13982-63-3	
Radium-228	EPA 9320	**-0.000688 ± 0.357 (0.827) C:78% T:78%**	pCi/L	11/03/17 11:16	15262-20-1	
Total Radium	Total Radium Calculation	**0.216 ± 0.521 (1.10)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: DGWC-14 **Lab ID: 30234319003** Collected: 10/25/17 13:45 Received: 10/27/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.580 ± 0.280 (0.400) C:91% T:NA**	pCi/L	11/02/17 08:36	13982-63-3	
Radium-228	EPA 9320	**0.0271 ± 0.338 (0.779) C:76% T:83%**	pCi/L	11/03/17 11:16	15262-20-1	
Total Radium	Total Radium Calculation	**0.607 ± 0.618 (1.18)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: DGWC-15 **Lab ID: 30234319004** Collected: 10/25/17 14:15 Received: 10/27/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.309 ± 0.199 (0.310) C:91% T:NA**	pCi/L	11/02/17 08:36	13982-63-3	
Radium-228	EPA 9320	**0.145 ± 0.333 (0.739) C:79% T:76%**	pCi/L	11/03/17 11:16	15262-20-1	
Total Radium	Total Radium Calculation	**0.454 ± 0.532 (1.05)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: DGWC-17 **Lab ID: 30234319005** Collected: 10/25/17 15:40 Received: 10/27/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.235 ± 0.173 (0.289) C:94% T:NA**	pCi/L	11/02/17 08:37	13982-63-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0905 Plant McDonough
Pace Project No.: 30234319

Sample: DGWC-17 **Lab ID: 30234319005** Collected: 10/25/17 15:40 Received: 10/27/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-228	EPA 9320	**0.166 ± 0.395 (0.877) C:80% T:77%**	pCi/L	11/03/17 14:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.401 ± 0.568 (1.17)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: DGWC-19 **Lab ID: 30234319006** Collected: 10/25/17 10:10 Received: 10/27/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.394 ± 0.211 (0.277) C:94% T:NA**	pCi/L	11/02/17 08:37	13982-63-3	
Radium-228	EPA 9320	**0.533 ± 0.430 (0.864) C:83% T:75%**	pCi/L	11/03/17 14:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.927 ± 0.641 (1.14)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: DGWC-20 **Lab ID: 30234319007** Collected: 10/25/17 13:30 Received: 10/27/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.382 ± 0.210 (0.304) C:92% T:NA**	pCi/L	11/02/17 08:37	13982-63-3	
Radium-228	EPA 9320	**0.471 ± 0.383 (0.770) C:79% T:87%**	pCi/L	11/03/17 14:47	15262-20-1	
Total Radium	Total Radium Calculation	**0.853 ± 0.593 (1.07)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: FD-2 **Lab ID: 30234319008** Collected: 10/25/17 00:00 Received: 10/27/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.246 ± 0.176 (0.303) C:104% T:NA**	pCi/L	11/02/17 08:37	13982-63-3	
Radium-228	EPA 9320	**0.225 ± 0.383 (0.835) C:79% T:80%**	pCi/L	11/03/17 14:47	15262-20-1	
Total Radium	Total Radium Calculation	**0.471 ± 0.559 (1.14)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: FB-2 **Lab ID: 30234319009** Collected: 10/25/17 10:00 Received: 10/27/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.260 ± 0.230 (0.435) C:97% T:NA**	pCi/L	11/03/17 09:25	13982-63-3	
Radium-228	EPA 9320	**0.874 ± 0.480 (0.896) C:85% T:82%**	pCi/L	11/06/17 11:44	15262-20-1	
Total Radium	Total Radium Calculation	**1.13 ± 0.710 (1.33)**	pCi/L	11/13/17 13:04	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0905 Plant McDonough
Pace Project No.: 30234319

Sample: EB-2 **Lab ID: 30234319010** Collected: 10/25/17 17:20 Received: 10/27/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0967 ± 0.163 (0.365) C:96% T:NA**	pCi/L	11/03/17 09:25	13982-63-3	
Radium-228	EPA 9320	**0.965 ± 0.489 (0.877) C:84% T:76%**	pCi/L	11/06/17 11:44	15262-20-1	
Total Radium	Total Radium Calculation	**1.06 ± 0.652 (1.24)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: DGWC-21 **Lab ID: 30234319011** Collected: 10/25/17 15:15 Received: 10/27/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.347 ± 0.239 (0.388) C:95% T:NA**	pCi/L	11/03/17 09:25	13982-63-3	
Radium-228	EPA 9320	**0.720 ± 0.524 (1.05) C:82% T:79%**	pCi/L	11/06/17 11:44	15262-20-1	
Total Radium	Total Radium Calculation	**1.07 ± 0.763 (1.44)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: DGWC-22 **Lab ID: 30234319012** Collected: 10/25/17 16:35 Received: 10/27/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.557 ± 0.300 (0.415) C:94% T:NA**	pCi/L	11/03/17 09:25	13982-63-3	
Radium-228	EPA 9320	**1.04 ± 0.513 (0.918) C:82% T:80%**	pCi/L	11/06/17 11:44	15262-20-1	
Total Radium	Total Radium Calculation	**1.60 ± 0.813 (1.33)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: DGWC-42 **Lab ID: 30234319013** Collected: 10/25/17 16:25 Received: 10/27/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.444 ± 0.252 (0.344) C:95% T:NA**	pCi/L	11/03/17 09:25	13982-63-3	
Radium-228	EPA 9320	**1.02 ± 0.506 (0.899) C:81% T:79%**	pCi/L	11/06/17 11:44	15262-20-1	
Total Radium	Total Radium Calculation	**1.46 ± 0.758 (1.24)**	pCi/L	11/13/17 13:04	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAJ0905 Plant McDonough
Pace Project No.: 30234319

QC Batch: 277201 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30234319001, 30234319002, 30234319003, 30234319004, 30234319005, 30234319006, 30234319007, 30234319008

METHOD BLANK: 1362722 Matrix: Water
Associated Lab Samples: 30234319001, 30234319002, 30234319003, 30234319004, 30234319005, 30234319006, 30234319007, 30234319008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.00112 ± 0.365 (0.847) C:75% T:80%	pCi/L	11/03/17 11:11	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAJ0905 Plant McDonough
Pace Project No.: 30234319

QC Batch: 277299 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30234319009, 30234319010, 30234319011, 30234319012, 30234319013

METHOD BLANK: 1363109 Matrix: Water
Associated Lab Samples: 30234319009, 30234319010, 30234319011, 30234319012, 30234319013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.133 ± 0.339 (0.757) C:85% T:74%	pCi/L	11/06/17 11:51	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAJ0905 Plant McDonough
Pace Project No.: 30234319

QC Batch: 277200 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30234319001, 30234319002, 30234319003, 30234319004, 30234319005, 30234319006, 30234319007, 30234319008

METHOD BLANK: 1362721 Matrix: Water
Associated Lab Samples: 30234319001, 30234319002, 30234319003, 30234319004, 30234319005, 30234319006, 30234319007, 30234319008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.309 ± 0.184 (0.250) C:92% T:NA	pCi/L	11/02/17 08:35	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAJ0905 Plant McDonough
Pace Project No.: 30234319

QC Batch: 277298 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30234319009, 30234319010, 30234319011, 30234319012, 30234319013

METHOD BLANK: 1363108 Matrix: Water
Associated Lab Samples: 30234319009, 30234319010, 30234319011, 30234319012, 30234319013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.304 ± 0.210 (0.324) C:97% T:NA	pCi/L	11/03/17 09:24	

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

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: AAJ0905 Plant McDonough
Pace Project No.: 30234319

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.

WO# : 30234319

30234319

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAJ0905 Workorder Name: Plant McDonough Owner Received Date: 10/26/2017 Results Requested By: 11/20/2017

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 HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	DGWC-5	G	10/25/2017 10:30	AAJ0905-01	GW	2	X	001
2	DGWC-12	G	10/25/2017 10:35	AAJ0905-02	GW	2	X	002
3	DGWC-14	G	10/25/2017 13:45	AAJ0905-03	GW	2	X	003
4	DGWC-15	G	10/25/2017 14:15	AAJ0905-04	GW	4	X	004
5	DGWC-17	G	10/25/2017 15:40	AAJ0905-05	GW	2	X	005
6	DGWC-19	G	10/25/2017 10:10	AAJ0905-06	GW	2	X	006
7	DGWC-20	G	10/25/2017 13:30	AAJ0905-07	GW	2	X	007
8	FD-2	G	10/25/2017 0:00	AAJ0905-08	GW	2	X	008
9	FB-2	G	10/25/2017 10:00	AAJ0905-09	W	2	X	009
10	EB-2	G	10/25/2017 17:20	AAJ0905-10	W	2	X	010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	10/26/17		10/27/17 1015	
2					
3					

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.

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAJ0905 Workorder Name: Plant McDonough Owner Received Date: 10/26/2017 Results Requested By: 11/20/2017

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

30234319

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
11	DGWC-21	G	10/25/2017 15:15	AAJ0905-11	GW	2	X	011
12	DGWC-22	G	10/25/2017 16:35	AAJ0905-12	GW	2	X	012
13	DGWC-42	G	10/25/2017 16:25	AAJ0905-13	GW	2	X	013
14								
15								
16								
17								
18								
19								
20								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	10/26/17		10/27/17 1015	
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.

30234319

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project # AAJ0905

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

Optional: Proj. Due Date: Proj. Name:

Tracking #: _____

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

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

Thermometer Used IR-4 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: 10/26/17 MR

Comments:

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

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

F-ALLC003rev.3 11September2006

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: PACE, GA Project # 30234319

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

Label ZH

LIMS Login ANL

Tracking #: 741366594970

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: ZH 10/27/17

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 Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9. Low Volume for 001
Correct Containers Used: -Pace Containers Used:	✓ ✓			10.
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous Compliance/NPDES sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. All containers needing preservation are found to be in compliance with EPA recommendation.	✓ ✓			16. pH<2
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed ZH Date/time of preservation Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:			✓	18.
Trip Blank Custody Seals Present			✓	
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: ZH Date: 10/27/17

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: Missing 1 bottle from Sample 001 and 1 bottle from Sample 004.

☐ **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

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	10/31/2017
Worklist:	38463
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1362721
MB concentration:	0.309
M/B Counting Uncertainty:	0.178
MB MDC:	0.250
MB Numerical Performance Indicator:	3.40
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment

	LCSD (Y or N)?	Y
	LCS38463	LCSD38463
Count Date:	11/2/2017	11/2/2017
Spike I.D.:	17-030	17-030
Spike Concentration (pCi/mL):	80.188	80.188
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.508	0.505
Target Conc. (pCi/L, g, F):	15.792	15.890
Uncertainty (Calculated):	1.455	1.464
Result (pCi/L, g, F):	14.140	12.597
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.054	0.947
Numerical Performance Indicator:	-1.80	-3.70
Percent Recovery:	89.53%	79.28%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	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:	

Duplicate Sample Assessment

Sample I.D.:	LCS38463	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD38463	
Sample Result (pCi/L, g, F):	14.140	
Sample Result Counting Uncertainty (pCi/L, g, F):	1.054	
Sample Duplicate Result (pCi/L, g, F):	12.597	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.947	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	2.133	
Duplicate RPD:	11.54%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:

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

11/13/17

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	11/2/2017
Worklist:	38483
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1363108
MB concentration:	0.304
M/B Counting Uncertainty:	0.205
MB MDC:	0.324
MB Numerical Performance Indicator:	2.91
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS38483	LCSD38483
Count Date:	11/3/2017	
Spike I.D.:	17-030	
Spike Concentration (pCi/mL):	80.188	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.520	
Target Conc. (pCi/L, g, F):	15.432	
Uncertainty (Calculated):	1.422	
Result (pCi/L, g, F):	12.579	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.073	
Numerical Performance Indicator:	-3.14	
Percent Recovery:	81.51%	
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:	
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.:	30234467002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30234467002DUP	
Sample Result (pCi/L, g, F):	0.607	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.273	
Sample Duplicate Result (pCi/L, g, F):	0.573	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.320	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.155	30234467002
Duplicate RPD:	5.63%	30234467002DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:

Upm 11/13/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	11/2/2017
Worklist:	38484
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1363109
MB concentration:	0.133
M/B Counting Uncertainty:	0.338
MB MDC:	0.757
MB Numerical Performance Indicator:	0.77
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS38484	LCSD38484
Count Date:	11/6/2017	
Spike I.D.:	17-033	
Spike Concentration (pCi/mL):	23.099	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.803	
Target Conc. (pCi/L, g, F):	5.751	
Uncertainty (Calculated):	0.414	
Result (pCi/L, g, F):	5.828	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.747	
Numerical Performance Indicator:	0.18	
Percent Recovery:	101.33%	
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:	
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.:	30234467002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30234467002DUP	
Sample Result (pCi/L, g, F):	0.428	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.352	
Sample Duplicate Result (pCi/L, g, F):	0.213	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.317	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.891	30234467002
Duplicate RPD:	67.21%	30234467002DUP
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:	
(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:

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

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JLW
Date:	11/1/2017
Worklist:	38464
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1362722
MB concentration:	-0.001
M/B Counting Uncertainty:	0.365
MB MDC:	0.847
MB Numerical Performance Indicator:	-0.01
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS38464	LCSD38464
Count Date:	11/3/2017	
Spike I.D.:	17-033	
Spike Concentration (pCi/mL):	23.122	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.812	
Target Conc. (pCi/L, g, F):	5.695	
Uncertainty (Calculated):	0.410	
Result (pCi/L, g, F):	6.629	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.698	
Numerical Performance Indicator:	2.26	
Percent Recovery:	116.38%	
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:	
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.:	30234155002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30234155002DUP	
Sample Result (pCi/L, g, F):	0.446	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.344	
Sample Duplicate Result (pCi/L, g, F):	0.614	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.377	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.647	30234155002
Duplicate RPD:	31.76%	30234155002DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

Opr 11/13/17

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: AAJ0956
November 08, 2017
Project: CCR Event
Project #:Plant McDonough

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

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 08, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWC-23	AAJ0956-01	Ground Water	10/26/17 10:05	10/27/17 11:00
DGWC-37	AAJ0956-02	Ground Water	10/26/17 11:05	10/27/17 11:00
DGWC-38	AAJ0956-03	Ground Water	10/26/17 13:30	10/27/17 11:00
DGWC-39	AAJ0956-04	Ground Water	10/26/17 14:40	10/27/17 11:00
DGWC-40	AAJ0956-05	Ground Water	10/26/17 12:05	10/27/17 11:00
DGWC-47	AAJ0956-06	Ground Water	10/26/17 13:35	10/27/17 11:00
DGWC-48	AAJ0956-07	Ground Water	10/26/17 15:20	10/27/17 11:00
FD-3	AAJ0956-08	Ground Water	10/26/17 00:00	10/27/17 11:00
FB-3	AAJ0956-09	Water	10/26/17 09:50	10/27/17 11:00
EB-3	AAJ0956-10	Water	10/26/17 14:50	10/27/17 11:00
DGWC-67	AAJ0956-11	Ground Water	10/26/17 10:05	10/27/17 11:00
DGWC-68A	AAJ0956-12	Ground Water	10/26/17 12:00	10/27/17 11:00
DGWC-69	AAJ0956-13	Ground Water	10/26/17 13:20	10/27/17 11:00

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

November 08, 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.

Total Dissolved Solids Analysis by Method SM 2540C (H-02 Qualifier):
Sample AAJ0956-10 (EB-3) for TDS was originally analyzed within the sample holding time of 7 days. Due to a quality question, the sample was re-analyzed in duplicate. All batch QC and sample data from the re-analysis was acceptable. The results of the re-analysis have been reported with an H-02 qualifier.

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 08, 2017

Report No.: AAJ0956
Client ID: DGWC-23
Date/Time Sampled: 10/26/2017 10:05:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0956-01
Date/Time Received: 10/27/2017 11:00:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	446	25	10	mg/L	SM 2540 C		1	11/01/17 15:45	11/01/17 15:45	7110011	JPT
Inorganic Anions											
Chloride	17	0.25	0.02	mg/L	EPA 300.0		1	11/02/17 18:04	11/03/17 13:10	7110072	RLC
Fluoride	0.66	0.30	0.03	mg/L	EPA 300.0		1	11/06/17 14:29	11/06/17 22:37	7110147	RLC
Sulfate	220	10	0.17	mg/L	EPA 300.0		10	11/02/17 18:04	11/05/17 16:45	7110072	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:01	7100837	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:01	7100837	CSW
Barium	0.0176	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:01	7100837	CSW
Beryllium	0.0004	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:01	7100837	CSW
Boron	4.07	0.0400	0.0060	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:01	7100837	CSW
Cadmium	0.0003	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:01	7100837	CSW
Calcium	67.2	25.0	2.02	mg/L	EPA 6020B		50	10/31/17 11:15	11/06/17 15:07	7100837	CSW
Chromium	0.0007	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:01	7100837	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:01	7100837	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:01	7100837	CSW
Molybdenum	0.0077	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:01	7100837	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:01	7100837	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:01	7100837	CSW
Lithium	0.0049	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:01	7100837	CSW
Mercury	0.00012	0.00050	0.000036	mg/L	EPA 7470A	J	1	11/03/17 09:50	11/03/17 12:26	7110070	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
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Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0956
Client ID: DGWC-37
Date/Time Sampled: 10/26/2017 11:05:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0956-02
Date/Time Received: 10/27/2017 11:00:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	340	25	10	mg/L	SM 2540 C		1	11/01/17 15:45	11/01/17 15:45	7110011	JPT
Inorganic Anions											
Chloride	6.4	0.25	0.02	mg/L	EPA 300.0		1	11/02/17 18:04	11/03/17 13:33	7110072	RLC
Fluoride	0.08	0.30	0.03	mg/L	EPA 300.0	J	1	11/06/17 14:29	11/06/17 22:58	7110147	RLC
Sulfate	97	10	0.17	mg/L	EPA 300.0		10	11/02/17 18:04	11/05/17 17:06	7110072	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:25	7100837	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:25	7100837	CSW
Barium	0.112	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:25	7100837	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:25	7100837	CSW
Boron	1.86	0.0400	0.0060	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:25	7100837	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:25	7100837	CSW
Calcium	60.8	25.0	2.02	mg/L	EPA 6020B		50	10/31/17 11:15	11/06/17 15:30	7100837	CSW
Chromium	0.0007	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:25	7100837	CSW
Cobalt	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:25	7100837	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:25	7100837	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:25	7100837	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:25	7100837	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:25	7100837	CSW
Lithium	0.0018	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:25	7100837	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/03/17 09:50	11/03/17 12:28	7110070	MTC

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Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0956
Client ID: DGWC-38
Date/Time Sampled: 10/26/2017 1:30:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0956-03
Date/Time Received: 10/27/2017 11:00:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	554	25	10	mg/L	SM 2540 C		1	11/01/17 15:45	11/01/17 15:45	7110011	JPT
Inorganic Anions											
Chloride	8.2	0.25	0.02	mg/L	EPA 300.0		1	11/02/17 18:04	11/03/17 13:56	7110072	RLC
Fluoride	0.47	0.30	0.03	mg/L	EPA 300.0		1	11/06/17 14:29	11/07/17 00:00	7110147	RLC
Sulfate	260	10	0.17	mg/L	EPA 300.0		10	11/02/17 18:04	11/05/17 17:26	7110072	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:36	7100837	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:36	7100837	CSW
Barium	0.0333	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:36	7100837	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:36	7100837	CSW
Boron	2.92	0.0400	0.0060	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:36	7100837	CSW
Cadmium	0.0002	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:36	7100837	CSW
Calcium	81.3	25.0	2.02	mg/L	EPA 6020B		50	10/31/17 11:15	11/06/17 15:42	7100837	CSW
Chromium	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:36	7100837	CSW
Cobalt	0.0016	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:36	7100837	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:36	7100837	CSW
Molybdenum	0.0011	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:36	7100837	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:36	7100837	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:36	7100837	CSW
Lithium	0.0034	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:36	7100837	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/03/17 09:50	11/03/17 12:30	7110070	MTC

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Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0956
Client ID: DGWC-39
Date/Time Sampled: 10/26/2017 2:40:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0956-04
Date/Time Received: 10/27/2017 11:00:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	532	25	10	mg/L	SM 2540 C		1	11/01/17 15:45	11/01/17 15:45	7110011	JPT
Inorganic Anions											
Chloride	8.3	0.25	0.02	mg/L	EPA 300.0		1	11/02/17 18:04	11/03/17 14:19	7110072	RLC
Fluoride	0.54	0.30	0.03	mg/L	EPA 300.0		1	11/06/17 14:29	11/07/17 00:21	7110147	RLC
Sulfate	210	20	0.34	mg/L	EPA 300.0		20	11/02/17 18:04	11/05/17 17:47	7110072	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:47	7100837	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:47	7100837	CSW
Barium	0.0899	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:47	7100837	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:47	7100837	CSW
Boron	3.41	0.0400	0.0060	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:47	7100837	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:47	7100837	CSW
Calcium	90.6	25.0	2.02	mg/L	EPA 6020B		50	10/31/17 11:15	11/06/17 15:53	7100837	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:47	7100837	CSW
Cobalt	0.0062	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:47	7100837	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:47	7100837	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:47	7100837	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:47	7100837	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:47	7100837	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:47	7100837	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/03/17 09:50	11/03/17 12:33	7110070	MTC

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0956
Client ID: DGWC-40
Date/Time Sampled: 10/26/2017 12:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0956-05
Date/Time Received: 10/27/2017 11:00:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	373	25	10	mg/L	SM 2540 C		1	11/01/17 15:45	11/01/17 15:45	7110011	JPT
Inorganic Anions											
Chloride	21	0.25	0.02	mg/L	EPA 300.0		1	11/02/17 18:04	11/03/17 15:27	7110072	RLC
Fluoride	0.50	0.30	0.03	mg/L	EPA 300.0		1	11/06/17 14:29	11/07/17 00:41	7110147	RLC
Sulfate	220	10	0.17	mg/L	EPA 300.0		10	11/02/17 18:04	11/05/17 18:08	7110072	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:59	7100837	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:59	7100837	CSW
Barium	0.0168	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:59	7100837	CSW
Beryllium	0.0027	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:59	7100837	CSW
Boron	0.873	0.0400	0.0060	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:59	7100837	CSW
Cadmium	0.0008	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:59	7100837	CSW
Calcium	41.8	25.0	2.02	mg/L	EPA 6020B		50	10/31/17 11:15	11/06/17 16:05	7100837	CSW
Chromium	0.0007	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:59	7100837	CSW
Cobalt	0.0371	0.0100	0.0003	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:59	7100837	CSW
Lead	0.00007	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:59	7100837	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 15:59	7100837	CSW
Selenium	0.0036	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:59	7100837	CSW
Thallium	0.00007	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:59	7100837	CSW
Lithium	0.0021	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 15:59	7100837	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/03/17 09:50	11/03/17 12:35	7110070	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

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November 08, 2017

Report No.: AAJ0956
Client ID: DGWC-47
Date/Time Sampled: 10/26/2017 1:35:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0956-06
Date/Time Received: 10/27/2017 11:00:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	444	25	10	mg/L	SM 2540 C		1	11/01/17 15:45	11/01/17 15:45	7110011	JPT
Inorganic Anions											
Chloride	6.6	0.25	0.02	mg/L	EPA 300.0		1	11/02/17 18:04	11/03/17 15:50	7110072	RLC
Fluoride	1.0	0.30	0.03	mg/L	EPA 300.0		1	11/06/17 14:29	11/07/17 01:02	7110147	RLC
Sulfate	290	10	0.17	mg/L	EPA 300.0		10	11/02/17 18:04	11/05/17 18:28	7110072	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:10	7100837	CSW
Arsenic	0.0016	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 16:10	7100837	CSW
Barium	0.0152	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:10	7100837	CSW
Beryllium	0.0119	0.0030	0.00009	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:10	7100837	CSW
Boron	0.269	0.0400	0.0060	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:10	7100837	CSW
Cadmium	0.0015	0.0010	0.0001	mg/L	EPA 6020B		1	10/31/17 11:15	11/07/17 14:31	7100837	CSW
Calcium	46.7	25.0	2.02	mg/L	EPA 6020B		50	10/31/17 11:15	11/06/17 16:16	7100837	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:10	7100837	CSW
Cobalt	0.383	0.0100	0.0003	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:10	7100837	CSW
Lead	0.0009	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 16:10	7100837	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:10	7100837	CSW
Selenium	0.0097	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 16:10	7100837	CSW
Thallium	0.0003	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 16:10	7100837	CSW
Lithium	0.0710	0.0500	0.0015	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:10	7100837	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/03/17 09:50	11/03/17 12:42	7110070	MTC

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November 08, 2017

Report No.: AAJ0956
Client ID: DGWC-48
Date/Time Sampled: 10/26/2017 3:20:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0956-07
Date/Time Received: 10/27/2017 11:00:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	753	25	10	mg/L	SM 2540 C		1	11/01/17 15:45	11/01/17 15:45	7110011	JPT
Inorganic Anions											
Chloride	14	0.25	0.02	mg/L	EPA 300.0		1	11/02/17 18:04	11/03/17 16:13	7110072	RLC
Fluoride	1.7	0.30	0.03	mg/L	EPA 300.0		1	11/06/17 14:29	11/07/17 01:43	7110147	RLC
Sulfate	510	10	0.17	mg/L	EPA 300.0		10	11/02/17 18:04	11/05/17 18:49	7110072	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:45	7100837	CSW
Arsenic	0.0008	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 16:45	7100837	CSW
Barium	0.0117	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:45	7100837	CSW
Beryllium	0.0078	0.0030	0.00009	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:45	7100837	CSW
Boron	0.746	0.0400	0.0060	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:45	7100837	CSW
Cadmium	0.0032	0.0010	0.0001	mg/L	EPA 6020B		1	10/31/17 11:15	11/07/17 14:37	7100837	CSW
Calcium	94.0	25.0	2.02	mg/L	EPA 6020B		50	10/31/17 11:15	11/06/17 16:50	7100837	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:45	7100837	CSW
Cobalt	0.482	0.0100	0.0003	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:45	7100837	CSW
Lead	0.0022	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 16:45	7100837	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:45	7100837	CSW
Selenium	0.0058	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 16:45	7100837	CSW
Thallium	0.00009	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 16:45	7100837	CSW
Lithium	0.115	0.0500	0.0015	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:45	7100837	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/03/17 09:50	11/03/17 12:45	7110070	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

November 08, 2017

Report No.: AAJ0956
Client ID: FD-3
Date/Time Sampled: 10/26/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0956-08
Date/Time Received: 10/27/2017 11:00:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	292	25	10	mg/L	SM 2540 C		1	11/01/17 15:45	11/01/17 15:45	7110011	JPT
Inorganic Anions											
Chloride	5.9	0.25	0.02	mg/L	EPA 300.0		1	11/02/17 18:04	11/03/17 18:08	7110072	RLC
Fluoride	0.04	0.30	0.03	mg/L	EPA 300.0	J	1	11/06/17 14:29	11/07/17 03:27	7110147	RLC
Sulfate	100	10	0.17	mg/L	EPA 300.0		10	11/02/17 18:04	11/05/17 19:10	7110072	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:56	7100837	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:56	7100837	CSW
Barium	0.106	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:56	7100837	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:56	7100837	CSW
Boron	3.26	0.0400	0.0060	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:56	7100837	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/31/17 11:15	11/07/17 14:42	7100837	CSW
Calcium	41.5	25.0	2.02	mg/L	EPA 6020B		50	10/31/17 11:15	11/06/17 17:02	7100837	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:56	7100837	CSW
Cobalt	0.0022	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 16:56	7100837	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:56	7100837	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:56	7100837	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:56	7100837	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 16:56	7100837	CSW
Lithium	0.0044	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 16:56	7100837	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/03/17 09:50	11/03/17 12:47	7110070	MTC

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0956
Client ID: FB-3
Date/Time Sampled: 10/26/2017 9:50:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAJ0956-09
Date/Time Received: 10/27/2017 11:00:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	11/01/17 15:45	11/01/17 15:45	7110011	JPT
Inorganic Anions											
Chloride	ND	0.25	0.02	mg/L	EPA 300.0		1	11/02/17 18:04	11/03/17 18:31	7110072	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	11/06/17 14:29	11/07/17 03:47	7110147	RLC
Sulfate	ND	1.0	0.02	mg/L	EPA 300.0		1	11/02/17 18:04	11/03/17 18:31	7110072	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:07	7100837	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:07	7100837	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:07	7100837	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:07	7100837	CSW
Boron	0.0073	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 17:07	7100837	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/31/17 11:15	11/07/17 14:48	7100837	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:07	7100837	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:07	7100837	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:07	7100837	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:07	7100837	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:07	7100837	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:07	7100837	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:07	7100837	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:07	7100837	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/03/17 09:50	11/03/17 12:49	7110070	MTC

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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0956
Client ID: EB-3
Date/Time Sampled: 10/26/2017 2:50:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAJ0956-10
Date/Time Received: 10/27/2017 11:00:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C	H-02	1	11/03/17 15:25	11/03/17 15:25	7110090	JPT
Inorganic Anions											
Chloride	0.05	0.25	0.02	mg/L	EPA 300.0	J	1	11/02/17 18:04	11/03/17 18:53	7110072	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	11/06/17 14:29	11/07/17 04:09	7110147	RLC
Sulfate	ND	1.0	0.02	mg/L	EPA 300.0		1	11/02/17 18:04	11/03/17 18:53	7110072	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:13	7100837	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:13	7100837	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:13	7100837	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:13	7100837	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:13	7100837	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/31/17 11:15	11/07/17 14:54	7100837	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:13	7100837	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:13	7100837	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:13	7100837	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:13	7100837	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:13	7100837	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:13	7100837	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:13	7100837	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:13	7100837	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/03/17 09:50	11/03/17 12:52	7110070	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0956
Client ID: DGWC-67
Date/Time Sampled: 10/26/2017 10:05:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0956-11
Date/Time Received: 10/27/2017 11:00:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	319	25	10	mg/L	SM 2540 C		1	11/01/17 15:45	11/01/17 15:45	7110011	JPT
Inorganic Anions											
Chloride	6.0	0.25	0.02	mg/L	EPA 300.0		1	11/02/17 18:04	11/03/17 19:16	7110072	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	11/06/17 14:29	11/07/17 04:30	7110147	RLC
Sulfate	100	10	0.17	mg/L	EPA 300.0		10	11/02/17 18:04	11/05/17 19:30	7110072	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:19	7100837	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:19	7100837	CSW
Barium	0.105	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:19	7100837	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:19	7100837	CSW
Boron	3.21	0.0400	0.0060	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:19	7100837	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/31/17 11:15	11/07/17 14:59	7100837	CSW
Calcium	40.4	25.0	2.02	mg/L	EPA 6020B		50	10/31/17 11:15	11/06/17 17:25	7100837	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:19	7100837	CSW
Cobalt	0.0022	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 17:19	7100837	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:19	7100837	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:19	7100837	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:19	7100837	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:19	7100837	CSW
Lithium	0.0043	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 17:19	7100837	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/03/17 09:50	11/03/17 12:54	7110070	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0956
Client ID: DGWC-68A
Date/Time Sampled: 10/26/2017 12:00:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0956-12
Date/Time Received: 10/27/2017 11:00:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	287	25	10	mg/L	SM 2540 C		1	11/01/17 15:45	11/01/17 15:45	7110011	JPT
Inorganic Anions											
Chloride	4.4	0.25	0.02	mg/L	EPA 300.0		1	11/02/17 18:04	11/03/17 19:39	7110072	RLC
Fluoride	0.11	0.30	0.03	mg/L	EPA 300.0	J	1	11/06/17 14:29	11/07/17 04:51	7110147	RLC
Sulfate	48	1.0	0.02	mg/L	EPA 300.0		1	11/02/17 18:04	11/03/17 19:39	7110072	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:30	7100837	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:30	7100837	CSW
Barium	0.0878	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:30	7100837	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:30	7100837	CSW
Boron	2.05	0.0400	0.0060	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:30	7100837	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/31/17 11:15	11/07/17 15:05	7100837	CSW
Calcium	48.2	25.0	2.02	mg/L	EPA 6020B		50	10/31/17 11:15	11/06/17 17:36	7100837	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:30	7100837	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:30	7100837	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:30	7100837	CSW
Molybdenum	0.226	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:30	7100837	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:30	7100837	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:30	7100837	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 17:30	7100837	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/03/17 09:50	11/03/17 12:57	7110070	MTC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0956
Client ID: DGWC-69
Date/Time Sampled: 10/26/2017 1:20:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0956-13
Date/Time Received: 10/27/2017 11:00:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	234	25	10	mg/L	SM 2540 C		1	11/01/17 15:45	11/01/17 15:45	7110011	JPT
Inorganic Anions											
Chloride	4.2	0.25	0.02	mg/L	EPA 300.0		1	11/02/17 18:04	11/03/17 20:25	7110072	RLC
Fluoride	0.29	0.30	0.03	mg/L	EPA 300.0	J	1	11/06/17 14:29	11/07/17 05:12	7110147	RLC
Sulfate	31	1.0	0.02	mg/L	EPA 300.0		1	11/02/17 18:04	11/03/17 20:25	7110072	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 18:19	7100837	CSW
Arsenic	0.114	0.0050	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 18:19	7100837	CSW
Barium	0.136	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 18:19	7100837	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 18:19	7100837	CSW
Boron	0.779	0.0400	0.0060	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 18:19	7100837	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/31/17 11:15	11/07/17 15:11	7100837	CSW
Calcium	33.3	25.0	2.02	mg/L	EPA 6020B		50	10/31/17 11:15	11/06/17 18:25	7100837	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 18:19	7100837	CSW
Cobalt	0.0031	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 18:19	7100837	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 18:19	7100837	CSW
Molybdenum	0.0244	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 18:19	7100837	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 18:19	7100837	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/31/17 11:15	11/06/17 18:19	7100837	CSW
Lithium	0.0034	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/31/17 11:15	11/06/17 18:19	7100837	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/03/17 09:50	11/03/17 12:59	7110070	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0956

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7110011 - SM 2540 C											
Blank (7110011-BLK1)						Prepared & Analyzed: 11/01/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7110011-BS1)						Prepared & Analyzed: 11/01/17					
Total Dissolved Solids	411	25	10	mg/L	400.00		103	84-108			
Duplicate (7110011-DUP1)		**Source: AAJ0956-04**				Prepared & Analyzed: 11/01/17					
Total Dissolved Solids	507	25	10	mg/L		532			5	10	
Duplicate (7110011-DUP2)		**Source: AAJ0956-09**				Prepared & Analyzed: 11/01/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Batch 7110090 - SM 2540 C											
Blank (7110090-BLK1)						Prepared & Analyzed: 11/03/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7110090-BS1)						Prepared & Analyzed: 11/03/17					
Total Dissolved Solids	381	25	10	mg/L	400.00		95	84-108			
Duplicate (7110090-DUP1)		**Source: AAJ0956-10RE1**				Prepared & Analyzed: 11/03/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2017

Report No.: AAJ0956

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7110072 - EPA 300.0											
Blank (7110072-BLK1)						Prepared: 11/02/17 Analyzed: 11/03/17					
Chloride	ND	0.25	0.02	mg/L							
Sulfate	ND	1.0	0.02	mg/L							
LCS (7110072-BS1)						Prepared: 11/02/17 Analyzed: 11/03/17					
Chloride	11.0	0.25	0.02	mg/L	10.020		110	90-110			
Sulfate	11.0	1.0	0.02	mg/L	10.050		110	90-110			
Matrix Spike (7110072-MS1)		**Source: AAJ0956-04**				Prepared: 11/02/17 Analyzed: 11/03/17					
Chloride	18.4	0.25	0.02	mg/L	10.020	8.26	101	90-110			
Sulfate	166	1.0	0.02	mg/L	10.050	173	NR	90-110			QM-02
Matrix Spike (7110072-MS2)		**Source: AAJ0956-12**				Prepared: 11/02/17 Analyzed: 11/03/17					
Chloride	14.7	0.25	0.02	mg/L	10.020	4.35	104	90-110			
Sulfate	52.9	1.0	0.02	mg/L	10.050	47.6	53	90-110			QM-02
Matrix Spike Dup (7110072-MSD1)		**Source: AAJ0956-04**				Prepared: 11/02/17 Analyzed: 11/03/17					
Chloride	18.5	0.25	0.02	mg/L	10.020	8.26	102	90-110	0.4	15	
Sulfate	166	1.0	0.02	mg/L	10.050	173	NR	90-110	0.1	15	QM-02
Batch 7110147 - EPA 300.0											
Blank (7110147-BLK1)						Prepared & Analyzed: 11/06/17					
Chloride	ND	0.25	0.02	mg/L							
Fluoride	ND	0.30	0.03	mg/L							
Sulfate	0.03	1.0	0.02	mg/L							J
LCS (7110147-BS1)						Prepared & Analyzed: 11/06/17					
Chloride	10.5	0.25	0.02	mg/L	10.000		105	90-110			
Fluoride	10.3	0.30	0.03	mg/L	10.000		103	90-110			
Sulfate	10.5	1.0	0.02	mg/L	10.000		105	90-110			

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November 08, 2017

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Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7110147 - EPA 300.0											
Matrix Spike (7110147-MS1)			**Source: AAJ0956-02RE2**			Prepared & Analyzed: 11/06/17					
Chloride	16.5	0.25	0.02	mg/L	10.000	6.44	100	90-110			
Fluoride	10.4	0.30	0.03	mg/L	10.000	0.08	103	90-110			
Sulfate	95.2	1.0	0.02	mg/L	10.000	95.2	NR	90-110			
Matrix Spike (7110147-MS2)			**Source: AAJ0956-06RE2**			Prepared: 11/06/17 Analyzed: 11/07/17					
Chloride	16.6	0.25	0.02	mg/L	10.000	8.59	80	90-110			
Fluoride	13.9	0.30	0.03	mg/L	10.000	1.00	129	90-110			QM-05
Sulfate	204	1.0	0.02	mg/L	10.000	217	NR	90-110			
Matrix Spike Dup (7110147-MSD1)			**Source: AAJ0956-02RE2**			Prepared & Analyzed: 11/06/17					
Chloride	16.7	0.25	0.02	mg/L	10.000	6.44	103	90-110	1	15	
Fluoride	10.8	0.30	0.03	mg/L	10.000	0.08	107	90-110	4	15	
Sulfate	95.3	1.0	0.02	mg/L	10.000	95.2	1	90-110	0.2	15	

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Report No.: AAJ0956

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100837 - EPA 3005A											
Blank (7100837-BLK1)						Prepared: 10/31/17 Analyzed: 11/06/17					
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 (7100837-BS1)						Prepared: 10/31/17 Analyzed: 11/06/17					
Antimony	0.102	0.0030	0.0006	mg/L	0.10000		102	80-120			
Arsenic	0.0990	0.0050	0.0005	mg/L	0.10000		99	80-120			
Barium	0.0999	0.0100	0.0004	mg/L	0.10000		100	80-120			
Beryllium	0.0988	0.0030	0.00009	mg/L	0.10000		99	80-120			
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000		101	80-120			
Chromium	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Cobalt	0.0993	0.0100	0.0003	mg/L	0.10000		99	80-120			
Copper	0.0999	0.0250	0.0003	mg/L	0.10000		100	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	0.105	0.0100	0.0018	mg/L	0.10000		105	80-120			
Silver	0.0993	0.0100	0.0002	mg/L	0.10000		99	80-120			
Thallium	0.101	0.0010	0.00005	mg/L	0.10000		101	80-120			
Vanadium	0.100	0.0100	0.0012	mg/L	0.10000		100	80-120			
Zinc	0.102	0.0100	0.0012	mg/L	0.10000		102	80-120			
Lithium	0.104	0.0500	0.0015	mg/L	0.10000		104	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
Batch 7100837 - EPA 3005A											
Matrix Spike (7100837-MS1)		**Source: AAJ0956-13**				Prepared: 10/31/17 Analyzed: 11/06/17					
Antimony	0.100	0.0030	0.0006	mg/L	0.10000	ND	100	75-125			
Arsenic	0.210	0.0050	0.0005	mg/L	0.10000	0.114	96	75-125			
Barium	0.224	0.0100	0.0004	mg/L	0.10000	0.136	88	75-125			
Beryllium	0.0914	0.0030	0.00009	mg/L	0.10000	ND	91	75-125			
Cadmium	0.103	0.0010	0.0001	mg/L	0.10000	ND	103	75-125			
Chromium	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125			
Cobalt	0.103	0.0100	0.0003	mg/L	0.10000	0.0031	100	75-125			
Copper	0.0980	0.0250	0.0003	mg/L	0.10000	0.0008	97	75-125			
Lead	0.0986	0.0050	0.00007	mg/L	0.10000	ND	99	75-125			
Nickel	0.103	0.0100	0.0005	mg/L	0.10000	0.0022	101	75-125			
Selenium	0.103	0.0100	0.0018	mg/L	0.10000	ND	103	75-125			
Silver	0.0946	0.0100	0.0002	mg/L	0.10000	ND	95	75-125			
Thallium	0.100	0.0010	0.00005	mg/L	0.10000	ND	100	75-125			
Vanadium	0.102	0.0100	0.0012	mg/L	0.10000	ND	102	75-125			
Zinc	0.102	0.0100	0.0012	mg/L	0.10000	ND	102	75-125			
Lithium	0.0973	0.0500	0.0015	mg/L	0.10000	0.0034	94	75-125			
Matrix Spike Dup (7100837-MSD1)		**Source: AAJ0956-13**				Prepared: 10/31/17 Analyzed: 11/06/17					
Antimony	0.102	0.0030	0.0006	mg/L	0.10000	ND	102	75-125	2	20	
Arsenic	0.211	0.0050	0.0005	mg/L	0.10000	0.114	98	75-125	0.7	20	
Barium	0.232	0.0100	0.0004	mg/L	0.10000	0.136	96	75-125	3	20	
Beryllium	0.0904	0.0030	0.00009	mg/L	0.10000	ND	90	75-125	1	20	
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000	ND	101	75-125	2	20	
Chromium	0.0976	0.0100	0.0005	mg/L	0.10000	ND	98	75-125	3	20	
Cobalt	0.0989	0.0100	0.0003	mg/L	0.10000	0.0031	96	75-125	4	20	
Copper	0.0986	0.0250	0.0003	mg/L	0.10000	0.0008	98	75-125	0.6	20	
Lead	0.0974	0.0050	0.00007	mg/L	0.10000	ND	97	75-125	1	20	
Nickel	0.100	0.0100	0.0005	mg/L	0.10000	0.0022	98	75-125	3	20	
Selenium	0.102	0.0100	0.0018	mg/L	0.10000	ND	102	75-125	1	20	
Silver	0.0963	0.0100	0.0002	mg/L	0.10000	ND	96	75-125	2	20	
Thallium	0.0995	0.0010	0.00005	mg/L	0.10000	ND	100	75-125	0.5	20	
Vanadium	0.0972	0.0100	0.0012	mg/L	0.10000	ND	97	75-125	5	20	
Zinc	0.101	0.0100	0.0012	mg/L	0.10000	ND	101	75-125	1	20	
Lithium	0.0965	0.0500	0.0015	mg/L	0.10000	0.0034	93	75-125	0.8	20	

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November 08, 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
Batch 7100837 - EPA 3005A											
Post Spike (7100837-PS1)			**Source: AAJ0956-13**			Prepared: 10/31/17 Analyzed: 11/06/17					
Antimony	103			ug/L	100.00	0.0615	103	80-120			
Arsenic	213			ug/L	100.00	114	100	80-120			
Barium	228			ug/L	100.00	136	92	80-120			
Beryllium	87.8			ug/L	100.00	0.0619	88	80-120			
Cadmium	101			ug/L	100.00	0.0600	101	80-120			
Chromium	102			ug/L	100.00	0.189	102	80-120			
Cobalt	101			ug/L	100.00	3.05	98	80-120			
Copper	101			ug/L	100.00	0.816	100	80-120			
Lead	96.8			ug/L	100.00	0.0604	97	80-120			
Nickel	103			ug/L	100.00	2.25	101	80-120			
Selenium	104			ug/L	100.00	0.589	104	80-120			
Silver	96.6			ug/L	100.00	0.0063	97	80-120			
Thallium	97.6			ug/L	100.00	0.0036	98	80-120			
Vanadium	102			ug/L	100.00	-0.659	102	80-120			
Zinc	105			ug/L	100.00	0.989	104	80-120			
Lithium	93.2			ug/L	100.00	3.39	90	80-120			
Batch 7110070 - EPA 7470A											
Blank (7110070-BLK1)						Prepared & Analyzed: 11/03/17					
Mercury	ND	0.00050	0.000036	mg/L							
LCS (7110070-BS1)						Prepared & Analyzed: 11/03/17					
Mercury	0.00230	0.00050	0.000036	mg/L	2.5000E-3		92	80-120			
Matrix Spike (7110070-MS1)			**Source: AAJ0956-01**			Prepared & Analyzed: 11/03/17					
Mercury	0.00227	0.00050	0.000036	mg/L	2.5000E-3	0.00012	86	75-125			

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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7110070 - EPA 7470A											
Matrix Spike Dup (7110070-MSD1)		**Source: AAJ0956-01**			Prepared & Analyzed: 11/03/17						
Mercury	0.00219	0.00050	0.000036	mg/L	2.5000E-3	0.00012	83	75-125	4	20	
Post Spike (7110070-PS1)		**Source: AAJ0956-01**			Prepared & Analyzed: 11/03/17						
Mercury	1.58			ug/L	1.6667	0.0779	90	80-120			

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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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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).

H-02 Sample was prepared and/or analyzed outside of the EPA recommended holding time. See Case Narrative.

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

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com

CC: Maria Padilla kjurinko@golder.com

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 3020/7470)	Cl, F, SO4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P							
PRESERVATION:								3	7	3							
10/26/17	1005	GW		x	DGWC-23	4		1	1	2						1	
10/26/17	1105	GW		x	DGWC-37	6		1	1	4						2	Extra Radium
10/26/17	1330	GW		x	DGWC-38	4		1	1	2						3	
10/26/17	1440	GW		x	DGWC-39	4		1	1	2						4	
10/26/17	1205	GW		x	DGWC-40	4		1	1	2						5	
10/26/17	1335	GW		x	DGWC-47	4		1	1	2						6	
10/26/17	1520	GW		x	DGWC-48	4		1	1	2						7	
10/26/17	--	GW		x	FD-3	4		1	1	2						8	
10/26/17	0950	W		x	FB-3	4		1	1	2						9	
10/26/17	1450	W		x	EB-3	4		1	1	2						10	
10/26/17	1005	GW		x	DGWC-67	4		1	1	2						11	
10/26/17	1200	GW		x	DGWC-68A	4		1	1	2						12	
10/26/17	1320	GW		x	DGWC-69	4		1	1	2						13	

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Ben Hodges / Field Lead — DATE/TIME: 10/27/17 0915

RECEIVED BY: Mike Nguyen — DATE/TIME: 10/27/17 0915

RECEIVED BY LAB: Waltman — DATE/TIME: 10/27/17 1100

RELINQUISHED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

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

Packed: No NA — Ice: Yes No NA — Temperature: Min: 0 Max: 13

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

FOR LAB USE ONLY
LAB #: AAJ0956
Entered Into LIMS: MK
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project # AAJ09566

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

Optional: Proj. Due Date: Proj. Name:

Tracking #: _____

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

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

Thermometer Used IR-4 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.3 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 10/27/17 MR

Temp should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

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

PACE ANALYTICAL SERVICES, LLC.

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

LOG-IN CHECKLIST

Printed: 10/30/2017 7:47:38AM

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 10/27/17 11:00

Work Order: AAJ0956
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 13 **#Containers:** 54

Minimum Temp(C): 0.3 **Maximum Temp(C):** 0.3 **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

November 13, 2017

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: AAJ0956 Plant McDonough
Pace Project No.: 30234467

Dear Mr. Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 30, 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

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

CERTIFICATIONS

Project: AAJ0956 Plant McDonough
Pace Project No.: 30234467

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

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

SAMPLE SUMMARY

Project: AAJ0956 Plant McDonough
Pace Project No.: 30234467

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30234467001	**DGWC-23**	Water	10/26/17 10:05	10/30/17 09:30
30234467002	**DGWC-37**	Water	10/26/17 11:05	10/30/17 09:30
30234467003	**DGWC-38**	Water	10/26/17 13:30	10/30/17 09:30
30234467004	**DGWC-39**	Water	10/26/17 14:40	10/30/17 09:30
30234467005	**DGWC-40**	Water	10/26/17 12:05	10/30/17 09:30
30234467006	**DGWC-47**	Water	10/26/17 13:35	10/30/17 09:30
30234467007	**DGWC-48**	Water	10/26/17 15:20	10/30/17 09:30
30234467008	**FD-3**	Water	10/26/17 00:00	10/30/17 09:30
30234467009	**FB-3**	Water	10/26/17 09:50	10/30/17 09:30
30234467010	**EB-3**	Water	10/26/17 14:50	10/30/17 09:30
30234467011	**DGWC-67**	Water	10/26/17 10:05	10/30/17 09:30
30234467012	**DGWC-68A**	Water	10/26/17 12:00	10/30/17 09:30
30234467013	**DGWC-69**	Water	10/26/17 13:20	10/30/17 09:30

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: AAJ0956 Plant McDonough
Pace Project No.: 30234467

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30234467001	DGWC-23	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234467002	DGWC-37	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234467003	DGWC-38	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234467004	DGWC-39	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234467005	DGWC-40	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234467006	DGWC-47	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234467007	DGWC-48	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234467008	FD-3	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234467009	FB-3	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234467010	EB-3	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234467011	DGWC-67	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234467012	DGWC-68A	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30234467013	DGWC-69	EPA 9315	LAL	1

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: AAJ0956 Plant McDonough
Pace Project No.: 30234467

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0956 Plant McDonough
Pace Project No.: 30234467

Sample: DGWC-23 **Lab ID: 30234467001** Collected: 10/26/17 10:05 Received: 10/30/17 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	**0.468 ± 0.274 (0.417) C:93% T:NA**	pCi/L	11/03/17 09:25	13982-63-3	
Radium-228	EPA 9320	**0.516 ± 0.395 (0.781) C:82% T:79%**	pCi/L	11/06/17 11:50	15262-20-1	
Total Radium	Total Radium Calculation	**0.984 ± 0.669 (1.20)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: DGWC-37 **Lab ID: 30234467002** Collected: 10/26/17 11:05 Received: 10/30/17 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	**0.607 ± 0.288 (0.354) C:94% T:NA**	pCi/L	11/03/17 09:25	13982-63-3	
Radium-228	EPA 9320	**0.428 ± 0.360 (0.719) C:80% T:85%**	pCi/L	11/06/17 11:51	15262-20-1	
Total Radium	Total Radium Calculation	**1.04 ± 0.648 (1.07)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: DGWC-38 **Lab ID: 30234467003** Collected: 10/26/17 13:30 Received: 10/30/17 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	**0.420 ± 0.285 (0.492) C:94% T:NA**	pCi/L	11/03/17 09:25	13982-63-3	
Radium-228	EPA 9320	**0.714 ± 0.434 (0.812) C:82% T:76%**	pCi/L	11/06/17 11:50	15262-20-1	
Total Radium	Total Radium Calculation	**1.13 ± 0.719 (1.30)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: DGWC-39 **Lab ID: 30234467004** Collected: 10/26/17 14:40 Received: 10/30/17 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	**0.560 ± 0.285 (0.378) C:92% T:NA**	pCi/L	11/03/17 09:26	13982-63-3	
Radium-228	EPA 9320	**0.315 ± 0.326 (0.674) C:83% T:83%**	pCi/L	11/06/17 11:51	15262-20-1	
Total Radium	Total Radium Calculation	**0.875 ± 0.611 (1.05)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: DGWC-40 **Lab ID: 30234467005** Collected: 10/26/17 12:05 Received: 10/30/17 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	**0.661 ± 0.311 (0.385) C:91% T:NA**	pCi/L	11/03/17 09:26	13982-63-3	
Radium-228	EPA 9320	**0.0869 ± 0.383 (0.871) C:82% T:73%**	pCi/L	11/06/17 11:51	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0956 Plant McDonough
Pace Project No.: 30234467

Sample: DGWC-40 **Lab ID: 30234467005** Collected: 10/26/17 12:05 Received: 10/30/17 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.748 ± 0.694 (1.26)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: DGWC-47 **Lab ID: 30234467006** Collected: 10/26/17 13:35 Received: 10/30/17 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	**1.73 ± 0.511 (0.358) C:92% T:NA**	pCi/L	11/03/17 09:26	13982-63-3	
Radium-228	EPA 9320	**1.15 ± 0.503 (0.868) C:86% T:85%**	pCi/L	11/06/17 15:39	15262-20-1	
Total Radium	Total Radium Calculation	**2.88 ± 1.01 (1.23)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: DGWC-48 **Lab ID: 30234467007** Collected: 10/26/17 15:20 Received: 10/30/17 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	**1.66 ± 0.493 (0.394) C:95% T:NA**	pCi/L	11/03/17 09:26	13982-63-3	
Radium-228	EPA 9320	**2.08 ± 0.611 (0.772) C:87% T:84%**	pCi/L	11/06/17 15:39	15262-20-1	
Total Radium	Total Radium Calculation	**3.74 ± 1.10 (1.17)**	pCi/L	11/13/17 13:04	7440-14-4	

Sample: FD-3 **Lab ID: 30234467008** Collected: 10/26/17 00:00 Received: 10/30/17 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	**0.493 ± 0.286 (0.444) C:89% T:NA**	pCi/L	11/03/17 09:26	13982-63-3	
Radium-228	EPA 9320	**0.525 ± 0.449 (0.920) C:87% T:85%**	pCi/L	11/06/17 15:39	15262-20-1	
Total Radium	Total Radium Calculation	**1.02 ± 0.735 (1.36)**	pCi/L	11/13/17 13:11	7440-14-4	

Sample: FB-3 **Lab ID: 30234467009** Collected: 10/26/17 09:50 Received: 10/30/17 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	**0.171 ± 0.201 (0.415) C:95% T:NA**	pCi/L	11/03/17 09:26	13982-63-3	
Radium-228	EPA 9320	**0.318 ± 0.432 (0.927) C:85% T:78%**	pCi/L	11/06/17 15:39	15262-20-1	
Total Radium	Total Radium Calculation	**0.489 ± 0.633 (1.34)**	pCi/L	11/13/17 13:11	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0956 Plant McDonough
Pace Project No.: 30234467

Sample: EB-3 **Lab ID: 30234467010** Collected: 10/26/17 14:50 Received: 10/30/17 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	**0.181 ± 0.187 (0.363) C:94% T:NA**	pCi/L	11/03/17 09:26	13982-63-3	
Radium-228	EPA 9320	**1.09 ± 0.505 (0.878) C:86% T:78%**	pCi/L	11/06/17 15:39	15262-20-1	
Total Radium	Total Radium Calculation	**1.27 ± 0.692 (1.24)**	pCi/L	11/13/17 13:11	7440-14-4	

Sample: DGWC-67 **Lab ID: 30234467011** Collected: 10/26/17 10:05 Received: 10/30/17 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	**0.333 ± 0.266 (0.493) C:92% T:NA**	pCi/L	11/03/17 09:27	13982-63-3	
Radium-228	EPA 9320	**0.286 ± 0.382 (0.815) C:84% T:76%**	pCi/L	11/06/17 15:43	15262-20-1	
Total Radium	Total Radium Calculation	**0.619 ± 0.648 (1.31)**	pCi/L	11/13/17 13:11	7440-14-4	

Sample: DGWC-68A **Lab ID: 30234467012** Collected: 10/26/17 12:00 Received: 10/30/17 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	**0.477 ± 0.260 (0.341) C:89% T:NA**	pCi/L	11/03/17 09:27	13982-63-3	
Radium-228	EPA 9320	**-0.0971 ± 0.263 (0.633) C:86% T:93%**	pCi/L	11/06/17 15:43	15262-20-1	
Total Radium	Total Radium Calculation	**0.477 ± 0.523 (0.974)**	pCi/L	11/13/17 13:11	7440-14-4	

Sample: DGWC-69 **Lab ID: 30234467013** Collected: 10/26/17 13:20 Received: 10/30/17 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	**1.46 ± 0.458 (0.409) C:96% T:NA**	pCi/L	11/03/17 09:27	13982-63-3	
Radium-228	EPA 9320	**0.575 ± 0.372 (0.699) C:85% T:84%**	pCi/L	11/06/17 15:43	15262-20-1	
Total Radium	Total Radium Calculation	**2.04 ± 0.830 (1.11)**	pCi/L	11/13/17 13:11	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAJ0956 Plant McDonough
Pace Project No.: 30234467

QC Batch: 277299 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30234467001, 30234467002, 30234467003, 30234467004, 30234467005, 30234467006, 30234467007, 30234467008, 30234467009, 30234467010, 30234467011, 30234467012, 30234467013

METHOD BLANK: 1363109 Matrix: Water
Associated Lab Samples: 30234467001, 30234467002, 30234467003, 30234467004, 30234467005, 30234467006, 30234467007, 30234467008, 30234467009, 30234467010, 30234467011, 30234467012, 30234467013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.133 ± 0.339 (0.757) C:85% T:74%	pCi/L	11/06/17 11:51	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAJ0956 Plant McDonough
Pace Project No.: 30234467

QC Batch: 277298 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30234467001, 30234467002, 30234467003, 30234467004, 30234467005, 30234467006, 30234467007, 30234467008, 30234467009, 30234467010, 30234467011, 30234467012, 30234467013

METHOD BLANK: 1363108 Matrix: Water
Associated Lab Samples: 30234467001, 30234467002, 30234467003, 30234467004, 30234467005, 30234467006, 30234467007, 30234467008, 30234467009, 30234467010, 30234467011, 30234467012, 30234467013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.304 ± 0.210 (0.324) C:97% T:NA	pCi/L	11/03/17 09:24	

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

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

QUALIFIERS

Project: AAJ0956 Plant McDonough
Pace Project No.: 30234467

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.

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAJ0956 Workorder Name: Plant McDonough Owner Received Date: 10/27/2017 Results Requested By: 11/21/2017

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

WO# : 30234467

30234467

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	DGWC-23	G	10/26/2017 10:05	AAJ0956-01	GW	2	X	001
2	DGWC-37	G	10/26/2017 11:05	AAJ0956-02	GW	4	X	002
3	DGWC-38	G	10/26/2017 13:30	AAJ0956-03	GW	2	X	003
4	DGWC-39	G	10/26/2017 14:40	AAJ0956-04	GW	2	X	004
5	DGWC-40	G	10/26/2017 12:05	AAJ0956-05	GW	2	X	005
6	DGWC-47	G	10/26/2017 13:35	AAJ0956-06	GW	2	X	006
7	DGWC-48	G	10/26/2017 15:20	AAJ0956-07	GW	2	X	007
8	FD-3	G	10/26/2017 0:00	AAJ0956-08	GW	2	X	008
9	FB-3	G	10/26/2017 9:50	AAJ0956-09	W	2	X	009
10	EB-3	G	10/26/2017 14:50	AAJ0956-10	W	2	X	010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	10/27/17	Ashleen Rahkao	10-30-17 0930	
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

Pace Analytical
www.pacelabs.com

Workorder: AAJ0956 Workorder Name: Plant McDonough Owner Received Date: 10/27/2017 Results Requested By: 11/21/2017

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: HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
11	DGWC-67	G	10/26/2017 10:05	AAJ0956-11	GW	2	X	011
12	DGWC-68A	G	10/26/2017 12:00	AAJ0956-12	GW	2	X	012
13	DGWC-69	G	10/26/2017 13:20	AAJ0956-13	GW	2	X	013
14								
15								
16								
17								
18								
19								
20								

30234467

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	10/27/17	Ashleigh Kamp Pace	10-30-17/0920	
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.

Sample Condition Upon Receipt

30234467

Pace Analytical

Client Name: GA Power Project # AAJ09856

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

Tracking #: ____

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 0.3 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 10/27/17 MR

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

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

Person Contacted: ____ Date/Time: ____

Comments/ Resolution: ____

Project Manager Review: ____ **Date:** ____

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

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Pace, GA Project # 30234467

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

Label BLM

Tracking #: 7413 6659 5244 LIMS Login ANV

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: AM 10-30-17

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: -Includes date/time/ID Matrix: WT	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 X			10.
Containers Intact:	X			11.
Orthophosphate field filtered			X	12.
Hex Cr Aqueous Compliance/NPDES sample field filtered			X	13.
Organic Samples checked for dechlorination:			X	14.
Filtered volume received for Dissolved tests			X	15.
All containers have been checked for preservation. All containers needing preservation are found to be in compliance with EPA recommendation.	X X			16.
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed AM; Date/time of preservation; Lot # of added preservative
Headspace in VOA Vials (>6mm):			X	17.
Trip Blank Present:		X		18.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: AM Date: 10-30-17

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

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	LAL
Date:	11/2/2017
Worklist:	38483
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1363108
MB concentration:	0.304
M/B Counting Uncertainty:	0.205
MB MDC:	0.324
MB Numerical Performance Indicator:	2.91
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS38483	LCSD38483
Count Date:	11/3/2017	
Spike I.D.:	17-030	
Spike Concentration (pCi/mL):	80.188	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.520	
Target Conc. (pCi/L, g, F):	15.432	
Uncertainty (Calculated):	1.422	
Result (pCi/L, g, F):	12.579	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.073	
Numerical Performance Indicator:	-3.14	
Percent Recovery:	81.51%	
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:	
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.:	30234467002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30234467002DUP	
Sample Result (pCi/L, g, F):	0.607	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.273	
Sample Duplicate Result (pCi/L, g, F):	0.573	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.320	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.155	30234467002
Duplicate RPD:	5.63%	30234467002DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:

11/13/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JLW
Date:	11/2/2017
Worklist:	38484
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1363109
MB concentration:	0.133
M/B Counting Uncertainty:	0.338
MB MDC:	0.757
MB Numerical Performance Indicator:	0.77
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS38484	LCSD38484
Count Date:	11/6/2017	
Spike I.D.:	17-033	
Spike Concentration (pCi/mL):	23.099	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.803	
Target Conc. (pCi/L, g, F):	5.751	
Uncertainty (Calculated):	0.414	
Result (pCi/L, g, F):	5.828	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.747	
Numerical Performance Indicator:	0.18	
Percent Recovery:	101.33%	
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:	
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.:	30234467002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30234467002DUP	
Sample Result (pCi/L, g, F):	0.428	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.352	
Sample Duplicate Result (pCi/L, g, F):	0.213	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.317	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.891	30234467002
Duplicate RPD:	67.21%	30234467002DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	OK

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:	

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.

11/13/17

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: AAK0586
November 22, 2017
Project: CCR Event
Project #:Plant McDonough

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

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

November 22, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DGWA-53	AAK0586-01	Ground Water	11/15/17 15:25	11/16/17 10:10
DGWA-71	AAK0586-02	Ground Water	11/15/17 11:05	11/16/17 10:10
FB-1	AAK0586-03	Water	11/15/17 10:45	11/16/17 10:10
DGWC-4	AAK0586-04	Ground Water	11/15/17 10:20	11/16/17 10:10
FD-1	AAK0586-05	Ground Water	11/15/17 00:00	11/16/17 10:10
DGWC-10	AAK0586-06	Ground Water	11/15/17 11:35	11/16/17 10:10
DGWC-13	AAK0586-07	Ground Water	11/15/17 15:45	11/16/17 10:10
DGWC-69	AAK0586-08	Ground Water	11/15/17 13:35	11/16/17 10:10

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 22, 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.

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 22, 2017

Report No.: AAK0586
Client ID: DGWA-53
Date/Time Sampled: 11/15/2017 3:25:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAK0586-01
Date/Time Received: 11/16/2017 10:10:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	241	25	10	mg/L	SM 2540 C		1	11/20/17 16:40	11/20/17 16:40	7110570	JPT
Inorganic Anions											
Chloride	2.2	0.25	0.02	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 10:31	7110553	RLC
Fluoride	0.05	0.30	0.03	mg/L	EPA 300.0	J	1	11/20/17 09:03	11/21/17 10:31	7110553	RLC
Sulfate	3.8	1.0	0.02	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 10:31	7110553	RLC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

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November 22, 2017

Report No.: AAK0586
Client ID: DGWA-71
Date/Time Sampled: 11/15/2017 11:05:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAK0586-02
Date/Time Received: 11/16/2017 10:10:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	90	25	10	mg/L	SM 2540 C		1	11/20/17 16:40	11/20/17 16:40	7110570	JPT
Inorganic Anions											
Chloride	3.1	0.25	0.02	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 12:38	7110553	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 12:38	7110553	RLC
Sulfate	7.8	1.0	0.02	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 12:38	7110553	RLC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 22, 2017

Report No.: AAK0586
Client ID: FB-1
Date/Time Sampled: 11/15/2017 10:45:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAK0586-03
Date/Time Received: 11/16/2017 10:10:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	11/20/17 16:40	11/20/17 16:40	7110570	JPT
Inorganic Anions											
Chloride	ND	0.25	0.02	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 12:59	7110553	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 12:59	7110553	RLC
Sulfate	ND	1.0	0.02	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 12:59	7110553	RLC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 22, 2017

Report No.: AAK0586
Client ID: DGWC-4
Date/Time Sampled: 11/15/2017 10:20:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAK0586-04
Date/Time Received: 11/16/2017 10:10:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1330	25	10	mg/L	SM 2540 C		1	11/20/17 16:40	11/20/17 16:40	7110570	JPT
Inorganic Anions											
Chloride	27	0.25	0.02	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 13:21	7110553	RLC
Fluoride	0.79	0.30	0.03	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 13:21	7110553	RLC
Sulfate	820	25	0.42	mg/L	EPA 300.0		25	11/20/17 09:03	11/21/17 17:35	7110553	RLC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 22, 2017

Report No.: AAK0586
Client ID: FD-1
Date/Time Sampled: 11/15/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAK0586-05
Date/Time Received: 11/16/2017 10:10:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1350	25	10	mg/L	SM 2540 C		1	11/20/17 16:40	11/20/17 16:40	7110570	JPT
Inorganic Anions											
Chloride	29	0.25	0.02	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 13:42	7110553	RLC
Fluoride	1.5	0.30	0.03	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 13:42	7110553	RLC
Sulfate	830	25	0.42	mg/L	EPA 300.0		25	11/20/17 09:03	11/21/17 17:56	7110553	RLC

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 22, 2017

Report No.: AAK0586
Client ID: DGWC-10
Date/Time Sampled: 11/15/2017 11:35:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAK0586-06
Date/Time Received: 11/16/2017 10:10:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	582	25	10	mg/L	SM 2540 C		1	11/20/17 16:40	11/20/17 16:40	7110570	JPT
Inorganic Anions											
Chloride	12	0.25	0.02	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 14:03	7110553	RLC
Fluoride	1.4	0.30	0.03	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 14:03	7110553	RLC
Sulfate	390	20	0.34	mg/L	EPA 300.0		20	11/20/17 09:03	11/21/17 18:18	7110553	RLC

PACE ANALYTICAL SERVICES, LLC.

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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 22, 2017

Report No.: AAK0586
Client ID: DGWC-13
Date/Time Sampled: 11/15/2017 3:45:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAK0586-07
Date/Time Received: 11/16/2017 10:10:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	325	25	10	mg/L	SM 2540 C		1	11/20/17 16:40	11/20/17 16:40	7110570	JPT
Inorganic Anions											
Chloride	16	0.25	0.02	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 14:24	7110553	RLC
Fluoride	0.44	0.30	0.03	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 14:24	7110553	RLC
Sulfate	180	20	0.34	mg/L	EPA 300.0		20	11/20/17 09:03	11/21/17 18:39	7110553	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:13	7110503	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:13	7110503	CSW
Barium	0.0309	0.0100	0.0004	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:13	7110503	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:13	7110503	CSW
Boron	0.795	0.0400	0.0060	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:13	7110503	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:13	7110503	CSW
Calcium	49.3	25.0	2.02	mg/L	EPA 6020B		50	11/17/17 10:15	11/21/17 23:19	7110503	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:13	7110503	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:13	7110503	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:13	7110503	CSW
Molybdenum	0.0275	0.0100	0.0010	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:13	7110503	CSW
Selenium	0.0019	0.0100	0.0018	mg/L	EPA 6020B	J	1	11/17/17 10:15	11/21/17 23:13	7110503	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:13	7110503	CSW
Lithium	0.0028	0.0500	0.0015	mg/L	EPA 6020B	J	1	11/17/17 10:15	11/21/17 23:13	7110503	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/20/17 12:30	11/21/17 12:53	7110549	MTC

PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 22, 2017

Report No.: AAK0586
Client ID: DGWC-69
Date/Time Sampled: 11/15/2017 1:35:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAK0586-08
Date/Time Received: 11/16/2017 10:10:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	188	25	10	mg/L	SM 2540 C		1	11/20/17 16:40	11/20/17 16:40	7110570	JPT
Inorganic Anions											
Chloride	4.7	0.25	0.02	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 14:46	7110553	RLC
Fluoride	0.28	0.30	0.03	mg/L	EPA 300.0	J	1	11/20/17 09:03	11/21/17 14:46	7110553	RLC
Sulfate	29	1.0	0.02	mg/L	EPA 300.0		1	11/20/17 09:03	11/21/17 14:46	7110553	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:24	7110503	CSW
Arsenic	0.164	0.0050	0.0005	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:24	7110503	CSW
Barium	0.107	0.0100	0.0004	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:24	7110503	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:24	7110503	CSW
Boron	0.667	0.0400	0.0060	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:24	7110503	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:24	7110503	CSW
Calcium	30.6	25.0	2.02	mg/L	EPA 6020B		50	11/17/17 10:15	11/21/17 23:30	7110503	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:24	7110503	CSW
Cobalt	0.0028	0.0100	0.0003	mg/L	EPA 6020B	J	1	11/17/17 10:15	11/21/17 23:24	7110503	CSW
Lead	0.00009	0.0050	0.00007	mg/L	EPA 6020B	J	1	11/17/17 10:15	11/21/17 23:24	7110503	CSW
Molybdenum	0.0237	0.0100	0.0010	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:24	7110503	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:24	7110503	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	11/17/17 10:15	11/21/17 23:24	7110503	CSW
Lithium	0.0034	0.0500	0.0015	mg/L	EPA 6020B	J	1	11/17/17 10:15	11/21/17 23:24	7110503	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	11/20/17 12:30	11/21/17 12:55	7110549	MTC

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November 22, 2017

Report No.: AAK0586

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7110570 - SM 2540 C											
Blank (7110570-BLK1)						Prepared & Analyzed: 11/20/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7110570-BS1)						Prepared & Analyzed: 11/20/17					
Total Dissolved Solids	416	25	10	mg/L	400.00		104	84-108			
Duplicate (7110570-DUP1)		**Source: AAK0586-01**				Prepared & Analyzed: 11/20/17					
Total Dissolved Solids	230	25	10	mg/L		241			5	10	
Duplicate (7110570-DUP2)		**Source: AAK0586-03**				Prepared & Analyzed: 11/20/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	

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Report No.: AAK0586

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7110553 - EPA 9056A											
Blank (7110553-BLK1)						Prepared: 11/20/17 Analyzed: 11/21/17					
Chloride	ND	0.25	0.02	mg/L							
Fluoride	ND	0.30	0.03	mg/L							
Sulfate	ND	1.0	0.02	mg/L							
LCS (7110553-BS1)						Prepared: 11/20/17 Analyzed: 11/21/17					
Chloride	11.0	0.25	0.02	mg/L	10.000		110	90-110			
Fluoride	10.6	0.30	0.03	mg/L	10.000		106	90-110			
Sulfate	10.9	1.0	0.02	mg/L	10.000		109	90-110			
Matrix Spike (7110553-MS1)		**Source: AAK0578-03**				Prepared: 11/20/17 Analyzed: 11/21/17					
Chloride	13.6	0.25	0.02	mg/L	10.000	3.09	105	90-110			
Fluoride	11.0	0.30	0.03	mg/L	10.000	ND	110	90-110			
Sulfate	72.8	1.0	0.02	mg/L	10.000	70.1	27	90-110			QM-02
Matrix Spike (7110553-MS2)		**Source: AAK0586-01**				Prepared: 11/20/17 Analyzed: 11/21/17					
Chloride	12.6	0.25	0.02	mg/L	10.000	2.20	104	90-110			
Fluoride	11.0	0.30	0.03	mg/L	10.000	0.05	109	90-110			
Sulfate	13.9	1.0	0.02	mg/L	10.000	3.83	101	90-110			
Matrix Spike Dup (7110553-MSD1)		**Source: AAK0578-03**				Prepared: 11/20/17 Analyzed: 11/21/17					
Chloride	13.6	0.25	0.02	mg/L	10.000	3.09	106	90-110	0.1	15	
Fluoride	11.0	0.30	0.03	mg/L	10.000	ND	110	90-110	0.1	15	
Sulfate	72.9	1.0	0.02	mg/L	10.000	70.1	27	90-110	0.1	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
Batch 7110503 - EPA 3005A											
Blank (7110503-BLK1)						Prepared: 11/17/17 Analyzed: 11/21/17					
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 (7110503-BS1)						Prepared: 11/17/17 Analyzed: 11/21/17					
Antimony	0.104	0.0030	0.0006	mg/L	0.10000		104	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	0.104	0.0030	0.00009	mg/L	0.10000		104	80-120			
Cadmium	0.103	0.0010	0.0001	mg/L	0.10000		103	80-120			
Chromium	0.0990	0.0100	0.0005	mg/L	0.10000		99	80-120			
Cobalt	0.0949	0.0100	0.0003	mg/L	0.10000		95	80-120			
Copper	0.0965	0.0250	0.0003	mg/L	0.10000		96	80-120			
Lead	0.100	0.0050	0.00007	mg/L	0.10000		100	80-120			
Nickel	0.0959	0.0100	0.0005	mg/L	0.10000		96	80-120			
Selenium	0.0994	0.0100	0.0018	mg/L	0.10000		99	80-120			
Silver	0.0943	0.0100	0.0002	mg/L	0.10000		94	80-120			
Thallium	0.103	0.0010	0.00005	mg/L	0.10000		103	80-120			
Vanadium	0.100	0.0100	0.0012	mg/L	0.10000		100	80-120			
Zinc	0.102	0.0100	0.0012	mg/L	0.10000		102	80-120			
Lithium	0.101	0.0500	0.0015	mg/L	0.10000		101	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
Batch 7110503 - EPA 3005A											
Matrix Spike (7110503-MS1)		**Source: AAK0534-01**				Prepared: 11/17/17 Analyzed: 11/21/17					
Antimony	0.107	0.0030	0.0006	mg/L	0.10000	ND	107	75-125			
Arsenic	0.0995	0.0050	0.0005	mg/L	0.10000	ND	99	75-125			
Barium	0.124	0.0100	0.0004	mg/L	0.10000	0.0217	102	75-125			
Beryllium	0.105	0.0030	0.00009	mg/L	0.10000	ND	105	75-125			
Cadmium	0.103	0.0010	0.0001	mg/L	0.10000	ND	103	75-125			
Chromium	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125			
Cobalt	0.0976	0.0100	0.0003	mg/L	0.10000	ND	98	75-125			
Copper	0.0986	0.0250	0.0003	mg/L	0.10000	ND	99	75-125			
Lead	0.106	0.0050	0.00007	mg/L	0.10000	ND	106	75-125			
Nickel	0.0976	0.0100	0.0005	mg/L	0.10000	ND	98	75-125			
Selenium	0.101	0.0100	0.0018	mg/L	0.10000	ND	101	75-125			
Silver	0.0950	0.0100	0.0002	mg/L	0.10000	ND	95	75-125			
Thallium	0.108	0.0010	0.00005	mg/L	0.10000	ND	108	75-125			
Vanadium	0.105	0.0100	0.0012	mg/L	0.10000	ND	105	75-125			
Zinc	0.103	0.0100	0.0012	mg/L	0.10000	ND	103	75-125			
Lithium	0.101	0.0500	0.0015	mg/L	0.10000	ND	101	75-125			
Matrix Spike Dup (7110503-MSD1)		**Source: AAK0534-01**				Prepared: 11/17/17 Analyzed: 11/21/17					
Antimony	0.107	0.0030	0.0006	mg/L	0.10000	ND	107	75-125	0.4	20	
Arsenic	0.0989	0.0050	0.0005	mg/L	0.10000	ND	99	75-125	0.6	20	
Barium	0.124	0.0100	0.0004	mg/L	0.10000	0.0217	102	75-125	0.1	20	
Beryllium	0.103	0.0030	0.00009	mg/L	0.10000	ND	103	75-125	2	20	
Cadmium	0.104	0.0010	0.0001	mg/L	0.10000	ND	104	75-125	0.7	20	
Chromium	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125	0.4	20	
Cobalt	0.0944	0.0100	0.0003	mg/L	0.10000	ND	94	75-125	3	20	
Copper	0.0977	0.0250	0.0003	mg/L	0.10000	ND	98	75-125	1	20	
Lead	0.104	0.0050	0.00007	mg/L	0.10000	ND	104	75-125	1	20	
Nickel	0.0954	0.0100	0.0005	mg/L	0.10000	ND	95	75-125	2	20	
Selenium	0.0976	0.0100	0.0018	mg/L	0.10000	ND	98	75-125	4	20	
Silver	0.0929	0.0100	0.0002	mg/L	0.10000	ND	93	75-125	2	20	
Thallium	0.105	0.0010	0.00005	mg/L	0.10000	ND	105	75-125	2	20	
Vanadium	0.102	0.0100	0.0012	mg/L	0.10000	ND	102	75-125	3	20	
Zinc	0.102	0.0100	0.0012	mg/L	0.10000	ND	102	75-125	2	20	
Lithium	0.0999	0.0500	0.0015	mg/L	0.10000	ND	100	75-125	1	20	

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Report No.: AAK0586

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7110503 - EPA 3005A											
Post Spike (7110503-PS1)			**Source: AAK0534-01**			Prepared: 11/17/17 Analyzed: 11/21/17					
Antimony	105			ug/L	100.00	0.0312	105	80-120			
Arsenic	99.7			ug/L	100.00	-0.252	100	80-120			
Barium	123			ug/L	100.00	21.7	101	80-120			
Beryllium	98.9			ug/L	100.00	0.0069	99	80-120			
Cadmium	101			ug/L	100.00	-0.0009	101	80-120			
Chromium	97.9			ug/L	100.00	0.122	98	80-120			
Cobalt	95.9			ug/L	100.00	0.0083	96	80-120			
Copper	97.3			ug/L	100.00	0.128	97	80-120			
Lead	101			ug/L	100.00	-0.0003	101	80-120			
Nickel	96.2			ug/L	100.00	0.248	96	80-120			
Selenium	99.3			ug/L	100.00	-0.153	99	80-120			
Silver	95.0			ug/L	100.00	-0.0001	95	80-120			
Thallium	103			ug/L	100.00	0.0070	103	80-120			
Vanadium	100			ug/L	100.00	-0.161	100	80-120			
Zinc	102			ug/L	100.00	0.283	102	80-120			
Lithium	101			ug/L	100.00	0.850	100	80-120			
Batch 7110549 - EPA 7470A											
Blank (7110549-BLK1)						Prepared: 11/20/17 Analyzed: 11/21/17					
Mercury	ND	0.00050	0.000036	mg/L							
LCS (7110549-BS1)						Prepared: 11/20/17 Analyzed: 11/21/17					
Mercury	0.00240	0.00050	0.000036	mg/L	2.5000E-3		96	80-120			
Matrix Spike (7110549-MS1)			**Source: AAK0534-02**			Prepared: 11/20/17 Analyzed: 11/21/17					
Mercury	0.00236	0.00050	0.000036	mg/L	2.5000E-3	ND	94	75-125			

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Report No.: AAK0586

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7110549 - EPA 7470A											
Matrix Spike Dup (7110549-MSD1)			**Source: AAK0534-02**			Prepared: 11/20/17 Analyzed: 11/21/17					
Mercury	0.00238	0.00050	0.000036	mg/L	2.5000E-3	ND	95	75-125	1	20	
Post Spike (7110549-PS1)			**Source: AAK0534-02**			Prepared: 11/20/17 Analyzed: 11/21/17					
Mercury	1.66			ug/L	1.6667	-0.0350	99	80-120			

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November 22, 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-Nitrososdiphenylamine. Pace is not NELAC certified for N-Nitrososdiphenylamine.

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.

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: Maria Padilla kjurinko@golder.com
REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: 1668496
Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB ID NUMBER
CONTAINER TYPE:								P	P	P						
PRESERVATION:								3	7	3						
11/15/17	1525	GW		x	DGWA-53	1			x							1
11/15/17	1105	GW		x	DGWA-71	1			x							2
11/15/17	1045	DW		x	FB-1	1			x							3
11/15/17	1020	GW		x	DGWC-4	1			x							4
11/15/17	–	GW		x	FD-1	1			x							5
11/15/17	1135	GW		x	DGWC-10	1			x							6
11/15/17	1545	GW		x	DGWC-13	4		x	x	x						7
11/15/17	1335	GW		x	DGWC-69	4		x	x	x						8

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 11/15/2017 1700
RELINQUISHED BY:
DATE/TIME: 11-16-17 1010

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

RECEIVED BY LAB: Mzalman
DATE/TIME: 11/16/17 1010

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

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0.9 Max
Custody Seal: Intact Broken Not Present
# of Coolers
Cooler ID:

FOR LAB USE ONLY
LAB #: AAK0586
Entered into LIMS:
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project # AAK0586

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

Optional: Proj. Due Date: Proj. Name:

Tracking #: _____

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

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

Thermometer Used IR-4 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.9 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 11/16/17 MR

Comments:

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

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

PACE ANALYTICAL SERVICES, LLC.

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

LOG-IN CHECKLIST **Printed: 11/17/2017 9:26:40AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 11/16/17 10:10

Work Order: AAK0586
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 8 **#Containers:** 14

Minimum Temp(C): 0.9 **Maximum Temp(C):** 0.9 **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

December 12, 2017

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: AAK0586 Plant McDonough
Pace Project No.: 30236435

Dear Mr. Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on November 17, 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

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

CERTIFICATIONS

Project: AAK0586 Plant McDonough
Pace Project No.: 30236435

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

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

SAMPLE SUMMARY

Project: AAK0586 Plant McDonough
Pace Project No.: 30236435

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30236435001	**DGWC-13**	Water	11/15/17 15:45	11/17/17 10:10
30236435002	**DGWC-69**	Water	11/15/17 13:35	11/17/17 10:10

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: AAK0586 Plant McDonough
Pace Project No.: 30236435

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30236435001	**DGWC-13**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1
30236435002	**DGWC-69**	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAK0586 Plant McDonough
Pace Project No.: 30236435

Sample: DGWC-13 **Lab ID: 30236435001** Collected: 11/15/17 15:45 Received: 11/17/17 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	**0.625 ± 0.251 (0.300) C:83% T:NA**	pCi/L	11/27/17 18:41	13982-63-3	
Radium-228	EPA 9320	**0.455 ± 0.432 (0.882) C:72% T:68%**	pCi/L	11/29/17 14:50	15262-20-1	
Total Radium	Total Radium Calculation	**1.08 ± 0.683 (1.18)**	pCi/L	12/12/17 12:05	7440-14-4	

Sample: DGWC-69 **Lab ID: 30236435002** Collected: 11/15/17 13:35 Received: 11/17/17 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	**1.31 ± 0.357 (0.246) C:89% T:NA**	pCi/L	11/27/17 18:41	13982-63-3	
Radium-228	EPA 9320	**0.683 ± 0.563 (1.13) C:61% T:73%**	pCi/L	11/29/17 14:50	15262-20-1	
Total Radium	Total Radium Calculation	**1.99 ± 0.920 (1.08)**	pCi/L	12/12/17 12:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAK0586 Plant McDonough
Pace Project No.: 30236435

QC Batch: 279888 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30236435001, 30236435002

METHOD BLANK: 1374797 Matrix: Water
Associated Lab Samples: 30236435001, 30236435002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.566 ± 0.420 (0.822) C:79% T:72%	pCi/L	11/29/17 14:48	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAK0586 Plant McDonough
Pace Project No.: 30236435

QC Batch: 279887 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30236435001, 30236435002

METHOD BLANK: 1374796 Matrix: Water
Associated Lab Samples: 30236435001, 30236435002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.412 ± 0.212 (0.298) C:89% T:NA	pCi/L	11/27/17 13:04	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: AAK0586 Plant McDonough
Pace Project No.: 30236435

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.

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAK0586 Workorder Name: Plant McDonough Owner Received Date: 11/16/2017 Results Requested By: 12/16/2017

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 HNO3					Requested Analysis Radium 226, 228, Total												LAB USE ONLY
1	DGWC-13	G	11/15/2017 15:45	AAK0586-07	W	2					X												001
2	DGWC-69	G	11/15/2017 13:35	~~AAK0578-02~~ AAK0586-08	W	2					X												002
3																							
4																							
5				MP 11/16/17																			
6																							
7																							
8																							
9																							
10																							

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	11/16/17		11/17/17 10:10	
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.

Friday, June 17, 2016 11:01:34 AM

WO#: 30236435

30236435

FMT-ALL-C-002rev.00 24March2009

Page 1 of 1

Page 9 of 13

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project # AFK0586

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client ☐ Commercial ☐ Pace Other ____

Tracking #: ____

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 0.9 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 11/16/17 MR

Temp should be above freezing to 6°C

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

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

Person Contacted: ____ Date/Time: ____

Comments/ Resolution: ____

Project Manager Review: ____ **Date:** ____

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

F-ALLC003rev.3 11September2006

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Pace GA Project # 30236435

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

Label ML
LIMS Login ZH

Tracking #: 741366059 9456

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 — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: ZH 11/17/17

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:	✓			5.
-Includes date/time/ID Matrix: WT				
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.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous Compliance/NPDES sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation.	✓			16. pH<2
All containers needing preservation are found to be in compliance with EPA recommendation.	✓			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed ZH / Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:			✓	18.
Trip Blank Custody Seals Present			✓	
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: ZH / Date: 11/17/17

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

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	JC2
Date:	11/27/2017
Worklist:	38828
Matrix:	DW

Method Blank Assessment

MB Sample ID	1374796
MB concentration:	0.412
M/B Counting Uncertainty:	0.203
MB MDC:	0.298
MB Numerical Performance Indicator:	3.97
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment

	LCSD (Y or N)?	Y
	LCS38828	LCSD38828
Count Date:	11/27/2017	11/27/2017
Spike I.D.:	17-030	17-030
Spike Concentration (pCi/mL):	80.186	80.186
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.512	0.508
Target Conc. (pCi/L, g, F):	15.666	15.784
Uncertainty (Calculated):	1.443	1.454
Result (pCi/L, g, F):	13.083	12.786
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.888	0.944
Numerical Performance Indicator:	-2.99	-3.39
Percent Recovery:	83.51%	81.01%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	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:	

Duplicate Sample Assessment

Sample I.D.:	LCS38828	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD38828	
Sample Result (pCi/L, g, F):	13.083	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.888	
Sample Duplicate Result (pCi/L, g, F):	12.786	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.944	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	0.449	
Duplicate RPD:	2.30%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:

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

12/12/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test: Ra-228
Analyst: VAL
Date: 11/27/2017
Worklist: 38829
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1374797
MB concentration:	0.566
M/B Counting Uncertainty:	0.407
MB MDC:	0.822
MB Numerical Performance Indicator:	2.73
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS38829	LCSD38829
Count Date:	11/29/2017	11/29/2017
Spike I.D.:	17-033	17-033
Spike Concentration (pCi/mL):	22.923	22.923
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.811	0.802
Target Conc. (pCi/L, g, F):	5.656	5.714
Uncertainty (Calculated):	0.407	0.411
Result (pCi/L, g, F):	5.835	6.318
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.737	0.698
Numerical Performance Indicator:	0.42	1.46
Percent Recovery:	103.18%	110.57%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	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:	

Duplicate Sample Assessment		
Sample I.D.:	LCS38829	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD38829	
Sample Result (pCi/L, g, F):	5.835	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.737	
Sample Duplicate Result (pCi/L, g, F):	6.318	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.698	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-0.931	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	6.92%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

12/12/17

LABORATORY ANALYTICAL DATA

February – March 2018

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

June 10, 2019

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

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on February 28, 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.

REV07252018_report revised per consultant request to correct mercury RL.

REV05282019_report revised per consultant request to adjust Ca RL for samples -001, -003, and -027.

REV06102019_report revised per consultant request to correct MDL settings.

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: Kristen Jurinko, Golder Associates Inc. Julie Lehrman, Golder Associates Inc.

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

cc: Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

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

CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

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

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
Florida: Cert E871149 SEKS WET
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

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Lab ID	Sample ID	Matrix	Date Collected	Date Received
262329001	**DGWA-70A**	Water	02/27/18 10:35	02/28/18 13:30
262329002	**DGWA-70A**	Water	02/27/18 10:35	02/28/18 13:30
262329003	**DGWA-71**	Water	02/27/18 09:00	02/28/18 13:30
262329004	**DGWA-71**	Water	02/27/18 09:00	02/28/18 13:30
262329005	**DGWC-2**	Water	02/27/18 15:05	02/28/18 13:30
262329006	**DGWC-2**	Water	02/27/18 15:05	02/28/18 13:30
262329007	**DGWC-4**	Water	02/27/18 09:40	02/28/18 13:30
262329008	**DGWC-4**	Water	02/27/18 09:40	02/28/18 13:30
262329009	**DGWC-5**	Water	02/27/18 11:20	02/28/18 13:30
262329010	**DGWC-5**	Water	02/27/18 11:20	02/28/18 13:30
262329011	**DGWC-8**	Water	02/27/18 11:45	02/28/18 13:30
262329012	**DGWC-8**	Water	02/27/18 11:45	02/28/18 13:30
262329013	**DGWC-9**	Water	02/27/18 13:30	02/28/18 13:30
262329014	**DGWC-9**	Water	02/27/18 13:30	02/28/18 13:30
262329015	**FD-1**	Water	02/27/18 00:00	02/28/18 13:30
262329016	**FD-1**	Water	02/27/18 00:00	02/28/18 13:30
262329017	**FB-1**	Water	02/27/18 10:25	02/28/18 13:30
262329018	**FB-1**	Water	02/27/18 10:25	02/28/18 13:30
262329019	**EB-1**	Water	02/27/18 16:15	02/28/18 13:30
262329020	**EB-1**	Water	02/27/18 16:15	02/28/18 13:30
262329021	**DGWC-10**	Water	02/27/18 14:55	02/28/18 13:30
262329022	**DGWC-10**	Water	02/27/18 14:55	02/28/18 13:30
262329023	**DGWC-11**	Water	02/27/18 14:30	02/28/18 13:30
262329024	**DGWC-11**	Water	02/27/18 14:30	02/28/18 13:30
262329025	**DGWC-12**	Water	02/27/18 17:20	02/28/18 13:30
262329026	**DGWC-12**	Water	02/27/18 17:20	02/28/18 13:30
262329027	**DGWC-14**	Water	02/27/18 16:10	02/28/18 13:30
262329028	**DGWC-14**	Water	02/27/18 16:10	02/28/18 13:30

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

SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
262329001	**DGWA-70A**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C-2011	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262329002	**DGWA-70A**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262329003	**DGWA-71**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C-2011	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262329004	**DGWA-71**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262329005	**DGWC-2**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C-2011	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262329006	**DGWC-2**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262329007	**DGWC-4**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C-2011	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262329008	**DGWC-4**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262329009	**DGWC-5**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C-2011	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262329010	**DGWC-5**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262329011	**DGWC-8**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA

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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2540C-2011	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262329012	**DGWC-8**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262329013	**DGWC-9**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C-2011	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262329014	**DGWC-9**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262329015	**FD-1**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C-2011	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262329016	**FD-1**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262329017	**FB-1**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C-2011	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262329018	**FB-1**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262329019	**EB-1**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C-2011	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262329020	**EB-1**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262329021	**DGWC-10**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C-2011	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA

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

SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
262329022	**DGWC-10**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262329023	**DGWC-11**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C-2011	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262329024	**DGWC-11**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262329025	**DGWC-12**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C-2011	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262329026	**DGWC-12**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262329027	**DGWC-14**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C-2011	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262329028	**DGWC-14**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWA-70A **Lab ID: 262329001** Collected: 02/27/18 10:35 Received: 02/28/18 13:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 18:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 18:05	7440-38-2	
Barium	**0.034**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 18:05	7440-39-3	
Beryllium	**0.000063J**	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 18:05	7440-41-7	
Boron	**0.0062J**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 18:05	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 18:05	7440-43-9	
Calcium	**5.6**	mg/L	5.0	0.69	50	03/02/18 11:00	03/05/18 18:11	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 18:05	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 18:05	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 18:05	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 18:05	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 18:05	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 18:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 18:05	7440-28-0	
7470 Mercury	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 18:32	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011								
Total Dissolved Solids	**43.0**	mg/L	25.0	25.0	1		03/02/18 19:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.5**	mg/L	0.25	0.024	1		03/02/18 14:14	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/02/18 14:14	16984-48-8	
Sulfate	**0.54J**	mg/L	1.0	0.017	1		03/02/18 14:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWA-71 **Lab ID: 262329003** Collected: 02/27/18 09:00 Received: 02/28/18 13:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 18:17	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 18:17	7440-38-2	
Barium	**0.029**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 18:17	7440-39-3	M1
Beryllium	**0.000092J**	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 18:17	7440-41-7	
Boron	**0.0069J**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 18:17	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 18:17	7440-43-9	
Calcium	**6.1**	mg/L	5.0	0.69	50	03/02/18 11:00	03/05/18 18:22	7440-70-2	M1
Chromium	ND	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 18:17	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 18:17	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 18:17	7439-92-1	
Lithium	**0.0013J**	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 18:17	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 18:17	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 18:17	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 18:17	7440-28-0	
7470 Mercury	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 18:58	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011								
Total Dissolved Solids	**79.0**	mg/L	25.0	25.0	1		03/02/18 19:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.2**	mg/L	0.25	0.024	1		03/02/18 15:16	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/02/18 15:16	16984-48-8	
Sulfate	**7.4**	mg/L	1.0	0.017	1		03/02/18 15:16	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-2 **Lab ID: 262329005** Collected: 02/27/18 15:05 Received: 02/28/18 13:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 19:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 19:08	7440-38-2	
Barium	**0.021**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 19:08	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 19:08	7440-41-7	
Boron	**1.1**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 19:08	7440-42-8	
Cadmium	**0.00062J**	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 19:08	7440-43-9	
Calcium	**66.7**	mg/L	25.0	0.69	50	03/02/18 11:00	03/05/18 19:14	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 19:08	7440-47-3	
Cobalt	**0.042**	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 19:08	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 19:08	7439-92-1	
Lithium	**0.088**	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 19:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 19:08	7439-98-7	
Selenium	**0.0017J**	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 19:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 19:08	7440-28-0	
7470 Mercury	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 19:01	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011								
Total Dissolved Solids	**401**	mg/L	25.0	25.0	1		03/02/18 19:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.1**	mg/L	0.25	0.024	1		03/02/18 15:36	16887-00-6	
Fluoride	**0.28J**	mg/L	0.30	0.029	1		03/02/18 15:36	16984-48-8	
Sulfate	**189**	mg/L	20.0	0.34	20		03/15/18 20:37	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-4 **Lab ID: 262329007** Collected: 02/27/18 09:40 Received: 02/28/18 13:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 19:20	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 19:20	7440-38-2	
Barium	**0.036**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 19:20	7440-39-3	
Beryllium	**0.00018J**	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 19:20	7440-41-7	
Boron	**4.1**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 19:20	7440-42-8	
Cadmium	**0.00074J**	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 19:20	7440-43-9	
Calcium	**245**	mg/L	125	3.4	250	03/02/18 11:00	03/08/18 17:15	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 19:20	7440-47-3	
Cobalt	**0.0018J**	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 19:20	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 19:20	7439-92-1	
Lithium	**0.0027J**	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 19:20	7439-93-2	
Molybdenum	**0.0069J**	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 19:20	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 19:20	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 19:20	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 19:03	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011								
Total Dissolved Solids	**1380**	mg/L	125	125	1		03/02/18 19:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**24.6**	mg/L	1.2	0.12	5		03/15/18 20:58	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/02/18 15:57	16984-48-8	
Sulfate	**811**	mg/L	50.0	0.85	50		03/15/18 21:18	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-5 **Lab ID: 262329009** Collected: 02/27/18 11:20 Received: 02/28/18 13:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 19:31	7440-36-0	
Arsenic	**0.0094**	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 19:31	7440-38-2	
Barium	**0.017**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 19:31	7440-39-3	
Beryllium	**0.0086**	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 19:31	7440-41-7	
Boron	**4.3**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 19:31	7440-42-8	
Cadmium	**0.00072J**	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 19:31	7440-43-9	
Calcium	**108**	mg/L	50.0	1.4	100	03/02/18 11:00	03/08/18 17:21	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 19:31	7440-47-3	
Cobalt	**0.024**	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 19:31	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 19:31	7439-92-1	
Lithium	**0.0066J**	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 19:31	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 19:31	7439-98-7	
Selenium	**0.035**	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 19:31	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 19:31	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000090J**	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 19:06	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011								
Total Dissolved Solids	**698**	mg/L	50.0	50.0	1		03/02/18 19:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**9.7**	mg/L	0.25	0.024	1		03/02/18 16:18	16887-00-6	
Fluoride	**1.3**	mg/L	0.30	0.029	1		03/02/18 16:18	16984-48-8	
Sulfate	**453**	mg/L	25.0	0.42	25		03/15/18 21:39	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-8 **Lab ID: 262329011** Collected: 02/27/18 11:45 Received: 02/28/18 13:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 19:42	7440-36-0	
Arsenic	**0.0020J**	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 19:42	7440-38-2	
Barium	**0.035**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 19:42	7440-39-3	
Beryllium	**0.0047**	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 19:42	7440-41-7	
Boron	**2.1**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 19:42	7440-42-8	
Cadmium	**0.0029**	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 19:42	7440-43-9	
Calcium	**64.2**	mg/L	25.0	0.69	50	03/02/18 11:00	03/05/18 19:48	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 19:42	7440-47-3	
Cobalt	**0.13**	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 19:42	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 19:42	7439-92-1	
Lithium	**0.0075J**	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 19:42	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 19:42	7439-98-7	
Selenium	**0.0096J**	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 19:42	7782-49-2	
Thallium	**0.00033J**	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 19:42	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000042J**	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 19:08	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011								
Total Dissolved Solids	**520**	mg/L	50.0	50.0	1		03/02/18 19:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**9.5**	mg/L	0.25	0.024	1		03/02/18 16:38	16887-00-6	
Fluoride	**0.59**	mg/L	0.30	0.029	1		03/02/18 16:38	16984-48-8	
Sulfate	**340**	mg/L	25.0	0.42	25		03/15/18 22:00	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-9 **Lab ID: 262329013** Collected: 02/27/18 13:30 Received: 02/28/18 13:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 20:05	7440-36-0	
Arsenic	**0.040**	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 20:05	7440-38-2	
Barium	**0.015**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 20:05	7440-39-3	
Beryllium	**0.0057**	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 20:05	7440-41-7	
Boron	**1.7**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 20:05	7440-42-8	
Cadmium	**0.00058J**	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 20:05	7440-43-9	
Calcium	**73.1**	mg/L	25.0	0.69	50	03/02/18 11:00	03/05/18 20:11	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 20:05	7440-47-3	
Cobalt	**0.16**	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 20:05	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 20:05	7439-92-1	
Lithium	**0.031J**	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 20:05	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 20:05	7439-98-7	
Selenium	**0.13**	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 20:05	7782-49-2	
Thallium	**0.00038J**	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 20:05	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000042J**	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 19:10	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011								
Total Dissolved Solids	**482**	mg/L	50.0	50.0	1		03/02/18 19:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**8.2**	mg/L	0.25	0.024	1		03/02/18 16:59	16887-00-6	
Fluoride	**1.2**	mg/L	0.30	0.029	1		03/02/18 16:59	16984-48-8	
Sulfate	**327**	mg/L	25.0	0.42	25		03/15/18 22:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: FD-1 **Lab ID: 262329015** Collected: 02/27/18 00:00 Received: 02/28/18 13:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 20:17	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 20:17	7440-38-2	
Barium	**0.036**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 20:17	7440-39-3	
Beryllium	**0.00017J**	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 20:17	7440-41-7	
Boron	**4.3**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 20:17	7440-42-8	
Cadmium	**0.00069J**	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 20:17	7440-43-9	
Calcium	**252**	mg/L	25.0	0.69	50	03/02/18 11:00	03/08/18 17:27	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 20:17	7440-47-3	
Cobalt	**0.0018J**	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 20:17	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 20:17	7439-92-1	
Lithium	**0.0029J**	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 20:17	7439-93-2	
Molybdenum	**0.0069J**	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 20:17	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 20:17	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 20:17	7440-28-0	
7470 Mercury	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 19:13	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011								
Total Dissolved Solids	**1300**	mg/L	125	125	1		03/02/18 19:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**24.7**	mg/L	1.2	0.12	5		03/16/18 00:04	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/02/18 17:20	16984-48-8	
Sulfate	**824**	mg/L	50.0	0.85	50		03/16/18 00:24	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: FB-1 **Lab ID: 262329017** Collected: 02/27/18 10:25 Received: 02/28/18 13:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 20:23	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 20:23	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 20:23	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 20:23	7440-41-7	
Boron	**0.012J**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 20:23	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 20:23	7440-43-9	
Calcium	**0.048J**	mg/L	0.50	0.014	1	03/02/18 11:00	03/05/18 20:23	7440-70-2	B
Chromium	ND	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 20:23	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 20:23	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 20:23	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 20:23	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 20:23	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 20:23	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 20:23	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000069J**	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 19:15	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		03/02/18 19:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.045J**	mg/L	0.25	0.024	1		03/02/18 19:03	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/02/18 19:03	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		03/02/18 19:03	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: EB-1 **Lab ID: 262329019** Collected: 02/27/18 16:15 Received: 02/28/18 13:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 20:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 20:28	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 20:28	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 20:28	7440-41-7	
Boron	**0.0056J**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 20:28	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 20:28	7440-43-9	
Calcium	**0.053J**	mg/L	0.50	0.014	1	03/02/18 11:00	03/05/18 20:28	7440-70-2	B
Chromium	ND	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 20:28	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 20:28	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 20:28	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 20:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 20:28	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 20:28	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 20:28	7440-28-0	
7470 Mercury	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 19:17	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		03/02/18 19:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.065J**	mg/L	0.25	0.024	1		03/02/18 19:24	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/02/18 19:24	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		03/02/18 19:24	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-10 **Lab ID: 262329021** Collected: 02/27/18 14:55 Received: 02/28/18 13:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 20:34	7440-36-0	
Arsenic	**0.011**	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 20:34	7440-38-2	
Barium	**0.028**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 20:34	7440-39-3	
Beryllium	**0.011**	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 20:34	7440-41-7	
Boron	**3.2**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 20:34	7440-42-8	
Cadmium	**0.0010**	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 20:34	7440-43-9	
Calcium	**96.2**	mg/L	25.0	0.69	50	03/02/18 11:00	03/05/18 20:40	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 20:34	7440-47-3	
Cobalt	**0.20**	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 20:34	7440-48-4	
Lead	ND	mg/L	0.025	0.0014	5	03/02/18 11:00	03/08/18 17:33	7439-92-1	D3
Lithium	**0.0037J**	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 20:34	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 20:34	7439-98-7	
Selenium	**0.067**	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 20:34	7782-49-2	
Thallium	ND	mg/L	0.0050	0.00071	5	03/02/18 11:00	03/08/18 17:33	7440-28-0	D3
7470 Mercury	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 19:25	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011								
Total Dissolved Solids	**542**	mg/L	50.0	50.0	1		03/02/18 19:08		D6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**10.8**	mg/L	0.25	0.024	1		03/02/18 20:05	16887-00-6	
Fluoride	**2.3**	mg/L	0.30	0.029	1		03/02/18 20:05	16984-48-8	
Sulfate	**335**	mg/L	25.0	0.42	25		03/16/18 00:45	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-11 **Lab ID: 262329023** Collected: 02/27/18 14:30 Received: 02/28/18 13:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 20:45	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 20:45	7440-38-2	
Barium	**0.067**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 20:45	7440-39-3	
Beryllium	**0.000058J**	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 20:45	7440-41-7	
Boron	**1.2**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 20:45	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 20:45	7440-43-9	
Calcium	**51.4**	mg/L	25.0	0.69	50	03/02/18 11:00	03/05/18 20:51	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 20:45	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 20:45	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 20:45	7439-92-1	
Lithium	**0.0022J**	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 20:45	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 20:45	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 20:45	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 20:45	7440-28-0	
7470 Mercury	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 19:27	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011								
Total Dissolved Solids	**393**	mg/L	25.0	25.0	1		03/02/18 19:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**12.7**	mg/L	0.25	0.024	1		03/02/18 20:26	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/02/18 20:26	16984-48-8	
Sulfate	**220**	mg/L	20.0	0.34	20		03/16/18 01:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-12 **Lab ID: 262329025** Collected: 02/27/18 17:20 Received: 02/28/18 13:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 21:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 21:08	7440-38-2	
Barium	**0.025**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 21:08	7440-39-3	
Beryllium	**0.00021J**	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 21:08	7440-41-7	
Boron	**8.0**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 21:08	7440-42-8	
Cadmium	**0.00038J**	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 21:08	7440-43-9	
Calcium	**85.6**	mg/L	25.0	0.69	50	03/02/18 11:00	03/05/18 21:14	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 21:08	7440-47-3	
Cobalt	**0.0021J**	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 21:08	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 21:08	7439-92-1	
Lithium	**0.00097J**	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 21:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 21:08	7439-98-7	
Selenium	**0.0024J**	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 21:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 21:08	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000060J**	mg/L	0.00050	0.000036	1	03/05/18 13:05	03/05/18 19:29	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011								
Total Dissolved Solids	**582**	mg/L	50.0	50.0	1		03/02/18 19:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**11.7**	mg/L	0.25	0.024	1		03/02/18 20:46	16887-00-6	
Fluoride	**0.34**	mg/L	0.30	0.029	1		03/02/18 20:46	16984-48-8	
Sulfate	**356**	mg/L	20.0	0.34	20		03/16/18 01:26	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-14 **Lab ID: 262329027** Collected: 02/27/18 16:10 Received: 02/28/18 13:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 21:20	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 21:20	7440-38-2	
Barium	**0.059**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 21:20	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 21:20	7440-41-7	
Boron	**0.054**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 21:20	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 21:20	7440-43-9	
Calcium	**10**	mg/L	5.0	0.69	50	03/02/18 11:00	03/05/18 21:26	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 21:20	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 21:20	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 21:20	7439-92-1	
Lithium	**0.0035J**	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 21:20	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 21:20	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 21:20	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 21:20	7440-28-0	
7470 Mercury	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 19:32	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2011								
Total Dissolved Solids	**99.0**	mg/L	25.0	25.0	1		03/02/18 19:08		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.4**	mg/L	0.25	0.024	1		03/02/18 21:07	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/02/18 21:07	16984-48-8	
Sulfate	**41.0**	mg/L	5.0	0.085	5		03/16/18 01:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

QC Batch: 1881 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 262329001, 262329003, 262329005, 262329007, 262329009, 262329011, 262329013, 262329015, 262329017, 262329019, 262329021, 262329023, 262329025, 262329027

METHOD BLANK: 10591 Matrix: Water
Associated Lab Samples: 262329001, 262329003, 262329005, 262329007, 262329009, 262329011, 262329013, 262329015, 262329017, 262329019, 262329021, 262329023, 262329025, 262329027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	03/05/18 18:28	

LABORATORY CONTROL SAMPLE: 10592

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 11137 11138

Parameter	Units	262329001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0024	0.0024	94	95	75-125	1	20	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

QC Batch: 1909 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 262329001, 262329003, 262329005, 262329007, 262329009, 262329011, 262329013, 262329015, 262329017, 262329019, 262329021, 262329023, 262329025, 262329027

METHOD BLANK: 10718 Matrix: Water
Associated Lab Samples: 262329001, 262329003, 262329005, 262329007, 262329009, 262329011, 262329013, 262329015, 262329017, 262329019, 262329021, 262329023, 262329025, 262329027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00079J	0.0030	0.00078	03/05/18 17:54	
Arsenic	mg/L	ND	0.0050	0.00057	03/05/18 17:54	
Barium	mg/L	ND	0.010	0.00078	03/05/18 17:54	
Beryllium	mg/L	ND	0.0030	0.000050	03/05/18 17:54	
Boron	mg/L	ND	0.040	0.0039	03/05/18 17:54	
Cadmium	mg/L	ND	0.0010	0.000093	03/05/18 17:54	
Calcium	mg/L	0.015J	0.10	0.014	03/05/18 17:54	
Chromium	mg/L	ND	0.010	0.0016	03/05/18 17:54	
Cobalt	mg/L	ND	0.010	0.00052	03/05/18 17:54	
Lead	mg/L	ND	0.0050	0.00027	03/05/18 17:54	
Lithium	mg/L	ND	0.050	0.00097	03/05/18 17:54	
Molybdenum	mg/L	ND	0.010	0.0019	03/05/18 17:54	
Selenium	mg/L	ND	0.010	0.0014	03/05/18 17:54	
Thallium	mg/L	ND	0.0010	0.00014	03/05/18 17:54	

LABORATORY CONTROL SAMPLE: 10719

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	104	80-120	
Arsenic	mg/L	0.1	0.10	103	80-120	
Barium	mg/L	0.1	0.10	102	80-120	
Beryllium	mg/L	0.1	0.11	105	80-120	
Boron	mg/L	1	1.1	111	80-120	
Cadmium	mg/L	0.1	0.10	102	80-120	
Calcium	mg/L	1	1.0	103	80-120	
Chromium	mg/L	0.1	0.11	109	80-120	
Cobalt	mg/L	0.1	0.11	111	80-120	
Lead	mg/L	0.1	0.10	104	80-120	
Lithium	mg/L	0.1	0.11	109	80-120	
Molybdenum	mg/L	0.1	0.11	106	80-120	
Selenium	mg/L	0.1	0.10	101	80-120	
Thallium	mg/L	0.1	0.10	101	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.

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 10722 10723

Parameter	Units	262329003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	105	106	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	102	102	75-125	0	20	
Barium	mg/L	0.029	0.1	0.1	0.16	0.18	132	153	75-125	12	20	M1
Beryllium	mg/L	0.000092J	0.1	0.1	0.10	0.10	104	104	75-125	1	20	
Boron	mg/L	0.0069J	1	1	1.1	1.1	108	108	75-125	0	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20	
Calcium	mg/L	6.1	1	1	7.5	7.6	136	144	75-125	1	20	
Chromium	mg/L	ND	0.1	0.1	0.11	0.11	107	106	75-125	0	20	
Cobalt	mg/L	ND	0.1	0.1	0.11	0.11	109	109	75-125	1	20	
Lead	mg/L	ND	0.1	0.1	0.10	0.10	104	102	75-125	2	20	
Lithium	mg/L	0.0013J	0.1	0.1	0.10	0.10	103	101	75-125	2	20	
Molybdenum	mg/L	ND	0.1	0.1	0.11	0.11	109	109	75-125	0	20	
Selenium	mg/L	ND	0.1	0.1	0.11	0.10	106	103	75-125	3	20	
Thallium	mg/L	ND	0.1	0.1	0.10	0.10	104	102	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

QC Batch: 400516 Analysis Method: SM 2540C-2011
QC Batch Method: SM 2540C-2011 Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 262329001, 262329003, 262329005, 262329007, 262329009, 262329011, 262329013, 262329015, 262329017, 262329019, 262329021, 262329023, 262329025, 262329027

METHOD BLANK: 2221252 Matrix: Water
Associated Lab Samples: 262329001, 262329003, 262329005, 262329007, 262329009, 262329011, 262329013, 262329015, 262329017, 262329019, 262329021, 262329023, 262329025, 262329027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	03/02/18 19:08	

LABORATORY CONTROL SAMPLE: 2221253

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	242	97	90-110	

SAMPLE DUPLICATE: 2221254

Parameter	Units	262329001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	43.0	44.0	2	5	

SAMPLE DUPLICATE: 2221255

Parameter	Units	262329021 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	542	492	10	5	D6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

QC Batch: 1903 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 262329001, 262329003, 262329005, 262329007, 262329009, 262329011, 262329013, 262329015, 262329017, 262329019, 262329021, 262329023, 262329025, 262329027

METHOD BLANK: 10675 Matrix: Water
Associated Lab Samples: 262329001, 262329003, 262329005, 262329007, 262329009, 262329011, 262329013, 262329015, 262329017, 262329019, 262329021, 262329023, 262329025, 262329027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	03/02/18 12:51	
Fluoride	mg/L	ND	0.30	0.029	03/02/18 12:51	
Sulfate	mg/L	ND	1.0	0.017	03/02/18 12:51	

LABORATORY CONTROL SAMPLE: 10676

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.3	103	90-110	
Fluoride	mg/L	10	9.9	99	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 10677 10678

Parameter	Units	262329001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.5	10	10	12.0	12.1	95	96	90-110	1	15	
Fluoride	mg/L	ND	10	10	10.1	10.2	101	102	90-110	1	15	
Sulfate	mg/L	0.54J	10	10	10.6	10.7	101	102	90-110	1	15	

MATRIX SPIKE SAMPLE: 10679

Parameter	Units	262329003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	3.2	10	13.2	100	90-110	
Fluoride	mg/L	ND	10	10.5	105	90-110	
Sulfate	mg/L	7.4	10	17.3	99	90-110	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWA-70A **Lab ID: 262329002** Collected: 02/27/18 10:35 Received: 02/28/18 13:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.138 ± 0.213 (0.472) C:100% T:NA**	pCi/L	03/14/18 08:38	13982-63-3	
Radium-228	EPA 9320	**1.08 ± 0.446 (0.717) C:83% T:81%**	pCi/L	03/21/18 12:16	15262-20-1	
Total Radium	Total Radium Calculation	**1.22 ± 0.659 (1.19)**	pCi/L	03/23/18 11:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWA-71 **Lab ID: 262329004** Collected: 02/27/18 09:00 Received: 02/28/18 13:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.132 ± 0.167 (0.342) C:95% T:NA**	pCi/L	03/14/18 08:38	13982-63-3	
Radium-228	EPA 9320	**0.582 ± 0.397 (0.766) C:78% T:77%**	pCi/L	03/21/18 12:17	15262-20-1	
Total Radium	Total Radium Calculation	**0.714 ± 0.564 (1.11)**	pCi/L	03/23/18 11:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-2 **Lab ID: 262329006** Collected: 02/27/18 15:05 Received: 02/28/18 13:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.308 ± 0.218 (0.361) C:100% T:NA**	pCi/L	03/14/18 08:38	13982-63-3	
Radium-228	EPA 9320	**0.555 ± 0.361 (0.687) C:82% T:82%**	pCi/L	03/21/18 12:17	15262-20-1	
Total Radium	Total Radium Calculation	**0.863 ± 0.579 (1.05)**	pCi/L	03/23/18 11:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-4 **Lab ID: 262329008** Collected: 02/27/18 09:40 Received: 02/28/18 13:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.695 ± 0.312 (0.386) C:100% T:NA**	pCi/L	03/14/18 08:38	13982-63-3	
Radium-228	EPA 9320	**1.12 ± 0.429 (0.645) C:84% T:78%**	pCi/L	03/21/18 12:17	15262-20-1	
Total Radium	Total Radium Calculation	**1.82 ± 0.741 (1.03)**	pCi/L	03/23/18 11:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-5 **Lab ID: 262329010** Collected: 02/27/18 11:20 Received: 02/28/18 13:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.637 ± 0.292 (0.347) C:97% T:NA**	pCi/L	03/14/18 08:38	13982-63-3	
Radium-228	EPA 9320	**1.33 ± 0.500 (0.760) C:81% T:77%**	pCi/L	03/21/18 12:17	15262-20-1	
Total Radium	Total Radium Calculation	**1.97 ± 0.792 (1.11)**	pCi/L	03/23/18 11:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-8 **Lab ID: 262329012** Collected: 02/27/18 11:45 Received: 02/28/18 13:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.536 ± 0.295 (0.458) C:100% T:NA**	pCi/L	03/14/18 08:38	13982-63-3	
Radium-228	EPA 9320	**0.509 ± 0.365 (0.711) C:82% T:81%**	pCi/L	03/21/18 12:17	15262-20-1	
Total Radium	Total Radium Calculation	**1.05 ± 0.660 (1.17)**	pCi/L	03/23/18 11:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-9 **Lab ID: 262329014** Collected: 02/27/18 13:30 Received: 02/28/18 13:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.605 ± 0.296 (0.385) C:95% T:NA**	pCi/L	03/14/18 08:39	13982-63-3	
Radium-228	EPA 9320	**1.18 ± 0.456 (0.700) C:82% T:79%**	pCi/L	03/21/18 12:17	15262-20-1	
Total Radium	Total Radium Calculation	**1.79 ± 0.752 (1.09)**	pCi/L	03/23/18 11:25	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: FD-1 **Lab ID: 262329016** Collected: 02/27/18 00:00 Received: 02/28/18 13:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.622 ± 0.289 (0.342) C:101% T:NA**	pCi/L	03/14/18 08:39	13982-63-3	
Radium-228	EPA 9320	**0.736 ± 0.412 (0.749) C:82% T:74%**	pCi/L	03/21/18 12:17	15262-20-1	
Total Radium	Total Radium Calculation	**1.36 ± 0.701 (1.09)**	pCi/L	03/23/18 11:25	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: FB-1 **Lab ID: 262329018** Collected: 02/27/18 10:25 Received: 02/28/18 13:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.118 ± 0.155 (0.320) C:98% T:NA**	pCi/L	03/14/18 08:39	13982-63-3	
Radium-228	EPA 9320	**0.701 ± 0.391 (0.705) C:83% T:74%**	pCi/L	03/21/18 12:17	15262-20-1	
Total Radium	Total Radium Calculation	**0.819 ± 0.546 (1.03)**	pCi/L	03/23/18 11:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: EB-1 **Lab ID: 262329020** Collected: 02/27/18 16:15 Received: 02/28/18 13:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.357 ± 0.255 (0.431) C:96% T:NA**	pCi/L	03/14/18 08:39	13982-63-3	
Radium-228	EPA 9320	**0.873 ± 0.473 (0.867) C:81% T:75%**	pCi/L	03/21/18 12:17	15262-20-1	
Total Radium	Total Radium Calculation	**1.23 ± 0.728 (1.30)**	pCi/L	03/23/18 11:25	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-10 **Lab ID: 262329022** Collected: 02/27/18 14:55 Received: 02/28/18 13:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.612 ± 0.295 (0.336) C:98% T:NA**	pCi/L	03/14/18 08:39	13982-63-3	
Radium-228	EPA 9320	**0.942 ± 0.431 (0.726) C:78% T:82%**	pCi/L	03/21/18 12:17	15262-20-1	
Total Radium	Total Radium Calculation	**1.55 ± 0.726 (1.06)**	pCi/L	03/23/18 11:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-11 **Lab ID: 262329024** Collected: 02/27/18 14:30 Received: 02/28/18 13:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.496 ± 0.267 (0.362) C:95% T:NA**	pCi/L	03/14/18 08:39	13982-63-3	
Radium-228	EPA 9320	**0.640 ± 0.383 (0.706) C:80% T:74%**	pCi/L	03/21/18 12:17	15262-20-1	
Total Radium	Total Radium Calculation	**1.14 ± 0.650 (1.07)**	pCi/L	03/23/18 11:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-12 **Lab ID: 262329026** Collected: 02/27/18 17:20 Received: 02/28/18 13:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.423 ± 0.231 (0.296) C:99% T:NA**	pCi/L	03/14/18 08:39	13982-63-3	
Radium-228	EPA 9320	**0.407 ± 0.270 (0.503) C:83% T:84%**	pCi/L	03/21/18 12:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.830 ± 0.501 (0.799)**	pCi/L	03/23/18 11:25	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Sample: DGWC-14 **Lab ID: 262329028** Collected: 02/27/18 16:10 Received: 02/28/18 13:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.309 ± 0.257 (0.479) C:93% T:NA**	pCi/L	03/14/18 08:39	13982-63-3	
Radium-228	EPA 9320	**0.386 ± 0.391 (0.807) C:79% T:71%**	pCi/L	03/21/18 12:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.695 ± 0.648 (1.29)**	pCi/L	03/23/18 11:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

QC Batch: 290437 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 262329002, 262329004, 262329006, 262329008, 262329010, 262329012, 262329014, 262329016, 262329018, 262329020, 262329022, 262329024, 262329026, 262329028

METHOD BLANK: 1422134 Matrix: Water
Associated Lab Samples: 262329002, 262329004, 262329006, 262329008, 262329010, 262329012, 262329014, 262329016, 262329018, 262329020, 262329022, 262329024, 262329026, 262329028

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.437 ± 0.326 (0.633) C:80% T:79%	pCi/L	03/21/18 12:17	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

QC Batch: 290436 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 262329002, 262329004, 262329006, 262329008, 262329010, 262329012, 262329014, 262329016, 262329018, 262329020, 262329022, 262329024, 262329026, 262329028

METHOD BLANK: 1422133 Matrix: Water
Associated Lab Samples: 262329002, 262329004, 262329006, 262329008, 262329010, 262329012, 262329014, 262329016, 262329018, 262329020, 262329022, 262329024, 262329026, 262329028

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.161 ± 0.156 (0.277) C:97% T:NA	pCi/L	03/14/18 08:38	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
262329001	**DGWA-70A**	EPA 3005A	1909	EPA 6020B	1969
262329003	**DGWA-71**	EPA 3005A	1909	EPA 6020B	1969
262329005	**DGWC-2**	EPA 3005A	1909	EPA 6020B	1969
262329007	**DGWC-4**	EPA 3005A	1909	EPA 6020B	1969
262329009	**DGWC-5**	EPA 3005A	1909	EPA 6020B	1969
262329011	**DGWC-8**	EPA 3005A	1909	EPA 6020B	1969
262329013	**DGWC-9**	EPA 3005A	1909	EPA 6020B	1969
262329015	**FD-1**	EPA 3005A	1909	EPA 6020B	1969
262329017	**FB-1**	EPA 3005A	1909	EPA 6020B	1969
262329019	**EB-1**	EPA 3005A	1909	EPA 6020B	1969
262329021	**DGWC-10**	EPA 3005A	1909	EPA 6020B	1969
262329023	**DGWC-11**	EPA 3005A	1909	EPA 6020B	1969
262329025	**DGWC-12**	EPA 3005A	1909	EPA 6020B	1969
262329027	**DGWC-14**	EPA 3005A	1909	EPA 6020B	1969
262329001	**DGWA-70A**	EPA 7470A	1881	EPA 7470A	2032
262329003	**DGWA-71**	EPA 7470A	1881	EPA 7470A	2032
262329005	**DGWC-2**	EPA 7470A	1881	EPA 7470A	2032
262329007	**DGWC-4**	EPA 7470A	1881	EPA 7470A	2032
262329009	**DGWC-5**	EPA 7470A	1881	EPA 7470A	2032
262329011	**DGWC-8**	EPA 7470A	1881	EPA 7470A	2032
262329013	**DGWC-9**	EPA 7470A	1881	EPA 7470A	2032
262329015	**FD-1**	EPA 7470A	1881	EPA 7470A	2032
262329017	**FB-1**	EPA 7470A	1881	EPA 7470A	2032
262329019	**EB-1**	EPA 7470A	1881	EPA 7470A	2032
262329021	**DGWC-10**	EPA 7470A	1881	EPA 7470A	2032
262329023	**DGWC-11**	EPA 7470A	1881	EPA 7470A	2032
262329025	**DGWC-12**	EPA 7470A	1881	EPA 7470A	2032
262329027	**DGWC-14**	EPA 7470A	1881	EPA 7470A	2032
262329002	**DGWA-70A**	EPA 9315	290436		
262329004	**DGWA-71**	EPA 9315	290436		
262329006	**DGWC-2**	EPA 9315	290436		
262329008	**DGWC-4**	EPA 9315	290436		
262329010	**DGWC-5**	EPA 9315	290436		
262329012	**DGWC-8**	EPA 9315	290436		
262329014	**DGWC-9**	EPA 9315	290436		
262329016	**FD-1**	EPA 9315	290436		
262329018	**FB-1**	EPA 9315	290436		
262329020	**EB-1**	EPA 9315	290436		
262329022	**DGWC-10**	EPA 9315	290436		
262329024	**DGWC-11**	EPA 9315	290436		
262329026	**DGWC-12**	EPA 9315	290436		
262329028	**DGWC-14**	EPA 9315	290436		
262329002	**DGWA-70A**	EPA 9320	290437		
262329004	**DGWA-71**	EPA 9320	290437		
262329006	**DGWC-2**	EPA 9320	290437		
262329008	**DGWC-4**	EPA 9320	290437		
262329010	**DGWC-5**	EPA 9320	290437		

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
262329012	**DGWC-8**	EPA 9320	290437		
262329014	**DGWC-9**	EPA 9320	290437		
262329016	**FD-1**	EPA 9320	290437		
262329018	**FB-1**	EPA 9320	290437		
262329020	**EB-1**	EPA 9320	290437		
262329022	**DGWC-10**	EPA 9320	290437		
262329024	**DGWC-11**	EPA 9320	290437		
262329026	**DGWC-12**	EPA 9320	290437		
262329028	**DGWC-14**	EPA 9320	290437		
262329002	**DGWA-70A**	Total Radium Calculation	292213		
262329004	**DGWA-71**	Total Radium Calculation	292213		
262329006	**DGWC-2**	Total Radium Calculation	292213		
262329008	**DGWC-4**	Total Radium Calculation	292213		
262329010	**DGWC-5**	Total Radium Calculation	292213		
262329012	**DGWC-8**	Total Radium Calculation	292213		
262329014	**DGWC-9**	Total Radium Calculation	292213		
262329016	**FD-1**	Total Radium Calculation	292213		
262329018	**FB-1**	Total Radium Calculation	292213		
262329020	**EB-1**	Total Radium Calculation	292213		
262329022	**DGWC-10**	Total Radium Calculation	292213		
262329024	**DGWC-11**	Total Radium Calculation	292213		
262329026	**DGWC-12**	Total Radium Calculation	292213		
262329028	**DGWC-14**	Total Radium Calculation	292213		
262329001	**DGWA-70A**	SM 2540C-2011	400516		
262329003	**DGWA-71**	SM 2540C-2011	400516		
262329005	**DGWC-2**	SM 2540C-2011	400516		
262329007	**DGWC-4**	SM 2540C-2011	400516		
262329009	**DGWC-5**	SM 2540C-2011	400516		
262329011	**DGWC-8**	SM 2540C-2011	400516		
262329013	**DGWC-9**	SM 2540C-2011	400516		
262329015	**FD-1**	SM 2540C-2011	400516		
262329017	**FB-1**	SM 2540C-2011	400516		
262329019	**EB-1**	SM 2540C-2011	400516		
262329021	**DGWC-10**	SM 2540C-2011	400516		
262329023	**DGWC-11**	SM 2540C-2011	400516		
262329025	**DGWC-12**	SM 2540C-2011	400516		
262329027	**DGWC-14**	SM 2540C-2011	400516		
262329001	**DGWA-70A**	EPA 300.0	1903		
262329003	**DGWA-71**	EPA 300.0	1903		
262329005	**DGWC-2**	EPA 300.0	1903		
262329007	**DGWC-4**	EPA 300.0	1903		
262329009	**DGWC-5**	EPA 300.0	1903		
262329011	**DGWC-8**	EPA 300.0	1903		
262329013	**DGWC-9**	EPA 300.0	1903		
262329015	**FD-1**	EPA 300.0	1903		
262329017	**FB-1**	EPA 300.0	1903		
262329019	**EB-1**	EPA 300.0	1903		

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 262329

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
262329021	**DGWC-10**	EPA 300.0	1903		
262329023	**DGWC-11**	EPA 300.0	1903		
262329025	**DGWC-12**	EPA 300.0	1903		
262329027	**DGWC-14**	EPA 300.0	1903		

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P		
PRESERVATION:								3	7	3		
02/27/18	1035	GW		x	DGWA-70A	4		1	1	2	1/2	
02/27/18	0900	GW		x	DGWA-71	4		1	1	2	3/4	
02/27/18	1505	GW		x	~~DGWA-2~~ DGWC-2	4		1	1	2	5/6	
02/27/18	0940	GW		x	DGWC-4	4		1	1	2	7/8	
02/27/18	1120	GW		x	DGWC-5	4		1	1	2	9/10	
02/27/18	1145	GW		x	DGWC-8	4		1	1	4	11/12	Extra Radium
02/27/18	1330	GW		x	DGWC-9	4		1	1	2	13/14	
02/27/18	--	GW		x	FD-1	4		1	1	2	15/16	
02/27/18	1025	W		x	FB-1	4		1	1	2	17/18	
02/27/18	1615	W		x	EB-1	4		1	1	2	19/20	
02/27/18	1455	GW		x	DGWC-10	4		1	1	2	21/22	
02/27/18	1430	GW		x	DGWC-11	4		1	1	2	23/24	

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

*MATRIX CODES:

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

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 2/27/18 1800
RELINQUISHED BY:
DATE/TIME: 2/28/18 1000

RECEIVED BY: Mike Nguyen
DATE/TIME: 2/28/18 1003
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB:
DATE/TIME: 2/28/18 1330
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 2.0°C Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

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

WO# : 262329

262329

CHAIN OF CUSTODY RECORD

Pace Analytical

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		CONTAINER TYPE:	P	P	P	LAB ID NUMBER
								PRESERVATION:	3	7	3	
									Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	
02/27/18	1720	GW		x	DGWC-12	4			1	1	2	25/26
02/27/18	1610	GW		x	DGWC-14	4			1	1	2	~~28~~/29/24 27/28

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 2/27/18 1800
RELINQUISHED BY:
DATE/TIME: 2/28/18 1000

RECEIVED BY: Mike Nguyen
DATE/TIME: 2/28/18 1003
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB:
DATE/TIME: 2/28/18 1330
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 2.1°C Max:
Custody Seal: Intact Broken Not Present
# of coolers:
Cooler ID:

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

WO# : 262329
PM: BM Due Date: 03/07/18
CLIENT: GAPower-CCR

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

WO# : 262329

PM: BM Due Date: 03/07/18

CLIENT: GAPower-CCR

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

Tracking #: _____

Proj. Name: [redacted]

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

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

Thermometer Used: IR083 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 2.0°C Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 1/28/18 CH

Comments:

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

Client Notification/ Resolution: Field Data Required? Y N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

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

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

June 19, 2019

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

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on March 01, 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.

REV05302019_report revised per consultant request to adjust Ca RL for samples -001, -005, and -015 and all metals units.

REV06192019_report revised to correct system settings to report data to MDL.

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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

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

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
Florida: Cert E871149 SEKS WET
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

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Lab ID	Sample ID	Matrix	Date Collected	Date Received
262357001	**DGWC-13**	Water	02/28/18 09:05	03/01/18 14:20
262357002	**DGWC-13**	Water	02/28/18 09:05	03/01/18 14:20
262357003	**DGWC-15**	Water	02/28/18 11:05	03/01/18 14:20
262357004	**DGWC-15**	Water	02/28/18 11:05	03/01/18 14:20
262357005	**DGWC-17**	Water	02/28/18 09:10	03/01/18 14:20
262357006	**DGWC-17**	Water	02/28/18 09:10	03/01/18 14:20
262357007	**DGWC-19**	Water	02/28/18 11:55	03/01/18 14:20
262357008	**DGWC-19**	Water	02/28/18 11:55	03/01/18 14:20
262357009	**DGWC-20**	Water	02/28/18 14:50	03/01/18 14:20
262357010	**DGWC-20**	Water	02/28/18 14:50	03/01/18 14:20
262357011	**DGWC-21**	Water	02/28/18 15:15	03/01/18 14:20
262357012	**DGWC-21**	Water	02/28/18 15:15	03/01/18 14:20
262357013	**DGWC-42**	Water	02/28/18 15:30	03/01/18 14:20
262357014	**DGWC-42**	Water	02/28/18 15:30	03/01/18 14:20
262357015	**FD-2**	Water	02/28/18 00:00	03/01/18 14:20
262357016	**FD-2**	Water	02/28/18 00:00	03/01/18 14:20
262357017	**FB-2**	Water	02/28/18 10:55	03/01/18 14:20
262357018	**FB-2**	Water	02/28/18 10:55	03/01/18 14:20
262357019	**EB-2**	Water	02/28/18 16:25	03/01/18 14:20
262357020	**EB-2**	Water	02/28/18 16:25	03/01/18 14:20
262357021	**DGWC-22**	Water	02/28/18 16:45	03/01/18 14:20
262357022	**DGWC-22**	Water	02/28/18 16:45	03/01/18 14:20

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

SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
262357001	**DGWC-13**	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
262357002	**DGWC-13**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262357003	**DGWC-15**	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
262357004	**DGWC-15**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262357005	**DGWC-17**	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
262357006	**DGWC-17**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262357007	**DGWC-19**	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
262357008	**DGWC-19**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262357009	**DGWC-20**	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
262357010	**DGWC-20**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262357011	**DGWC-21**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA

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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2540C	EJJ	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262357012	**DGWC-21**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262357013	**DGWC-42**	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
262357014	**DGWC-42**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262357015	**FD-2**	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
262357016	**FD-2**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262357017	**FB-2**	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
262357018	**FB-2**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262357019	**EB-2**	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
262357020	**EB-2**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262357021	**DGWC-22**	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 McDonough Ash Ponds
Pace Project No.: 262357

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
262357022	**DGWC-22**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: DGWC-13 **Lab ID: 262357001** Collected: 02/28/18 09:05 Received: 03/01/18 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 21:31	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 21:31	7440-38-2	
Barium	**0.0079J**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 21:31	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 21:31	7440-41-7	
Boron	**0.11**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 21:31	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 21:31	7440-43-9	
Calcium	**13.1**	mg/L	5.0	0.69	50	03/02/18 11:00	03/05/18 21:37	7440-70-2	
Chromium	**0.0022J**	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 21:31	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 21:31	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 21:31	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 21:31	7439-93-2	
Molybdenum	**0.0093J**	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 21:31	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 21:31	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 21:31	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 11:15	03/12/18 16:18	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**84.0**	mg/L	25.0	25.0	1		03/05/18 23:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.7**	mg/L	0.25	0.024	1		03/02/18 21:28	16887-00-6	
Fluoride	**0.18J**	mg/L	0.30	0.029	1		03/02/18 21:28	16984-48-8	
Sulfate	**43.5**	mg/L	5.0	0.085	5		03/16/18 02:08	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: DGWC-15 **Lab ID: 262357003** Collected: 02/28/18 11:05 Received: 03/01/18 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 21:43	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 21:43	7440-38-2	
Barium	**0.045**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 21:43	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 21:43	7440-41-7	
Boron	**1.6**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 21:43	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 21:43	7440-43-9	
Calcium	**35.0**	mg/L	25.0	0.69	50	03/02/18 11:00	03/05/18 21:48	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 21:43	7440-47-3	
Cobalt	**0.0016J**	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 21:43	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 21:43	7439-92-1	
Lithium	**0.0062J**	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 21:43	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 21:43	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 21:43	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 21:43	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 11:15	03/12/18 16:32	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**313**	mg/L	25.0	25.0	1		03/05/18 23:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**20.1**	mg/L	2.5	0.24	10		03/16/18 02:28	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/02/18 21:48	16984-48-8	
Sulfate	**168**	mg/L	10.0	0.17	10		03/16/18 02:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: DGWC-17 **Lab ID: 262357005** Collected: 02/28/18 09:10 Received: 03/01/18 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 21:54	7440-36-0	
Arsenic	**0.00073J**	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 21:54	7440-38-2	
Barium	**0.053**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 21:54	7440-39-3	
Beryllium	**0.00053J**	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 21:54	7440-41-7	
Boron	**0.63**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 21:54	7440-42-8	
Cadmium	**0.00022J**	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 21:54	7440-43-9	
Calcium	**10.9**	mg/L	5.0	0.69	50	03/02/18 11:00	03/05/18 22:00	7440-70-2	
Chromium	**0.0022J**	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 21:54	7440-47-3	
Cobalt	**0.020**	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 21:54	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 21:54	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 21:54	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 21:54	7439-98-7	
Selenium	**0.0072J**	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 21:54	7782-49-2	
Thallium	**0.00015J**	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 21:54	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 11:15	03/12/18 16:44	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**364**	mg/L	25.0	25.0	1		03/05/18 23:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**17.0**	mg/L	0.25	0.024	1		03/02/18 22:09	16887-00-6	
Fluoride	**0.54**	mg/L	0.30	0.029	1		03/02/18 22:09	16984-48-8	
Sulfate	**203**	mg/L	20.0	0.34	20		03/16/18 02:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: DGWC-19 **Lab ID: 262357007** Collected: 02/28/18 11:55 Received: 03/01/18 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 22:17	7440-36-0	
Arsenic	**0.0028J**	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 22:17	7440-38-2	
Barium	**0.021**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 22:17	7440-39-3	
Beryllium	**0.0020J**	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 22:17	7440-41-7	
Boron	**2.9**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 22:17	7440-42-8	
Cadmium	**0.00035J**	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 22:17	7440-43-9	
Calcium	**72.0**	mg/L	25.0	0.69	50	03/02/18 11:00	03/05/18 22:23	7440-70-2	
Chromium	**0.0021J**	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 22:17	7440-47-3	
Cobalt	**0.051**	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 22:17	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 22:17	7439-92-1	
Lithium	**0.0031J**	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 22:17	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 22:17	7439-98-7	
Selenium	**0.011**	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 22:17	7782-49-2	
Thallium	**0.00049J**	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 22:17	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 11:15	03/12/18 16:47	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**440**	mg/L	25.0	25.0	1		03/05/18 23:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**36.4**	mg/L	5.0	0.48	20		03/16/18 03:10	16887-00-6	
Fluoride	**1.2**	mg/L	0.30	0.029	1		03/02/18 23:52	16984-48-8	
Sulfate	**244**	mg/L	20.0	0.34	20		03/16/18 03:10	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: DGWC-20 **Lab ID: 262357009** Collected: 02/28/18 14:50 Received: 03/01/18 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 22:28	7440-36-0	
Arsenic	**0.018**	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 22:28	7440-38-2	
Barium	**0.0094J**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 22:28	7440-39-3	
Beryllium	**0.0025J**	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 22:28	7440-41-7	
Boron	**6.3**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 22:28	7440-42-8	
Cadmium	**0.0018**	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 22:28	7440-43-9	
Calcium	**86.3**	mg/L	25.0	0.69	50	03/02/18 11:00	03/05/18 22:34	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 22:28	7440-47-3	
Cobalt	**0.46**	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 22:28	7440-48-4	
Lead	ND	mg/L	0.025	0.0014	5	03/02/18 11:00	03/08/18 17:38	7439-92-1	D3
Lithium	**0.0019J**	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 22:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 22:28	7439-98-7	
Selenium	**0.076**	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 22:28	7782-49-2	
Thallium	ND	mg/L	0.0050	0.00071	5	03/02/18 11:00	03/08/18 17:38	7440-28-0	D3
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 11:15	03/12/18 16:49	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**888**	mg/L	50.0	50.0	1		03/05/18 23:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**18.6**	mg/L	0.25	0.024	1		03/03/18 00:13	16887-00-6	
Fluoride	**0.76**	mg/L	0.30	0.029	1		03/03/18 00:13	16984-48-8	
Sulfate	**584**	mg/L	50.0	0.85	50		03/20/18 00:29	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: DGWC-21 **Lab ID: 262357011** Collected: 02/28/18 15:15 Received: 03/01/18 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/02/18 11:00	03/05/18 22:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/02/18 11:00	03/05/18 22:40	7440-38-2	
Barium	**0.027**	mg/L	0.010	0.00078	1	03/02/18 11:00	03/05/18 22:40	7440-39-3	
Beryllium	**0.00016J**	mg/L	0.0030	0.000050	1	03/02/18 11:00	03/05/18 22:40	7440-41-7	
Boron	**5.9**	mg/L	0.040	0.0039	1	03/02/18 11:00	03/05/18 22:40	7440-42-8	
Cadmium	**0.00054J**	mg/L	0.0010	0.000093	1	03/02/18 11:00	03/05/18 22:40	7440-43-9	
Calcium	**73.2**	mg/L	25.0	0.69	50	03/02/18 11:00	03/05/18 22:46	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	03/02/18 11:00	03/05/18 22:40	7440-47-3	
Cobalt	**0.0094J**	mg/L	0.010	0.00052	1	03/02/18 11:00	03/05/18 22:40	7440-48-4	
Lead	**0.00047J**	mg/L	0.0050	0.00027	1	03/02/18 11:00	03/05/18 22:40	7439-92-1	
Lithium	**0.0061J**	mg/L	0.050	0.00097	1	03/02/18 11:00	03/05/18 22:40	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/02/18 11:00	03/05/18 22:40	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/02/18 11:00	03/05/18 22:40	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/02/18 11:00	03/05/18 22:40	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 11:15	03/12/18 16:51	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**480**	mg/L	50.0	50.0	1		03/05/18 23:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**19.9**	mg/L	0.25	0.024	1		03/03/18 00:34	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/03/18 00:34	16984-48-8	
Sulfate	**267**	mg/L	20.0	0.34	20		03/16/18 05:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: DGWC-42 **Lab ID: 262357013** Collected: 02/28/18 15:30 Received: 03/01/18 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/07/18 10:35	03/07/18 16:54	7440-36-0	
Arsenic	**0.0011J**	mg/L	0.0050	0.00057	1	03/07/18 10:35	03/07/18 16:54	7440-38-2	
Barium	**0.017**	mg/L	0.010	0.00078	1	03/07/18 10:35	03/07/18 16:54	7440-39-3	
Beryllium	**0.0029J**	mg/L	0.0030	0.000050	1	03/07/18 10:35	03/07/18 16:54	7440-41-7	
Boron	**0.92**	mg/L	0.040	0.0039	1	03/07/18 10:35	03/07/18 16:54	7440-42-8	M1
Cadmium	**0.00025J**	mg/L	0.0010	0.000093	1	03/07/18 10:35	03/07/18 16:54	7440-43-9	
Calcium	**45.1**	mg/L	25.0	0.69	50	03/07/18 10:35	03/07/18 17:00	7440-70-2	M6
Chromium	ND	mg/L	0.010	0.0016	1	03/07/18 10:35	03/07/18 16:54	7440-47-3	
Cobalt	**0.017**	mg/L	0.010	0.00052	1	03/07/18 10:35	03/07/18 16:54	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/07/18 10:35	03/07/18 16:54	7439-92-1	
Lithium	**0.012J**	mg/L	0.050	0.00097	1	03/07/18 10:35	03/07/18 16:54	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/07/18 10:35	03/07/18 16:54	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/07/18 10:35	03/07/18 16:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/07/18 10:35	03/07/18 16:54	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 11:15	03/12/18 16:54	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**616**	mg/L	50.0	50.0	1		03/05/18 23:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**29.0**	mg/L	1.2	0.12	5		03/16/18 06:16	16887-00-6	M1
Fluoride	ND	mg/L	0.30	0.029	1		03/05/18 17:58	16984-48-8	
Sulfate	**350**	mg/L	25.0	0.42	25		03/16/18 06:36	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: FD-2 **Lab ID: 262357015** Collected: 02/28/18 00:00 Received: 03/01/18 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/07/18 10:35	03/07/18 18:00	7440-36-0	
Arsenic	**0.0014J**	mg/L	0.0050	0.00057	1	03/07/18 10:35	03/07/18 18:00	7440-38-2	
Barium	**0.052**	mg/L	0.010	0.00078	1	03/07/18 10:35	03/07/18 18:00	7440-39-3	
Beryllium	**0.00056J**	mg/L	0.0030	0.000050	1	03/07/18 10:35	03/07/18 18:00	7440-41-7	
Boron	**0.73**	mg/L	0.040	0.0039	1	03/07/18 10:35	03/07/18 18:00	7440-42-8	
Cadmium	**0.00024J**	mg/L	0.0010	0.000093	1	03/07/18 10:35	03/07/18 18:00	7440-43-9	
Calcium	**12.1**	mg/L	5.0	0.69	50	03/07/18 10:35	03/07/18 18:06	7440-70-2	
Chromium	**0.0024J**	mg/L	0.010	0.0016	1	03/07/18 10:35	03/07/18 18:00	7440-47-3	
Cobalt	**0.020**	mg/L	0.010	0.00052	1	03/07/18 10:35	03/07/18 18:00	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/07/18 10:35	03/07/18 18:00	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/07/18 10:35	03/07/18 18:00	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/07/18 10:35	03/07/18 18:00	7439-98-7	
Selenium	**0.0077J**	mg/L	0.010	0.0014	1	03/07/18 10:35	03/07/18 18:00	7782-49-2	
Thallium	**0.00016J**	mg/L	0.0010	0.00014	1	03/07/18 10:35	03/07/18 18:00	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 11:15	03/12/18 16:56	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**364**	mg/L	25.0	25.0	1		03/05/18 23:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**17.0**	mg/L	0.25	0.024	1		03/05/18 19:00	16887-00-6	M1
Fluoride	**0.86**	mg/L	0.30	0.029	1		03/05/18 19:00	16984-48-8	
Sulfate	**217**	mg/L	25.0	0.42	25		03/16/18 06:57	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: FB-2 **Lab ID: 262357017** Collected: 02/28/18 10:55 Received: 03/01/18 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/07/18 10:35	03/07/18 18:11	7440-36-0	
Arsenic	**0.00091J**	mg/L	0.0050	0.00057	1	03/07/18 10:35	03/07/18 18:11	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	03/07/18 10:35	03/07/18 18:11	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/07/18 10:35	03/07/18 18:11	7440-41-7	
Boron	**0.0046J**	mg/L	0.040	0.0039	1	03/07/18 10:35	03/07/18 18:11	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/07/18 10:35	03/07/18 18:11	7440-43-9	
Calcium	**0.033J**	mg/L	0.50	0.014	1	03/07/18 10:35	03/07/18 18:11	7440-70-2	B
Chromium	ND	mg/L	0.010	0.0016	1	03/07/18 10:35	03/07/18 18:11	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/07/18 10:35	03/07/18 18:11	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/07/18 10:35	03/07/18 18:11	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/07/18 10:35	03/07/18 18:11	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/07/18 10:35	03/07/18 18:11	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/07/18 10:35	03/07/18 18:11	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/07/18 10:35	03/07/18 18:11	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 11:15	03/12/18 16:58	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		03/05/18 23:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.057J**	mg/L	0.25	0.024	1		03/05/18 19:20	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		03/05/18 19:20	16984-48-8	
Sulfate	**0.053J**	mg/L	1.0	0.017	1		03/05/18 19:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: EB-2 **Lab ID: 262357019** Collected: 02/28/18 16:25 Received: 03/01/18 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/07/18 10:35	03/07/18 18:17	7440-36-0	
Arsenic	**0.00086J**	mg/L	0.0050	0.00057	1	03/07/18 10:35	03/07/18 18:17	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	03/07/18 10:35	03/07/18 18:17	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/07/18 10:35	03/07/18 18:17	7440-41-7	
Boron	**0.073**	mg/L	0.040	0.0039	1	03/07/18 10:35	03/07/18 18:17	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/07/18 10:35	03/07/18 18:17	7440-43-9	
Calcium	**1.0**	mg/L	0.50	0.014	1	03/07/18 10:35	03/07/18 18:17	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	03/07/18 10:35	03/07/18 18:17	7440-47-3	
Cobalt	**0.0056J**	mg/L	0.010	0.00052	1	03/07/18 10:35	03/07/18 18:17	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/07/18 10:35	03/07/18 18:17	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/07/18 10:35	03/07/18 18:17	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/07/18 10:35	03/07/18 18:17	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/07/18 10:35	03/07/18 18:17	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/07/18 10:35	03/07/18 18:17	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 11:15	03/12/18 17:01	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		03/06/18 18:02		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.066J**	mg/L	0.25	0.024	1		03/05/18 19:41	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		03/05/18 19:41	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		03/05/18 19:41	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: DGWC-22 **Lab ID: 262357021** Collected: 02/28/18 16:45 Received: 03/01/18 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/07/18 10:35	03/07/18 18:23	7440-36-0	
Arsenic	**0.0010J**	mg/L	0.0050	0.00057	1	03/07/18 10:35	03/07/18 18:23	7440-38-2	
Barium	**0.035**	mg/L	0.010	0.00078	1	03/07/18 10:35	03/07/18 18:23	7440-39-3	
Beryllium	**0.00019J**	mg/L	0.0030	0.000050	1	03/07/18 10:35	03/07/18 18:23	7440-41-7	
Boron	**5.1**	mg/L	2.0	0.20	50	03/07/18 10:35	03/07/18 18:29	7440-42-8	
Cadmium	**0.00086J**	mg/L	0.0010	0.000093	1	03/07/18 10:35	03/07/18 18:23	7440-43-9	
Calcium	**62.3**	mg/L	25.0	0.69	50	03/07/18 10:35	03/07/18 18:29	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	03/07/18 10:35	03/07/18 18:23	7440-47-3	
Cobalt	**0.0098J**	mg/L	0.010	0.00052	1	03/07/18 10:35	03/07/18 18:23	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/07/18 10:35	03/07/18 18:23	7439-92-1	
Lithium	**0.0043J**	mg/L	0.050	0.00097	1	03/07/18 10:35	03/07/18 18:23	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/07/18 10:35	03/07/18 18:23	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/07/18 10:35	03/07/18 18:23	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/07/18 10:35	03/07/18 18:23	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 11:15	03/12/18 17:03	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**476**	mg/L	25.0	25.0	1		03/06/18 18:02		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**23.4**	mg/L	2.5	0.24	10		03/16/18 07:19	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/05/18 20:02	16984-48-8	
Sulfate	**278**	mg/L	50.0	0.85	50		03/16/18 07:40	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

QC Batch: 1882 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 262357001, 262357003, 262357005, 262357007, 262357009, 262357011, 262357013, 262357015, 262357017, 262357019, 262357021

METHOD BLANK: 10597 Matrix: Water
Associated Lab Samples: 262357001, 262357003, 262357005, 262357007, 262357009, 262357011, 262357013, 262357015, 262357017, 262357019, 262357021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	03/12/18 16:13	

LABORATORY CONTROL SAMPLE: 10598

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0023	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 11862 11863

Parameter	Units	262357001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0023	0.0023	93	93	75-125	0	20	

SAMPLE DUPLICATE: 11806

Parameter	Units	261274003 Result	Dup Result	RPD	Max RPD	Qualifiers
Mercury	mg/L	0.10J ug/L	0.000050J		20	H1

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

QC Batch: 1909 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 262357001, 262357003, 262357005, 262357007, 262357009, 262357011

METHOD BLANK: 10718 Matrix: Water
Associated Lab Samples: 262357001, 262357003, 262357005, 262357007, 262357009, 262357011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00079J	0.0030	0.00078	03/05/18 17:54	
Arsenic	mg/L	ND	0.0050	0.00057	03/05/18 17:54	
Barium	mg/L	ND	0.010	0.00078	03/05/18 17:54	
Beryllium	mg/L	ND	0.0030	0.000050	03/05/18 17:54	
Boron	mg/L	ND	0.040	0.0039	03/05/18 17:54	
Cadmium	mg/L	ND	0.0010	0.000093	03/05/18 17:54	
Calcium	mg/L	0.015J	0.10	0.014	03/05/18 17:54	
Chromium	mg/L	ND	0.010	0.0016	03/05/18 17:54	
Cobalt	mg/L	ND	0.010	0.00052	03/05/18 17:54	
Lead	mg/L	ND	0.0050	0.00027	03/05/18 17:54	
Lithium	mg/L	ND	0.050	0.00097	03/05/18 17:54	
Molybdenum	mg/L	ND	0.010	0.0019	03/05/18 17:54	
Selenium	mg/L	ND	0.010	0.0014	03/05/18 17:54	
Thallium	mg/L	ND	0.0010	0.00014	03/05/18 17:54	

LABORATORY CONTROL SAMPLE: 10719

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	104	80-120	
Arsenic	mg/L	0.1	0.10	103	80-120	
Barium	mg/L	0.1	0.10	102	80-120	
Beryllium	mg/L	0.1	0.11	105	80-120	
Boron	mg/L	1	1.1	111	80-120	
Cadmium	mg/L	0.1	0.10	102	80-120	
Calcium	mg/L	1	1.0	103	80-120	
Chromium	mg/L	0.1	0.11	109	80-120	
Cobalt	mg/L	0.1	0.11	111	80-120	
Lead	mg/L	0.1	0.10	104	80-120	
Lithium	mg/L	0.1	0.11	109	80-120	
Molybdenum	mg/L	0.1	0.11	106	80-120	
Selenium	mg/L	0.1	0.10	101	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 10722 10723

Parameter	Units	262329003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	105	106	75-125	1	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 10722 10723

Parameter	Units	262329003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	102	102	75-125	0	20	
Barium	mg/L	0.029	0.1	0.1	0.16	0.18	132	153	75-125	12	20	M1
Beryllium	mg/L	0.000092J	0.1	0.1	0.10	0.10	104	104	75-125	1	20	
Boron	mg/L	0.0069J	1	1	1.1	1.1	108	108	75-125	0	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20	
Calcium	mg/L	6.1	1	1	7.5	7.6	136	144	75-125	1	20	
Chromium	mg/L	ND	0.1	0.1	0.11	0.11	107	106	75-125	0	20	
Cobalt	mg/L	ND	0.1	0.1	0.11	0.11	109	109	75-125	1	20	
Lead	mg/L	ND	0.1	0.1	0.10	0.10	104	102	75-125	2	20	
Lithium	mg/L	0.0013J	0.1	0.1	0.10	0.10	103	101	75-125	2	20	
Molybdenum	mg/L	ND	0.1	0.1	0.11	0.11	109	109	75-125	0	20	
Selenium	mg/L	ND	0.1	0.1	0.11	0.10	106	103	75-125	3	20	
Thallium	mg/L	ND	0.1	0.1	0.10	0.10	104	102	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

QC Batch: 2137 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 262357013, 262357015, 262357017, 262357019, 262357021

METHOD BLANK: 11618 Matrix: Water
Associated Lab Samples: 262357013, 262357015, 262357017, 262357019, 262357021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	03/07/18 16:41	
Arsenic	mg/L	ND	0.0050	0.00057	03/07/18 16:41	
Barium	mg/L	ND	0.010	0.00078	03/07/18 16:41	
Beryllium	mg/L	ND	0.0030	0.000050	03/07/18 16:41	
Boron	mg/L	ND	0.040	0.0039	03/07/18 16:41	
Cadmium	mg/L	ND	0.0010	0.000093	03/07/18 16:41	
Calcium	mg/L	0.024J	0.50	0.014	03/07/18 16:41	
Chromium	mg/L	ND	0.010	0.0016	03/07/18 16:41	
Cobalt	mg/L	ND	0.010	0.00052	03/07/18 16:41	
Lead	mg/L	ND	0.0050	0.00027	03/07/18 16:41	
Lithium	mg/L	ND	0.050	0.00097	03/07/18 16:41	
Molybdenum	mg/L	ND	0.010	0.0019	03/07/18 16:41	
Selenium	mg/L	ND	0.010	0.0014	03/07/18 16:41	
Thallium	mg/L	ND	0.0010	0.00014	03/07/18 16:41	

LABORATORY CONTROL SAMPLE: 11619

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.098	98	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.095	95	80-120	
Beryllium	mg/L	0.1	0.11	110	80-120	
Boron	mg/L	1	1.1	109	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Calcium	mg/L	1	1.0	103	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.10	100	80-120	
Lithium	mg/L	0.1	0.11	115	80-120	
Molybdenum	mg/L	0.1	0.10	102	80-120	
Selenium	mg/L	0.1	0.10	100	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 11620 11621

Parameter	Units	262357013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 11620 11621

Parameter	Units	262357013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.0011J	0.1	0.1	0.11	0.11	105	104	75-125	1	20	
Barium	mg/L	0.017	0.1	0.1	0.12	0.12	99	98	75-125	1	20	
Beryllium	mg/L	0.0029J	0.1	0.1	0.10	0.099	99	97	75-125	3	20	
Boron	mg/L	0.92	1	1	2.6	2.6	171	171	75-125	0	20	
Cadmium	mg/L	0.00025J	0.1	0.1	0.10	0.10	100	103	75-125	3	20	
Calcium	mg/L	45.1	1	1	45.5	45.5	38	42	75-125	0	20	M6
Chromium	mg/L	ND	0.1	0.1	0.099	0.097	99	97	75-125	2	20	
Cobalt	mg/L	0.017	0.1	0.1	0.12	0.12	102	101	75-125	0	20	
Lead	mg/L	ND	0.1	0.1	0.097	0.097	97	97	75-125	0	20	
Lithium	mg/L	0.012J	0.1	0.1	0.11	0.11	103	100	75-125	3	20	
Molybdenum	mg/L	ND	0.1	0.1	0.11	0.11	110	110	75-125	0	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	104	104	75-125	0	20	
Thallium	mg/L	ND	0.1	0.1	0.097	0.097	97	97	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

QC Batch: 400716 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 262357001, 262357003, 262357005, 262357007, 262357009, 262357011, 262357013, 262357015, 262357017

METHOD BLANK: 2222271 Matrix: Water
Associated Lab Samples: 262357001, 262357003, 262357005, 262357007, 262357009, 262357011, 262357013, 262357015, 262357017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	03/05/18 23:15	

LABORATORY CONTROL SAMPLE: 2222272

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	254	102	90-110	

SAMPLE DUPLICATE: 2222273

Parameter	Units	92375157007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	110	128	15	5	D6

SAMPLE DUPLICATE: 2222274

Parameter	Units	92375157017 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

QC Batch: 400775 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 262357019, 262357021

METHOD BLANK: 2222436 Matrix: Water
Associated Lab Samples: 262357019, 262357021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	03/06/18 18:02	

LABORATORY CONTROL SAMPLE: 2222437

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	240	96	90-110	

SAMPLE DUPLICATE: 2222438

Parameter	Units	262357019 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		5	

SAMPLE DUPLICATE: 2222439

Parameter	Units	92375316009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	494	484	2	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

QC Batch: 1903 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 262357001, 262357003, 262357005, 262357007, 262357009, 262357011

METHOD BLANK: 10675 Matrix: Water
Associated Lab Samples: 262357001, 262357003, 262357005, 262357007, 262357009, 262357011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	03/02/18 12:51	
Fluoride	mg/L	ND	0.30	0.029	03/02/18 12:51	
Sulfate	mg/L	ND	1.0	0.017	03/02/18 12:51	

LABORATORY CONTROL SAMPLE: 10676

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.3	103	90-110	
Fluoride	mg/L	10	9.9	99	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 10677 10678

Parameter	Units	262329001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.5	10	10	12.0	12.1	95	96	90-110	1	15	
Fluoride	mg/L	ND	10	10	10.1	10.2	101	102	90-110	1	15	
Sulfate	mg/L	0.54J	10	10	10.6	10.7	101	102	90-110	1	15	

MATRIX SPIKE SAMPLE: 10679

Parameter	Units	262329003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	3.2	10	13.2	100	90-110	
Fluoride	mg/L	ND	10	10.5	105	90-110	
Sulfate	mg/L	7.4	10	17.3	99	90-110	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

QC Batch: 1994 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 262357013, 262357015, 262357017, 262357019, 262357021

METHOD BLANK: 11098 Matrix: Water
Associated Lab Samples: 262357013, 262357015, 262357017, 262357019, 262357021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.058J	0.25	0.024	03/05/18 16:35	
Fluoride	mg/L	ND	0.30	0.029	03/05/18 16:35	
Sulfate	mg/L	ND	1.0	0.017	03/05/18 16:35	

LABORATORY CONTROL SAMPLE: 11099

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.4	104	90-110	
Fluoride	mg/L	10	10.1	101	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 11100 11101

Parameter	Units	262357013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	29.0	10	10	34.6	34.5	56	55	90-110	0	15	E,M1
Fluoride	mg/L	ND	10	10	10.1	10.3	101	103	90-110	2	15	
Sulfate	mg/L	350	10	10	223	222	-1270	-1280	90-110	0	15	E,M1

MATRIX SPIKE SAMPLE: 11102

Parameter	Units	262357015 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	17.0	10	24.8	78	90-110	E,M1
Fluoride	mg/L	0.86	10	11.3	105	90-110	
Sulfate	mg/L	217	10	157	-607	90-110	E,M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: DGWC-13 **Lab ID: 262357002** Collected: 02/28/18 09:05 Received: 03/01/18 14:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.118 ± 0.191 (0.422) C:80% T:NA**	pCi/L	03/14/18 08:40	13982-63-3	
Radium-228	EPA 9320	**0.603 ± 0.351 (0.633) C:85% T:72%**	pCi/L	03/21/18 12:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.721 ± 0.542 (1.06)**	pCi/L	03/23/18 11:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: DGWC-15 **Lab ID: 262357004** Collected: 02/28/18 11:05 Received: 03/01/18 14:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.459 ± 0.260 (0.356) C:91% T:NA**	pCi/L	03/14/18 08:40	13982-63-3	
Radium-228	EPA 9320	**0.794 ± 0.381 (0.611) C:84% T:65%**	pCi/L	03/21/18 12:18	15262-20-1	
Total Radium	Total Radium Calculation	**1.25 ± 0.641 (0.967)**	pCi/L	03/23/18 11:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: DGWC-17 **Lab ID: 262357006** Collected: 02/28/18 09:10 Received: 03/01/18 14:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.223 ± 0.238 (0.472) C:77% T:NA**	pCi/L	03/14/18 08:40	13982-63-3	
Radium-228	EPA 9320	**0.874 ± 0.393 (0.641) C:80% T:82%**	pCi/L	03/21/18 12:18	15262-20-1	
Total Radium	Total Radium Calculation	**1.10 ± 0.631 (1.11)**	pCi/L	03/23/18 11:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: DGWC-19 **Lab ID: 262357008** Collected: 02/28/18 11:55 Received: 03/01/18 14:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.296 ± 0.238 (0.422) C:84% T:NA**	pCi/L	03/14/18 08:40	13982-63-3	
Radium-228	EPA 9320	**0.517 ± 0.385 (0.753) C:81% T:74%**	pCi/L	03/21/18 12:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.813 ± 0.623 (1.18)**	pCi/L	03/23/18 11:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: DGWC-20 **Lab ID: 262357010** Collected: 02/28/18 14:50 Received: 03/01/18 14:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.298 ± 0.236 (0.428) C:95% T:NA**	pCi/L	03/14/18 08:40	13982-63-3	
Radium-228	EPA 9320	**0.429 ± 0.302 (0.578) C:81% T:88%**	pCi/L	03/21/18 12:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.727 ± 0.538 (1.01)**	pCi/L	03/23/18 11:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: DGWC-21 **Lab ID: 262357012** Collected: 02/28/18 15:15 Received: 03/01/18 14:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.266 ± 0.220 (0.406) C:101% T:NA**	pCi/L	03/14/18 08:40	13982-63-3	
Radium-228	EPA 9320	**1.18 ± 0.472 (0.738) C:83% T:75%**	pCi/L	03/21/18 12:19	15262-20-1	
Total Radium	Total Radium Calculation	**1.45 ± 0.692 (1.14)**	pCi/L	03/23/18 11:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: DGWC-42 **Lab ID: 262357014** Collected: 02/28/18 15:30 Received: 03/01/18 14:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.555 ± 0.311 (0.436) C:76% T:NA**	pCi/L	03/14/18 08:37	13982-63-3	
Radium-228	EPA 9320	**0.327 ± 0.277 (0.545) C:79% T:81%**	pCi/L	03/20/18 14:35	15262-20-1	
Total Radium	Total Radium Calculation	**0.882 ± 0.588 (0.981)**	pCi/L	03/23/18 13:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: FD-2 **Lab ID: 262357016** Collected: 02/28/18 00:00 Received: 03/01/18 14:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.257 ± 0.275 (0.560) C:88% T:NA**	pCi/L	03/14/18 08:37	13982-63-3	
Radium-228	EPA 9320	**0.419 ± 0.304 (0.588) C:82% T:87%**	pCi/L	03/20/18 14:35	15262-20-1	
Total Radium	Total Radium Calculation	**0.676 ± 0.579 (1.15)**	pCi/L	03/23/18 13:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: FB-2 **Lab ID: 262357018** Collected: 02/28/18 10:55 Received: 03/01/18 14:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.107 ± 0.237 (0.555) C:92% T:NA**	pCi/L	03/14/18 08:38	13982-63-3	
Radium-228	EPA 9320	**0.0654 ± 0.418 (0.944) C:78% T:86%**	pCi/L	03/20/18 12:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.172 ± 0.655 (1.50)**	pCi/L	03/23/18 13:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: EB-2 **Lab ID: 262357020** Collected: 02/28/18 16:25 Received: 03/01/18 14:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.670 ± 0.316 (0.326) C:84% T:NA**	pCi/L	03/14/18 08:44	13982-63-3	
Radium-228	EPA 9320	**0.495 ± 0.355 (0.698) C:77% T:94%**	pCi/L	03/20/18 12:00	15262-20-1	
Total Radium	Total Radium Calculation	**1.17 ± 0.671 (1.02)**	pCi/L	03/23/18 13:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Sample: DGWC-22 **Lab ID: 262357022** Collected: 02/28/18 16:45 Received: 03/01/18 14:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.522 ± 0.286 (0.345) C:78% T:NA**	pCi/L	03/14/18 08:44	13982-63-3	
Radium-228	EPA 9320	**0.396 ± 0.428 (0.902) C:82% T:85%**	pCi/L	03/20/18 12:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.918 ± 0.714 (1.25)**	pCi/L	03/23/18 13:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

QC Batch: 290437 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 262357002, 262357004, 262357006, 262357008, 262357010, 262357012

METHOD BLANK: 1422134 Matrix: Water
Associated Lab Samples: 262357002, 262357004, 262357006, 262357008, 262357010, 262357012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.437 ± 0.326 (0.633) C:80% T:79%	pCi/L	03/21/18 12:17	

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

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

QC Batch: 290897 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 262357014, 262357016, 262357018, 262357020, 262357022

METHOD BLANK: 1424476 Matrix: Water
Associated Lab Samples: 262357014, 262357016, 262357018, 262357020, 262357022

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.259 ± 0.235 (0.428) C:79% T:NA	pCi/L	03/14/18 08:37	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

QC Batch: 290436 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 262357002, 262357004, 262357006, 262357008, 262357010, 262357012

METHOD BLANK: 1422133 Matrix: Water
Associated Lab Samples: 262357002, 262357004, 262357006, 262357008, 262357010, 262357012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.161 ± 0.156 (0.277) C:97% T:NA	pCi/L	03/14/18 08:38	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

QC Batch: 290899 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 262357014, 262357016, 262357018, 262357020, 262357022

METHOD BLANK: 1424478 Matrix: Water
Associated Lab Samples: 262357014, 262357016, 262357018, 262357020, 262357022

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.410 ± 0.336 (0.667) C:81% T:79%	pCi/L	03/20/18 11:27	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

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-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.
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.
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.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
262357001	DGWC-13	EPA 3005A	1909	EPA 6020B	1969
262357003	DGWC-15	EPA 3005A	1909	EPA 6020B	1969
262357005	DGWC-17	EPA 3005A	1909	EPA 6020B	1969
262357007	DGWC-19	EPA 3005A	1909	EPA 6020B	1969
262357009	DGWC-20	EPA 3005A	1909	EPA 6020B	1969
262357011	DGWC-21	EPA 3005A	1909	EPA 6020B	1969
262357013	DGWC-42	EPA 3005A	2137	EPA 6020B	2184
262357015	FD-2	EPA 3005A	2137	EPA 6020B	2184
262357017	FB-2	EPA 3005A	2137	EPA 6020B	2184
262357019	EB-2	EPA 3005A	2137	EPA 6020B	2184
262357021	DGWC-22	EPA 3005A	2137	EPA 6020B	2184
262357001	DGWC-13	EPA 7470A	1882	EPA 7470A	2413
262357003	DGWC-15	EPA 7470A	1882	EPA 7470A	2413
262357005	DGWC-17	EPA 7470A	1882	EPA 7470A	2413
262357007	DGWC-19	EPA 7470A	1882	EPA 7470A	2413
262357009	DGWC-20	EPA 7470A	1882	EPA 7470A	2413
262357011	DGWC-21	EPA 7470A	1882	EPA 7470A	2413
262357013	DGWC-42	EPA 7470A	1882	EPA 7470A	2413
262357015	FD-2	EPA 7470A	1882	EPA 7470A	2413
262357017	FB-2	EPA 7470A	1882	EPA 7470A	2413
262357019	EB-2	EPA 7470A	1882	EPA 7470A	2413
262357021	DGWC-22	EPA 7470A	1882	EPA 7470A	2413
262357002	DGWC-13	EPA 9315	290436		
262357004	DGWC-15	EPA 9315	290436		
262357006	DGWC-17	EPA 9315	290436		
262357008	DGWC-19	EPA 9315	290436		
262357010	DGWC-20	EPA 9315	290436		
262357012	DGWC-21	EPA 9315	290436		
262357014	DGWC-42	EPA 9315	290897		
262357016	FD-2	EPA 9315	290897		
262357018	FB-2	EPA 9315	290897		
262357020	EB-2	EPA 9315	290897		
262357022	DGWC-22	EPA 9315	290897		
262357002	DGWC-13	EPA 9320	290437		
262357004	DGWC-15	EPA 9320	290437		
262357006	DGWC-17	EPA 9320	290437		
262357008	DGWC-19	EPA 9320	290437		
262357010	DGWC-20	EPA 9320	290437		
262357012	DGWC-21	EPA 9320	290437		
262357014	DGWC-42	EPA 9320	290899		
262357016	FD-2	EPA 9320	290899		
262357018	FB-2	EPA 9320	290899		
262357020	EB-2	EPA 9320	290899		
262357022	DGWC-22	EPA 9320	290899		
262357002	DGWC-13	Total Radium Calculation	292213		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 262357

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
262357004	**DGWC-15**	Total Radium Calculation	292213		
262357006	**DGWC-17**	Total Radium Calculation	292213		
262357008	**DGWC-19**	Total Radium Calculation	292213		
262357010	**DGWC-20**	Total Radium Calculation	292213		
262357012	**DGWC-21**	Total Radium Calculation	292213		
262357014	**DGWC-42**	Total Radium Calculation	292214		
262357016	**FD-2**	Total Radium Calculation	292214		
262357018	**FB-2**	Total Radium Calculation	292214		
262357020	**EB-2**	Total Radium Calculation	292214		
262357022	**DGWC-22**	Total Radium Calculation	292214		
262357001	**DGWC-13**	SM 2540C	400716		
262357003	**DGWC-15**	SM 2540C	400716		
262357005	**DGWC-17**	SM 2540C	400716		
262357007	**DGWC-19**	SM 2540C	400716		
262357009	**DGWC-20**	SM 2540C	400716		
262357011	**DGWC-21**	SM 2540C	400716		
262357013	**DGWC-42**	SM 2540C	400716		
262357015	**FD-2**	SM 2540C	400716		
262357017	**FB-2**	SM 2540C	400716		
262357019	**EB-2**	SM 2540C	400775		
262357021	**DGWC-22**	SM 2540C	400775		
262357001	**DGWC-13**	EPA 300.0	1903		
262357003	**DGWC-15**	EPA 300.0	1903		
262357005	**DGWC-17**	EPA 300.0	1903		
262357007	**DGWC-19**	EPA 300.0	1903		
262357009	**DGWC-20**	EPA 300.0	1903		
262357011	**DGWC-21**	EPA 300.0	1903		
262357013	**DGWC-42**	EPA 300.0	1994		
262357015	**FD-2**	EPA 300.0	1994		
262357017	**FB-2**	EPA 300.0	1994		
262357019	**EB-2**	EPA 300.0	1994		
262357021	**DGWC-22**	EPA 300.0	1994		

CHAIN OF CUSTODY RECORD

Pace Analytical®

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: kiurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB ID NUMBER
CONTAINER TYPE:								P	P	P						
PRESERVATION:								3	7	3						
02/28/18	0905	GW		x	DGWC-13	4		1	1	2						
02/28/18	~~1000~~ 1105	GW		x	DGWC-15	4		1	1	2						
02/28/18	0910	GW		x	DGWC-17	4		1	1	2						
02/28/18	1155	GW		x	DGWC-19	4		1	1	2						
02/28/18	1450	GW		x	DGWC-20	4		1	1	2						
02/28/18	1515	GW		x	DGWC-21	4		1	1	4						
02/28/18	1530	GW		x	DGWC-42	4		1	1	2						
02/28/18	–	GW		x	FD-2	4		1	1	2						
02/28/18	1055	W		x	FB-2	4		1	1	2						
02/28/18	1625	W		x	EB-2	4		1	1	2						
02/28/18	1645	GW		x	DGWC-22	4		1	1	2						

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

Extra Radium

WO# : 262357

262357

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 2/28/18 1800

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY: Mike
DATE/TIME: 3/1/18 0919

RELINQUISHED BY: Karim Minkara
DATE/TIME: 3-1-18/ 0919

RECEIVED BY/LAB: Malman
DATE/TIME: 03/01/18 1420

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

pH Checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0.1 Max:
Custody Seal: Intact Broken Not Present
Ice Cooler
Cooler ID:

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

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 262357

PM: BM Due Date: 03/08/18

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 ☐ 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: 3/1/18 MA

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

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

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

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

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	3/13/2018
Worklist:	40364
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1422134
MB concentration:	0.437
M/B Counting Uncertainty:	0.317
MB MDC:	0.633
MB Numerical Performance Indicator:	2.71
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS40364	**LCSD40364**
Count Date:	3/21/2018	3/21/2018
Spike I.D.:	17-033	17-033
Spike Concentration (pCi/mL):	22.092	22.092
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.808	0.808
Target Conc. (pCi/L, g, F):	5.466	5.470
Uncertainty (Calculated):	0.394	0.394
Result (pCi/L, g, F):	4.879	5.673
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.641	0.679
Numerical Performance Indicator:	-1.53	0.51
Percent Recovery:	89.25%	103.71%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	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:	

Duplicate Sample Assessment		
Sample I.D.:	LCS40364	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD40364	
Sample Result (pCi/L, g, F):	4.879	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.641	
Sample Duplicate Result (pCi/L, g, F):	5.673	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.679	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-1.666	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	14.98%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

JJW 3/22/18 CWR 3/23/18

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	JC2
Date:	3/13/2018
Worklist:	40363
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1422133
MB concentration:	0.161
M/B Counting Uncertainty:	0.154
MB MDC:	0.277
MB Numerical Performance Indicator:	2.05
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N/A
	LCS40363	**LCSD40363**
Count Date:	3/14/2018	3/14/2018
Spike I.D.:	17-030	17-030
Spike Concentration (pCi/mL):	80.175	80.175
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.513	0.504
Target Conc. (pCi/L, g, F):	15.636	15.924
Uncertainty (Calculated):	1.440	1.467
Result (pCi/L, g, F):	12.494	12.265
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.074	
Numerical Performance Indicator:	-3.43	#VALUE!
Percent Recovery:	79.91%	77.02%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	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:	

Duplicate Sample Assessment

Sample I.D.:	262329002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	262329002DUP	
Sample Result (pCi/L, g, F):	0.138	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.212	
Sample Duplicate Result (pCi/L, g, F):	0.229	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.190	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.626	262329002
Duplicate RPD:	49.48%	262329002DUP
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:

***Batch must be re-prepped due to unacceptable precision. ~~results < 5x MDC~~, numerical indicator < 2 acceptable for all matrices

3/14/18

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	JC2
Date:	3/13/2018
Worklist:	40438
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1424476
MB concentration:	0.259
M/B Counting Uncertainty:	0.232
MB MDC:	0.428
MB Numerical Performance Indicator:	2.19
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS40438	**LCSD40438**
Count Date:	3/14/2018	
Spike I.D.:	17-030	
Spike Concentration (pCi/mL):	80.175	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.508	
Target Conc. (pCi/L, g, F):	15.792	
Uncertainty (Calculated):	1.455	
Result (pCi/L, g, F):	13.680	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.154	
Numerical Performance Indicator:	-2.23	
Percent Recovery:	86.63%	
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:	
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.:	262423006	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	262423006DUP	
Sample Result (pCi/L, g, F):	1.030	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.365	
Sample Duplicate Result (pCi/L, g, F):	0.981	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.346	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.194	262423006
Duplicate RPD:	4.95%	262423006DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:

TAR DW QC
Printed: 3/14/2018 5:28 PM

JW 3-14-18

1 of 1

CW 3/15/18

TAR_40438_W
Total Alpha Radium (R104-2 17Mar2014).xls

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	3/15/2018
Worklist:	40440
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1424478
MB concentration:	0.410
M/B Counting Uncertainty:	0.328
MB MDC:	0.667
MB Numerical Performance Indicator:	2.45
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS40440	**LCSD40440**
Count Date:	3/20/2018	3/20/2018
Spike I.D.:	17-033	17-033
Spike Concentration (pCi/mL):	22.099	22.099
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.812	0.805
Target Conc. (pCi/L, g, F):	5.442	5.488
Uncertainty (Calculated):	0.392	0.395
Result (pCi/L, g, F):	6.878	5.209
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.719	0.639
Numerical Performance Indicator:	3.44	-0.73
Percent Recovery:	126.39%	94.91%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	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:	

Duplicate Sample Assessment		
Sample I.D.:	LCS40440	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD40440	
Sample Result (pCi/L, g, F):	6.878	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.719	
Sample Duplicate Result (pCi/L, g, F):	5.209	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.639	
Are sample and/or duplicate results below MDC?.	NO	
Duplicate Numerical Performance Indicator:	3.399	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	28.45%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

3/21/18

JJY 3-21-18

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

July 05, 2019

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

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on March 02, 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.

REV07052019_report revised per consultant request to correct MDL settings.

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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

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

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
Florida: Cert E871149 SEKS WET
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

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Lab ID	Sample ID	Matrix	Date Collected	Date Received
262423001	**DGWC-37**	Water	03/01/18 09:50	03/02/18 15:30
262423002	**DGWC-37**	Water	03/01/18 09:50	03/02/18 15:30
262423003	**DGWC-23**	Water	03/01/18 10:05	03/02/18 15:30
262423004	**DGWC-23**	Water	03/01/18 10:05	03/02/18 15:30
262423005	**DGWC-47**	Water	03/01/18 12:45	03/02/18 15:30
262423006	**DGWC-47**	Water	03/01/18 12:45	03/02/18 15:30
262423007	**DGWC-39**	Water	03/01/18 13:15	03/02/18 15:30
262423008	**DGWC-39**	Water	03/01/18 13:15	03/02/18 15:30
262423009	**DGWC-38**	Water	03/01/18 11:40	03/02/18 15:30
262423010	**DGWC-38**	Water	03/01/18 11:40	03/02/18 15:30
262423011	**FD-3**	Water	03/01/18 00:00	03/02/18 15:30
262423012	**FD-3**	Water	03/01/18 00:00	03/02/18 15:30
262423013	**FB-3**	Water	03/01/18 09:55	03/02/18 15:30
262423014	**FB-3**	Water	03/01/18 09:55	03/02/18 15:30
262423015	**EB-3**	Water	03/01/18 13:55	03/02/18 15:30
262423016	**EB-3**	Water	03/01/18 13:55	03/02/18 15:30
262423017	**DGWC-67**	Water	03/02/18 09:40	03/02/18 15:30
262423018	**DGWC-67**	Water	03/02/18 09:40	03/02/18 15:30
262423019	**DGWC-68A**	Water	03/02/18 11:10	03/02/18 15:30
262423020	**DGWC-68A**	Water	03/02/18 11:10	03/02/18 15:30
262423021	**DGWC-69**	Water	03/02/18 12:30	03/02/18 15:30
262423022	**DGWC-69**	Water	03/02/18 12:30	03/02/18 15:30
262423023	**DGWC-40**	Water	03/02/18 09:40	03/02/18 15:30
262423024	**DGWC-40**	Water	03/02/18 09:40	03/02/18 15:30
262423025	**DGWC-48**	Water	03/02/18 11:05	03/02/18 15:30
262423026	**DGWC-48**	Water	03/02/18 11:05	03/02/18 15:30

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
262423001	**DGWC-37**	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
262423002	**DGWC-37**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262423003	**DGWC-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
262423004	**DGWC-23**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262423005	**DGWC-47**	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
262423006	**DGWC-47**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262423007	**DGWC-39**	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
262423008	**DGWC-39**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262423009	**DGWC-38**	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
262423010	**DGWC-38**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262423011	**FD-3**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA

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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262423012	**FD-3**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262423013	**FB-3**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262423014	**FB-3**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262423015	**EB-3**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262423016	**EB-3**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262423017	**DGWC-67**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262423018	**DGWC-67**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262423019	**DGWC-68A**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262423020	**DGWC-68A**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262423021	**DGWC-69**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
262423022	**DGWC-69**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262423023	**DGWC-40**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262423024	**DGWC-40**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
262423025	**DGWC-48**	EPA 6020B	CSW	14	PASI-GA
		EPA 7470A	MTC	1	PASI-GA
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	RLC	3	PASI-GA
262423026	**DGWC-48**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-37 **Lab ID: 262423001** Collected: 03/01/18 09:50 Received: 03/02/18 15:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/09/18 16:17	7440-36-0	
Arsenic	ND	ug/L	5.0	0.57	1	03/07/18 10:35	03/09/18 16:17	7440-38-2	
Barium	**102**	ug/L	10.0	0.78	1	03/07/18 10:35	03/09/18 16:17	7440-39-3	
Beryllium	**0.067J**	ug/L	3.0	0.050	1	03/07/18 10:35	03/09/18 16:17	7440-41-7	
Boron	**1870**	ug/L	40.0	3.9	1	03/07/18 10:35	03/09/18 16:17	7440-42-8	
Cadmium	ND	ug/L	1.0	0.093	1	03/07/18 10:35	03/09/18 16:17	7440-43-9	
Calcium	**57000**	ug/L	25000	685	50	03/07/18 10:35	03/09/18 16:22	7440-70-2	M6
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/09/18 16:17	7440-47-3	
Cobalt	ND	ug/L	10.0	0.52	1	03/07/18 10:35	03/09/18 16:17	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/09/18 16:17	7439-92-1	
Lithium	**2.4J**	ug/L	50.0	0.97	1	03/07/18 10:35	03/09/18 16:17	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.9	1	03/07/18 10:35	03/09/18 16:17	7439-98-7	
Selenium	ND	ug/L	10.0	1.4	1	03/07/18 10:35	03/09/18 16:17	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/09/18 16:17	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 13:25	03/13/18 14:15	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**311**	mg/L	25.0	25.0	1		03/06/18 18:13		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.3**	mg/L	0.25	0.024	1		03/05/18 20:22	16887-00-6	
Fluoride	**0.22J**	mg/L	0.30	0.029	1		03/05/18 20:22	16984-48-8	
Sulfate	**94.6**	mg/L	10.0	0.17	10		03/16/18 08:01	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-23 **Lab ID: 262423003** Collected: 03/01/18 10:05 Received: 03/02/18 15:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/09/18 17:24	7440-36-0	
Arsenic	ND	ug/L	5.0	0.57	1	03/07/18 10:35	03/09/18 17:24	7440-38-2	
Barium	**16.4**	ug/L	10.0	0.78	1	03/07/18 10:35	03/09/18 17:24	7440-39-3	
Beryllium	**0.34J**	ug/L	3.0	0.050	1	03/07/18 10:35	03/09/18 17:24	7440-41-7	
Boron	**4370**	ug/L	40.0	3.9	1	03/07/18 10:35	03/09/18 17:24	7440-42-8	
Cadmium	ND	ug/L	1.0	0.093	1	03/07/18 10:35	03/09/18 17:24	7440-43-9	
Calcium	**66500**	ug/L	25000	685	50	03/07/18 10:35	03/09/18 17:30	7440-70-2	
Chromium	**3.3J**	ug/L	10.0	1.6	1	03/07/18 10:35	03/09/18 17:24	7440-47-3	
Cobalt	ND	ug/L	10.0	0.52	1	03/07/18 10:35	03/09/18 17:24	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/09/18 17:24	7439-92-1	
Lithium	**75.9**	ug/L	50.0	0.97	1	03/07/18 10:35	03/09/18 17:24	7439-93-2	
Molybdenum	**4.5J**	ug/L	10.0	1.9	1	03/07/18 10:35	03/09/18 17:24	7439-98-7	
Selenium	ND	ug/L	10.0	1.4	1	03/07/18 10:35	03/09/18 17:24	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/09/18 17:24	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.00013J**	mg/L	0.00050	0.000036	1	03/12/18 13:25	03/13/18 14:06	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**454**	mg/L	25.0	25.0	1		03/06/18 18:13		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**14.8**	mg/L	0.25	0.024	1		03/05/18 20:43	16887-00-6	
Fluoride	**0.18J**	mg/L	0.30	0.029	1		03/05/18 20:43	16984-48-8	
Sulfate	**209**	mg/L	25.0	0.42	25		03/16/18 09:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-47 **Lab ID: 262423005** Collected: 03/01/18 12:45 Received: 03/02/18 15:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/09/18 17:35	7440-36-0	
Arsenic	**2.9J**	ug/L	5.0	0.57	1	03/07/18 10:35	03/09/18 17:35	7440-38-2	
Barium	**16.4**	ug/L	10.0	0.78	1	03/07/18 10:35	03/09/18 17:35	7440-39-3	
Beryllium	**14.6**	ug/L	3.0	0.050	1	03/07/18 10:35	03/09/18 17:35	7440-41-7	
Boron	**296**	ug/L	40.0	3.9	1	03/07/18 10:35	03/09/18 17:35	7440-42-8	
Cadmium	**2.5**	ug/L	1.0	0.093	1	03/07/18 10:35	03/09/18 17:35	7440-43-9	
Calcium	**44200**	ug/L	25000	685	50	03/07/18 10:35	03/09/18 17:41	7440-70-2	
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/09/18 17:35	7440-47-3	
Cobalt	**401**	ug/L	10.0	0.52	1	03/07/18 10:35	03/09/18 17:35	7440-48-4	
Lead	**1.1J**	ug/L	5.0	0.27	1	03/07/18 10:35	03/09/18 17:35	7439-92-1	
Lithium	**77.2**	ug/L	50.0	0.97	1	03/07/18 10:35	03/09/18 17:35	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.9	1	03/07/18 10:35	03/09/18 17:35	7439-98-7	
Selenium	**12.4**	ug/L	10.0	1.4	1	03/07/18 10:35	03/09/18 17:35	7782-49-2	
Thallium	**0.32J**	ug/L	1.0	0.14	1	03/07/18 10:35	03/09/18 17:35	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 13:25	03/13/18 14:18	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**435**	mg/L	25.0	25.0	1		03/06/18 18:13		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**10.7**	mg/L	0.25	0.024	1		03/05/18 21:04	16887-00-6	
Fluoride	**1.4**	mg/L	0.30	0.029	1		03/05/18 21:04	16984-48-8	
Sulfate	**245**	mg/L	25.0	0.42	25		03/16/18 10:08	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-39 **Lab ID: 262423007** Collected: 03/01/18 13:15 Received: 03/02/18 15:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/09/18 17:47	7440-36-0	
Arsenic	**1.1J**	ug/L	5.0	0.57	1	03/07/18 10:35	03/09/18 17:47	7440-38-2	
Barium	**74.2**	ug/L	10.0	0.78	1	03/07/18 10:35	03/09/18 17:47	7440-39-3	
Beryllium	ND	ug/L	3.0	0.050	1	03/07/18 10:35	03/09/18 17:47	7440-41-7	
Boron	**2860**	ug/L	40.0	3.9	1	03/07/18 10:35	03/09/18 17:47	7440-42-8	
Cadmium	ND	ug/L	1.0	0.093	1	03/07/18 10:35	03/09/18 17:47	7440-43-9	
Calcium	**79600**	ug/L	25000	685	50	03/07/18 10:35	03/09/18 17:52	7440-70-2	
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/09/18 17:47	7440-47-3	
Cobalt	**5.8J**	ug/L	10.0	0.52	1	03/07/18 10:35	03/09/18 17:47	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/09/18 17:47	7439-92-1	
Lithium	ND	ug/L	50.0	0.97	1	03/07/18 10:35	03/09/18 17:47	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.9	1	03/07/18 10:35	03/09/18 17:47	7439-98-7	
Selenium	ND	ug/L	10.0	1.4	1	03/07/18 10:35	03/09/18 17:47	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/09/18 17:47	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 13:25	03/13/18 14:20	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**440**	mg/L	25.0	25.0	1		03/06/18 18:13		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**8.1**	mg/L	0.25	0.024	1		03/05/18 22:47	16887-00-6	
Fluoride	**0.13J**	mg/L	0.30	0.029	1		03/05/18 22:47	16984-48-8	
Sulfate	**166**	mg/L	20.0	0.34	20		03/16/18 10:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-38 **Lab ID: 262423009** Collected: 03/01/18 11:40 Received: 03/02/18 15:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/09/18 17:58	7440-36-0	
Arsenic	ND	ug/L	5.0	0.57	1	03/07/18 10:35	03/09/18 17:58	7440-38-2	
Barium	**33.3**	ug/L	10.0	0.78	1	03/07/18 10:35	03/09/18 17:58	7440-39-3	
Beryllium	**0.054J**	ug/L	3.0	0.050	1	03/07/18 10:35	03/09/18 17:58	7440-41-7	
Boron	**3080**	ug/L	40.0	3.9	1	03/07/18 10:35	03/09/18 17:58	7440-42-8	
Cadmium	**0.18J**	ug/L	1.0	0.093	1	03/07/18 10:35	03/09/18 17:58	7440-43-9	
Calcium	**81800**	ug/L	25000	685	50	03/07/18 10:35	03/09/18 18:04	7440-70-2	
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/09/18 17:58	7440-47-3	
Cobalt	**1.8J**	ug/L	10.0	0.52	1	03/07/18 10:35	03/09/18 17:58	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/09/18 17:58	7439-92-1	
Lithium	**3.3J**	ug/L	50.0	0.97	1	03/07/18 10:35	03/09/18 17:58	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.9	1	03/07/18 10:35	03/09/18 17:58	7439-98-7	
Selenium	ND	ug/L	10.0	1.4	1	03/07/18 10:35	03/09/18 17:58	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/09/18 17:58	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 13:25	03/13/18 14:23	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**492**	mg/L	25.0	25.0	1		03/06/18 18:13		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**8.1**	mg/L	0.25	0.024	1		03/05/18 23:08	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/05/18 23:08	16984-48-8	
Sulfate	**242**	mg/L	25.0	0.42	25		03/16/18 10:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: FD-3 **Lab ID: 262423011** Collected: 03/01/18 00:00 Received: 03/02/18 15:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/09/18 18:10	7440-36-0	
Arsenic	ND	ug/L	5.0	0.57	1	03/07/18 10:35	03/09/18 18:10	7440-38-2	
Barium	**102**	ug/L	10.0	0.78	1	03/07/18 10:35	03/09/18 18:10	7440-39-3	
Beryllium	**0.058J**	ug/L	3.0	0.050	1	03/07/18 10:35	03/09/18 18:10	7440-41-7	
Boron	**1800**	ug/L	40.0	3.9	1	03/07/18 10:35	03/09/18 18:10	7440-42-8	
Cadmium	ND	ug/L	1.0	0.093	1	03/07/18 10:35	03/09/18 18:10	7440-43-9	
Calcium	**58500**	ug/L	25000	685	50	03/07/18 10:35	03/09/18 18:15	7440-70-2	
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/09/18 18:10	7440-47-3	
Cobalt	ND	ug/L	10.0	0.52	1	03/07/18 10:35	03/09/18 18:10	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/09/18 18:10	7439-92-1	
Lithium	**2.3J**	ug/L	50.0	0.97	1	03/07/18 10:35	03/09/18 18:10	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.9	1	03/07/18 10:35	03/09/18 18:10	7439-98-7	
Selenium	ND	ug/L	10.0	1.4	1	03/07/18 10:35	03/09/18 18:10	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/09/18 18:10	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 13:25	03/13/18 14:30	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**301**	mg/L	25.0	25.0	1		03/08/18 14:44		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.3**	mg/L	0.25	0.024	1		03/05/18 23:49	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/05/18 23:49	16984-48-8	
Sulfate	**95.9**	mg/L	10.0	0.17	10		03/16/18 11:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: FB-3 **Lab ID: 262423013** Collected: 03/01/18 09:55 Received: 03/02/18 15:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/09/18 18:33	7440-36-0	
Arsenic	ND	ug/L	5.0	0.57	1	03/07/18 10:35	03/09/18 18:33	7440-38-2	
Barium	ND	ug/L	10.0	0.78	1	03/07/18 10:35	03/09/18 18:33	7440-39-3	
Beryllium	ND	ug/L	3.0	0.050	1	03/07/18 10:35	03/09/18 18:33	7440-41-7	
Boron	ND	ug/L	40.0	3.9	1	03/07/18 10:35	03/09/18 18:33	7440-42-8	
Cadmium	ND	ug/L	1.0	0.093	1	03/07/18 10:35	03/09/18 18:33	7440-43-9	
Calcium	**37.9J**	ug/L	500	13.7	1	03/07/18 10:35	03/09/18 18:33	7440-70-2	B
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/09/18 18:33	7440-47-3	
Cobalt	ND	ug/L	10.0	0.52	1	03/07/18 10:35	03/09/18 18:33	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/09/18 18:33	7439-92-1	
Lithium	ND	ug/L	50.0	0.97	1	03/07/18 10:35	03/09/18 18:33	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.9	1	03/07/18 10:35	03/09/18 18:33	7439-98-7	
Selenium	ND	ug/L	10.0	1.4	1	03/07/18 10:35	03/09/18 18:33	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/09/18 18:33	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 13:25	03/13/18 14:32	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		03/08/18 14:54		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.057J**	mg/L	0.25	0.024	1		03/06/18 00:10	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		03/06/18 00:10	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		03/06/18 00:10	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: EB-3 **Lab ID: 262423015** Collected: 03/01/18 13:55 Received: 03/02/18 15:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/09/18 18:38	7440-36-0	
Arsenic	ND	ug/L	5.0	0.57	1	03/07/18 10:35	03/09/18 18:38	7440-38-2	
Barium	ND	ug/L	10.0	0.78	1	03/07/18 10:35	03/09/18 18:38	7440-39-3	
Beryllium	ND	ug/L	3.0	0.050	1	03/07/18 10:35	03/09/18 18:38	7440-41-7	
Boron	ND	ug/L	40.0	3.9	1	03/07/18 10:35	03/09/18 18:38	7440-42-8	
Cadmium	ND	ug/L	1.0	0.093	1	03/07/18 10:35	03/09/18 18:38	7440-43-9	
Calcium	**41.2J**	ug/L	500	13.7	1	03/07/18 10:35	03/09/18 18:38	7440-70-2	B
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/09/18 18:38	7440-47-3	
Cobalt	ND	ug/L	10.0	0.52	1	03/07/18 10:35	03/09/18 18:38	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/09/18 18:38	7439-92-1	
Lithium	ND	ug/L	50.0	0.97	1	03/07/18 10:35	03/09/18 18:38	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.9	1	03/07/18 10:35	03/09/18 18:38	7439-98-7	
Selenium	ND	ug/L	10.0	1.4	1	03/07/18 10:35	03/09/18 18:38	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/09/18 18:38	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 13:25	03/13/18 14:34	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		03/08/18 14:54		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.045J**	mg/L	0.25	0.024	1		03/06/18 00:30	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		03/06/18 00:30	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		03/06/18 00:30	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-67 **Lab ID: 262423017** Collected: 03/02/18 09:40 Received: 03/02/18 15:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/09/18 18:44	7440-36-0	
Arsenic	ND	ug/L	5.0	0.57	1	03/07/18 10:35	03/09/18 18:44	7440-38-2	
Barium	**104**	ug/L	10.0	0.78	1	03/07/18 10:35	03/09/18 18:44	7440-39-3	
Beryllium	ND	ug/L	3.0	0.050	1	03/07/18 10:35	03/09/18 18:44	7440-41-7	
Boron	**3490**	ug/L	40.0	3.9	1	03/07/18 10:35	03/09/18 18:44	7440-42-8	
Cadmium	ND	ug/L	1.0	0.093	1	03/07/18 10:35	03/09/18 18:44	7440-43-9	
Calcium	**40100**	ug/L	25000	685	50	03/07/18 10:35	03/09/18 18:50	7440-70-2	
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/09/18 18:44	7440-47-3	
Cobalt	**1.7J**	ug/L	10.0	0.52	1	03/07/18 10:35	03/09/18 18:44	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/09/18 18:44	7439-92-1	
Lithium	**4.7J**	ug/L	50.0	0.97	1	03/07/18 10:35	03/09/18 18:44	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.9	1	03/07/18 10:35	03/09/18 18:44	7439-98-7	
Selenium	ND	ug/L	10.0	1.4	1	03/07/18 10:35	03/09/18 18:44	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/09/18 18:44	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 13:25	03/13/18 14:37	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**264**	mg/L	25.0	25.0	1		03/08/18 14:54		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.8**	mg/L	0.25	0.024	1		03/06/18 00:51	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/06/18 00:51	16984-48-8	
Sulfate	**98.5**	mg/L	10.0	0.17	10		03/16/18 11:33	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-68A **Lab ID: 262423019** Collected: 03/02/18 11:10 Received: 03/02/18 15:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/09/18 18:55	7440-36-0	
Arsenic	ND	ug/L	5.0	0.57	1	03/07/18 10:35	03/09/18 18:55	7440-38-2	
Barium	**87.8**	ug/L	10.0	0.78	1	03/07/18 10:35	03/09/18 18:55	7440-39-3	
Beryllium	ND	ug/L	3.0	0.050	1	03/07/18 10:35	03/09/18 18:55	7440-41-7	
Boron	**2050**	ug/L	40.0	3.9	1	03/07/18 10:35	03/09/18 18:55	7440-42-8	
Cadmium	**0.19J**	ug/L	1.0	0.093	1	03/07/18 10:35	03/09/18 18:55	7440-43-9	
Calcium	**48900**	ug/L	25000	685	50	03/07/18 10:35	03/09/18 19:01	7440-70-2	
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/09/18 18:55	7440-47-3	
Cobalt	ND	ug/L	10.0	0.52	1	03/07/18 10:35	03/09/18 18:55	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/09/18 18:55	7439-92-1	
Lithium	ND	ug/L	50.0	0.97	1	03/07/18 10:35	03/09/18 18:55	7439-93-2	
Molybdenum	**215**	ug/L	10.0	1.9	1	03/07/18 10:35	03/09/18 18:55	7439-98-7	
Selenium	ND	ug/L	10.0	1.4	1	03/07/18 10:35	03/09/18 18:55	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/09/18 18:55	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 13:25	03/13/18 14:39	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**252**	mg/L	25.0	25.0	1		03/08/18 14:54		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.2**	mg/L	0.25	0.024	1		03/06/18 01:12	16887-00-6	
Fluoride	**0.23J**	mg/L	0.30	0.029	1		03/06/18 01:12	16984-48-8	
Sulfate	**44.7**	mg/L	5.0	0.085	5		03/16/18 11:54	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-69 **Lab ID: 262423021** Collected: 03/02/18 12:30 Received: 03/02/18 15:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/09/18 19:07	7440-36-0	
Arsenic	**12.7**	ug/L	5.0	0.57	1	03/07/18 10:35	03/09/18 19:07	7440-38-2	
Barium	**67.1**	ug/L	10.0	0.78	1	03/07/18 10:35	03/09/18 19:07	7440-39-3	
Beryllium	**0.060J**	ug/L	3.0	0.050	1	03/07/18 10:35	03/09/18 19:07	7440-41-7	
Boron	**47.8**	ug/L	40.0	3.9	1	03/07/18 10:35	03/09/18 19:07	7440-42-8	
Cadmium	**0.16J**	ug/L	1.0	0.093	1	03/07/18 10:35	03/09/18 19:07	7440-43-9	
Calcium	**8090**	ug/L	500	13.7	1	03/07/18 10:35	03/09/18 19:07	7440-70-2	
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/09/18 19:07	7440-47-3	
Cobalt	ND	ug/L	10.0	0.52	1	03/07/18 10:35	03/09/18 19:07	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/09/18 19:07	7439-92-1	
Lithium	**2.8J**	ug/L	50.0	0.97	1	03/07/18 10:35	03/09/18 19:07	7439-93-2	
Molybdenum	**7.2J**	ug/L	10.0	1.9	1	03/07/18 10:35	03/09/18 19:07	7439-98-7	
Selenium	ND	ug/L	10.0	1.4	1	03/07/18 10:35	03/09/18 19:07	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/09/18 19:07	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 13:25	03/13/18 14:42	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**73.0**	mg/L	25.0	25.0	1		03/08/18 14:54		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.4**	mg/L	0.25	0.024	1		03/06/18 01:32	16887-00-6	
Fluoride	**0.18J**	mg/L	0.30	0.029	1		03/06/18 01:32	16984-48-8	
Sulfate	**10.1**	mg/L	1.0	0.017	1		03/06/18 01:32	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-40 **Lab ID: 262423023** Collected: 03/02/18 09:40 Received: 03/02/18 15:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/09/18 19:18	7440-36-0	
Arsenic	**1.1J**	ug/L	5.0	0.57	1	03/07/18 10:35	03/09/18 19:18	7440-38-2	
Barium	**16.9**	ug/L	10.0	0.78	1	03/07/18 10:35	03/09/18 19:18	7440-39-3	
Beryllium	**3.3**	ug/L	3.0	0.050	1	03/07/18 10:35	03/09/18 19:18	7440-41-7	
Boron	**974**	ug/L	40.0	3.9	1	03/07/18 10:35	03/09/18 19:18	7440-42-8	
Cadmium	**0.85J**	ug/L	1.0	0.093	1	03/07/18 10:35	03/09/18 19:18	7440-43-9	
Calcium	**43200**	ug/L	25000	685	50	03/07/18 10:35	03/09/18 19:24	7440-70-2	
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/09/18 19:18	7440-47-3	
Cobalt	**42.5**	ug/L	10.0	0.52	1	03/07/18 10:35	03/09/18 19:18	7440-48-4	
Lead	ND	ug/L	5.0	0.27	1	03/07/18 10:35	03/09/18 19:18	7439-92-1	
Lithium	**2.3J**	ug/L	50.0	0.97	1	03/07/18 10:35	03/09/18 19:18	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.9	1	03/07/18 10:35	03/09/18 19:18	7439-98-7	
Selenium	**4.5J**	ug/L	10.0	1.4	1	03/07/18 10:35	03/09/18 19:18	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/09/18 19:18	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 13:25	03/13/18 14:44	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**359**	mg/L	25.0	25.0	1		03/08/18 14:58		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**19.5**	mg/L	0.25	0.024	1		03/06/18 01:53	16887-00-6	
Fluoride	**0.33**	mg/L	0.30	0.029	1		03/06/18 01:53	16984-48-8	
Sulfate	**219**	mg/L	25.0	0.42	25		03/16/18 12:15	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-48 **Lab ID: 262423025** Collected: 03/02/18 11:05 Received: 03/02/18 15:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	ug/L	3.0	0.78	1	03/07/18 10:35	03/09/18 19:41	7440-36-0	
Arsenic	**1.7J**	ug/L	5.0	0.57	1	03/07/18 10:35	03/09/18 19:41	7440-38-2	
Barium	**13.1**	ug/L	10.0	0.78	1	03/07/18 10:35	03/09/18 19:41	7440-39-3	
Beryllium	**9.6**	ug/L	3.0	0.050	1	03/07/18 10:35	03/09/18 19:41	7440-41-7	
Boron	**878**	ug/L	40.0	3.9	1	03/07/18 10:35	03/09/18 19:41	7440-42-8	
Cadmium	**4.9**	ug/L	1.0	0.093	1	03/07/18 10:35	03/09/18 19:41	7440-43-9	
Calcium	**86600**	ug/L	25000	685	50	03/07/18 10:35	03/09/18 19:47	7440-70-2	
Chromium	ND	ug/L	10.0	1.6	1	03/07/18 10:35	03/09/18 19:41	7440-47-3	
Cobalt	**490**	ug/L	10.0	0.52	1	03/07/18 10:35	03/09/18 19:41	7440-48-4	
Lead	**2.2J**	ug/L	5.0	0.27	1	03/07/18 10:35	03/09/18 19:41	7439-92-1	
Lithium	**129**	ug/L	50.0	0.97	1	03/07/18 10:35	03/09/18 19:41	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.9	1	03/07/18 10:35	03/09/18 19:41	7439-98-7	
Selenium	**8.4J**	ug/L	10.0	1.4	1	03/07/18 10:35	03/09/18 19:41	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	1	03/07/18 10:35	03/09/18 19:41	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/12/18 13:25	03/13/18 14:46	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**704**	mg/L	50.0	50.0	1		03/08/18 14:58		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**12.8**	mg/L	0.25	0.024	1		03/06/18 03:36	16887-00-6	
Fluoride	**1.1**	mg/L	0.30	0.029	1		03/06/18 03:36	16984-48-8	
Sulfate	**456**	mg/L	50.0	0.85	50		03/16/18 12:36	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

QC Batch: 2176 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 262423001, 262423003, 262423005, 262423007, 262423009, 262423011, 262423013, 262423015, 262423017, 262423019, 262423021, 262423023, 262423025

METHOD BLANK: 11813 Matrix: Water
Associated Lab Samples: 262423001, 262423003, 262423005, 262423007, 262423009, 262423011, 262423013, 262423015, 262423017, 262423019, 262423021, 262423023, 262423025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	03/13/18 14:01	

LABORATORY CONTROL SAMPLE: 11814

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0022	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 11872 11873

Parameter	Units	262423003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	0.00013J	0.0025	0.0025	0.0022	0.0022	84	84	75-125	1	20	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

QC Batch: 2138 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 262423001, 262423003, 262423005, 262423007, 262423009, 262423011, 262423013, 262423015, 262423017, 262423019, 262423021, 262423023, 262423025

METHOD BLANK: 11622 Matrix: Water
Associated Lab Samples: 262423001, 262423003, 262423005, 262423007, 262423009, 262423011, 262423013, 262423015, 262423017, 262423019, 262423021, 262423023, 262423025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	3.0	0.78	03/09/18 16:05	
Arsenic	ug/L	ND	5.0	0.57	03/09/18 16:05	
Barium	ug/L	ND	10.0	0.78	03/09/18 16:05	
Beryllium	ug/L	ND	3.0	0.050	03/09/18 16:05	
Boron	ug/L	ND	40.0	3.9	03/09/18 16:05	
Cadmium	ug/L	ND	1.0	0.093	03/09/18 16:05	
Calcium	ug/L	25.3J	500	13.7	03/09/18 16:05	
Chromium	ug/L	ND	10.0	1.6	03/09/18 16:05	
Cobalt	ug/L	ND	10.0	0.52	03/09/18 16:05	
Lead	ug/L	ND	5.0	0.27	03/09/18 16:05	
Lithium	ug/L	ND	50.0	0.97	03/09/18 16:05	
Molybdenum	ug/L	ND	10.0	1.9	03/09/18 16:05	
Selenium	ug/L	ND	10.0	1.4	03/09/18 16:05	
Thallium	ug/L	ND	1.0	0.14	03/09/18 16:05	

LABORATORY CONTROL SAMPLE: 11623

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	100	113	113	80-120	
Arsenic	ug/L	100	104	104	80-120	
Barium	ug/L	100	104	104	80-120	
Beryllium	ug/L	100	108	108	80-120	
Boron	ug/L	1000	1130	113	80-120	
Cadmium	ug/L	100	105	105	80-120	
Calcium	ug/L	1000	1060	106	80-120	
Chromium	ug/L	100	110	110	80-120	
Cobalt	ug/L	100	109	109	80-120	
Lead	ug/L	100	97.4	97	80-120	
Lithium	ug/L	100	109	109	80-120	
Molybdenum	ug/L	100	111	111	80-120	
Selenium	ug/L	100	104	104	80-120	
Thallium	ug/L	100	99.1	99	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.

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 11624 11625

Parameter	Units	262423001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	100	100	110	109	110	109	75-125	1	20	
Arsenic	ug/L	ND	100	100	104	103	104	103	75-125	1	20	
Barium	ug/L	102	100	100	178	177	77	75	75-125	1	20	
Beryllium	ug/L	0.067J	100	100	103	102	102	102	75-125	0	20	
Boron	ug/L	1870	1000	1000	2790	2750	91	88	75-125	1	20	
Cadmium	ug/L	ND	100	100	101	101	101	101	75-125	0	20	
Calcium	ug/L	57000	1000	1000	58300	54100	129	-295	75-125	8	20	M6
Chromium	ug/L	ND	100	100	105	103	105	102	75-125	3	20	
Cobalt	ug/L	ND	100	100	103	101	102	101	75-125	1	20	
Lead	ug/L	ND	100	100	96.1	97.2	96	97	75-125	1	20	
Lithium	ug/L	2.4J	100	100	101	107	99	104	75-125	5	20	
Molybdenum	ug/L	ND	100	100	106	105	106	105	75-125	1	20	
Selenium	ug/L	ND	100	100	100	104	100	103	75-125	3	20	
Thallium	ug/L	ND	100	100	96.9	99.1	97	99	75-125	2	20	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

QC Batch: 400840 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 262423001, 262423003, 262423005, 262423007, 262423009

METHOD BLANK: 2223092 Matrix: Water
Associated Lab Samples: 262423001, 262423003, 262423005, 262423007, 262423009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	03/06/18 18:13	

LABORATORY CONTROL SAMPLE: 2223093

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	250	100	90-110	

SAMPLE DUPLICATE: 2223094

Parameter	Units	92375320001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		5	

SAMPLE DUPLICATE: 2223095

Parameter	Units	92375320011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	158	156	1	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

QC Batch: 401129 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 262423011, 262423013, 262423015, 262423017, 262423019, 262423021, 262423023, 262423025

METHOD BLANK: 2224811 Matrix: Water
Associated Lab Samples: 262423011, 262423013, 262423015, 262423017, 262423019, 262423021, 262423023, 262423025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	03/08/18 14:44	

LABORATORY CONTROL SAMPLE: 2224812

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	240	96	90-110	

SAMPLE DUPLICATE: 2224813

Parameter	Units	262423011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	301	302	0	5	

SAMPLE DUPLICATE: 2224814

Parameter	Units	92375484002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

QC Batch: 1994 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 262423001, 262423003, 262423005, 262423007, 262423009, 262423011, 262423013, 262423015, 262423017, 262423019, 262423021, 262423023, 262423025

METHOD BLANK: 11098 Matrix: Water
Associated Lab Samples: 262423001, 262423003, 262423005, 262423007, 262423009, 262423011, 262423013, 262423015, 262423017, 262423019, 262423021, 262423023, 262423025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.058J	0.25	0.024	03/05/18 16:35	
Fluoride	mg/L	ND	0.30	0.029	03/05/18 16:35	
Sulfate	mg/L	ND	1.0	0.017	03/05/18 16:35	

LABORATORY CONTROL SAMPLE: 11099

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.4	104	90-110	
Fluoride	mg/L	10	10.1	101	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 11100 11101

Parameter	Units	262357013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	29.0	10	10	34.6	34.5	56	55	90-110	0	15	E,M1
Fluoride	mg/L	ND	10	10	10.1	10.3	101	103	90-110	2	15	
Sulfate	mg/L	350	10	10	223	222	-1270	-1280	90-110	0	15	E,M1

MATRIX SPIKE SAMPLE: 11102

Parameter	Units	262357015 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	17.0	10	24.8	78	90-110	E,M1
Fluoride	mg/L	0.86	10	11.3	105	90-110	
Sulfate	mg/L	217	10	157	-607	90-110	E,M1

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-37 **Lab ID: 262423002** Collected: 03/01/18 09:50 Received: 03/02/18 15:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.344 ± 0.298 (0.519) C:58% T:NA**	pCi/L	03/14/18 08:44	13982-63-3	
Radium-228	EPA 9320	**-0.280 ± 0.362 (0.876) C:80% T:84%**	pCi/L	03/20/18 12:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.344 ± 0.660 (1.40)**	pCi/L	03/23/18 13:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-23 **Lab ID: 262423004** Collected: 03/01/18 10:05 Received: 03/02/18 15:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.511 ± 0.303 (0.420) C:81% T:NA**	pCi/L	03/14/18 08:44	13982-63-3	
Radium-228	EPA 9320	**0.232 ± 0.439 (0.962) C:82% T:85%**	pCi/L	03/20/18 12:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.743 ± 0.742 (1.38)**	pCi/L	03/23/18 13:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-47 **Lab ID: 262423006** Collected: 03/01/18 12:45 Received: 03/02/18 15:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**1.03 ± 0.395 (0.376) C:86% T:NA**	pCi/L	03/14/18 08:44	13982-63-3	
Radium-228	EPA 9320	**1.18 ± 0.503 (0.783) C:79% T:81%**	pCi/L	03/20/18 14:23	15262-20-1	
Total Radium	Total Radium Calculation	**2.21 ± 0.898 (1.16)**	pCi/L	03/23/18 13:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-39 **Lab ID: 262423008** Collected: 03/01/18 13:15 Received: 03/02/18 15:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.140 ± 0.171 (0.344) C:94% T:NA**	pCi/L	03/14/18 08:44	13982-63-3	
Radium-228	EPA 9320	**1.10 ± 0.470 (0.772) C:82% T:82%**	pCi/L	03/20/18 15:07	15262-20-1	
Total Radium	Total Radium Calculation	**1.24 ± 0.641 (1.12)**	pCi/L	03/23/18 13:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-38 **Lab ID: 262423010** Collected: 03/01/18 11:40 Received: 03/02/18 15:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.138 ± 0.210 (0.460) C:88% T:NA**	pCi/L	03/14/18 08:44	13982-63-3	
Radium-228	EPA 9320	**0.847 ± 0.449 (0.804) C:77% T:81%**	pCi/L	03/20/18 15:07	15262-20-1	
Total Radium	Total Radium Calculation	**0.985 ± 0.659 (1.26)**	pCi/L	03/23/18 13:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: FD-3 **Lab ID: 262423012** Collected: 03/01/18 00:00 Received: 03/02/18 15:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.430 ± 0.301 (0.481) C:66% T:NA**	pCi/L	03/14/18 10:19	13982-63-3	
Radium-228	EPA 9320	**0.639 ± 0.372 (0.683) C:84% T:83%**	pCi/L	03/20/18 15:07	15262-20-1	
Total Radium	Total Radium Calculation	**1.07 ± 0.673 (1.16)**	pCi/L	03/23/18 13:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: FB-3 **Lab ID: 262423014** Collected: 03/01/18 09:55 Received: 03/02/18 15:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0936 ± 0.164 (0.368) C:81% T:NA**	pCi/L	03/14/18 08:44	13982-63-3	
Radium-228	EPA 9320	**0.727 ± 0.384 (0.695) C:84% T:92%**	pCi/L	03/20/18 15:07	15262-20-1	
Total Radium	Total Radium Calculation	**0.821 ± 0.548 (1.06)**	pCi/L	03/23/18 13:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: EB-3 **Lab ID: 262423016** Collected: 03/01/18 13:55 Received: 03/02/18 15:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.155 ± 0.185 (0.371) C:87% T:NA**	pCi/L	03/14/18 08:44	13982-63-3	
Radium-228	EPA 9320	**0.545 ± 0.355 (0.675) C:82% T:88%**	pCi/L	03/20/18 15:07	15262-20-1	
Total Radium	Total Radium Calculation	**0.700 ± 0.540 (1.05)**	pCi/L	03/23/18 13:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-67 **Lab ID: 262423018** Collected: 03/02/18 09:40 Received: 03/02/18 15:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.702 ± 0.438 (0.577) C:43% T:NA**	pCi/L	03/14/18 10:22	13982-63-3	
Radium-228	EPA 9320	**0.611 ± 0.352 (0.642) C:84% T:84%**	pCi/L	03/20/18 15:07	15262-20-1	
Total Radium	Total Radium Calculation	**1.31 ± 0.790 (1.22)**	pCi/L	03/23/18 13:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-68A **Lab ID: 262423020** Collected: 03/02/18 11:10 Received: 03/02/18 15:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.336 ± 0.224 (0.316) C:86% T:NA**	pCi/L	03/14/18 10:22	13982-63-3	
Radium-228	EPA 9320	**0.796 ± 0.418 (0.748) C:81% T:83%**	pCi/L	03/20/18 15:07	15262-20-1	
Total Radium	Total Radium Calculation	**1.13 ± 0.642 (1.06)**	pCi/L	03/23/18 13:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-69 **Lab ID: 262423022** Collected: 03/02/18 12:30 Received: 03/02/18 15:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.468 ± 0.259 (0.340) C:91% T:NA**	pCi/L	03/14/18 10:22	13982-63-3	
Radium-228	EPA 9320	**0.450 ± 0.374 (0.737) C:75% T:77%**	pCi/L	03/26/18 15:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.918 ± 0.633 (1.08)**	pCi/L	03/27/18 13:53	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-40 **Lab ID: 262423024** Collected: 03/02/18 09:40 Received: 03/02/18 15:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.298 ± 0.240 (0.402) C:76% T:NA**	pCi/L	03/14/18 10:22	13982-63-3	
Radium-228	EPA 9320	**0.187 ± 0.442 (0.983) C:75% T:66%**	pCi/L	03/26/18 15:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.485 ± 0.682 (1.39)**	pCi/L	03/27/18 13:53	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Sample: DGWC-48 **Lab ID: 262423026** Collected: 03/02/18 11:05 Received: 03/02/18 15:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**1.05 ± 0.387 (0.353) C:91% T:NA**	pCi/L	03/14/18 10:22	13982-63-3	
Radium-228	EPA 9320	**1.21 ± 0.483 (0.731) C:75% T:83%**	pCi/L	03/26/18 15:46	15262-20-1	
Total Radium	Total Radium Calculation	**2.26 ± 0.870 (1.08)**	pCi/L	03/27/18 13:53	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

QC Batch: 290897 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 262423002, 262423004, 262423006, 262423008, 262423010, 262423012, 262423014, 262423016, 262423018, 262423020, 262423022, 262423024, 262423026

METHOD BLANK: 1424476 Matrix: Water
Associated Lab Samples: 262423002, 262423004, 262423006, 262423008, 262423010, 262423012, 262423014, 262423016, 262423018, 262423020, 262423022, 262423024, 262423026

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.259 ± 0.235 (0.428) C:79% T:NA	pCi/L	03/14/18 08:37	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

QC Batch: 291249 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 262423022, 262423024, 262423026

METHOD BLANK: 1425571 Matrix: Water
Associated Lab Samples: 262423022, 262423024, 262423026

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.247 ± 0.304 (0.638) C:75% T:80%	pCi/L	03/26/18 15:46	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

QC Batch: 290899 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 262423002, 262423004, 262423006, 262423008, 262423010, 262423012, 262423014, 262423016, 262423018, 262423020

METHOD BLANK: 1424478 Matrix: Water
Associated Lab Samples: 262423002, 262423004, 262423006, 262423008, 262423010, 262423012, 262423014, 262423016, 262423018, 262423020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.410 ± 0.336 (0.667) C:81% T:79%	pCi/L	03/20/18 11:27	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

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-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.
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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
262423001	DGWC-37	EPA 3005A	2138	EPA 6020B	2324
262423003	DGWC-23	EPA 3005A	2138	EPA 6020B	2324
262423005	DGWC-47	EPA 3005A	2138	EPA 6020B	2324
262423007	DGWC-39	EPA 3005A	2138	EPA 6020B	2324
262423009	DGWC-38	EPA 3005A	2138	EPA 6020B	2324
262423011	FD-3	EPA 3005A	2138	EPA 6020B	2324
262423013	FB-3	EPA 3005A	2138	EPA 6020B	2324
262423015	EB-3	EPA 3005A	2138	EPA 6020B	2324
262423017	DGWC-67	EPA 3005A	2138	EPA 6020B	2324
262423019	DGWC-68A	EPA 3005A	2138	EPA 6020B	2324
262423021	DGWC-69	EPA 3005A	2138	EPA 6020B	2324
262423023	DGWC-40	EPA 3005A	2138	EPA 6020B	2324
262423025	DGWC-48	EPA 3005A	2138	EPA 6020B	2324
262423001	DGWC-37	EPA 7470A	2176	EPA 7470A	2433
262423003	DGWC-23	EPA 7470A	2176	EPA 7470A	2433
262423005	DGWC-47	EPA 7470A	2176	EPA 7470A	2433
262423007	DGWC-39	EPA 7470A	2176	EPA 7470A	2433
262423009	DGWC-38	EPA 7470A	2176	EPA 7470A	2433
262423011	FD-3	EPA 7470A	2176	EPA 7470A	2433
262423013	FB-3	EPA 7470A	2176	EPA 7470A	2433
262423015	EB-3	EPA 7470A	2176	EPA 7470A	2433
262423017	DGWC-67	EPA 7470A	2176	EPA 7470A	2433
262423019	DGWC-68A	EPA 7470A	2176	EPA 7470A	2433
262423021	DGWC-69	EPA 7470A	2176	EPA 7470A	2433
262423023	DGWC-40	EPA 7470A	2176	EPA 7470A	2433
262423025	DGWC-48	EPA 7470A	2176	EPA 7470A	2433
262423002	DGWC-37	EPA 9315	290897		
262423004	DGWC-23	EPA 9315	290897		
262423006	DGWC-47	EPA 9315	290897		
262423008	DGWC-39	EPA 9315	290897		
262423010	DGWC-38	EPA 9315	290897		
262423012	FD-3	EPA 9315	290897		
262423014	FB-3	EPA 9315	290897		
262423016	EB-3	EPA 9315	290897		
262423018	DGWC-67	EPA 9315	290897		
262423020	DGWC-68A	EPA 9315	290897		
262423022	DGWC-69	EPA 9315	290897		
262423024	DGWC-40	EPA 9315	290897		
262423026	DGWC-48	EPA 9315	290897		
262423002	DGWC-37	EPA 9320	290899		
262423004	DGWC-23	EPA 9320	290899		
262423006	DGWC-47	EPA 9320	290899		
262423008	DGWC-39	EPA 9320	290899		
262423010	DGWC-38	EPA 9320	290899		
262423012	FD-3	EPA 9320	290899		
262423014	FB-3	EPA 9320	290899		
262423016	EB-3	EPA 9320	290899		

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 262423

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
262423018	**DGWC-67**	EPA 9320	290899		
262423020	**DGWC-68A**	EPA 9320	290899		
262423022	**DGWC-69**	EPA 9320	291249		
262423024	**DGWC-40**	EPA 9320	291249		
262423026	**DGWC-48**	EPA 9320	291249		
262423002	**DGWC-37**	Total Radium Calculation	292214		
262423004	**DGWC-23**	Total Radium Calculation	292214		
262423006	**DGWC-47**	Total Radium Calculation	292214		
262423008	**DGWC-39**	Total Radium Calculation	292214		
262423010	**DGWC-38**	Total Radium Calculation	292214		
262423012	**FD-3**	Total Radium Calculation	292214		
262423014	**FB-3**	Total Radium Calculation	292214		
262423016	**EB-3**	Total Radium Calculation	292214		
262423018	**DGWC-67**	Total Radium Calculation	292214		
262423020	**DGWC-68A**	Total Radium Calculation	292214		
262423022	**DGWC-69**	Total Radium Calculation	292657		
262423024	**DGWC-40**	Total Radium Calculation	292657		
262423026	**DGWC-48**	Total Radium Calculation	292657		
262423001	**DGWC-37**	SM 2540C	400840		
262423003	**DGWC-23**	SM 2540C	400840		
262423005	**DGWC-47**	SM 2540C	400840		
262423007	**DGWC-39**	SM 2540C	400840		
262423009	**DGWC-38**	SM 2540C	400840		
262423011	**FD-3**	SM 2540C	401129		
262423013	**FB-3**	SM 2540C	401129		
262423015	**EB-3**	SM 2540C	401129		
262423017	**DGWC-67**	SM 2540C	401129		
262423019	**DGWC-68A**	SM 2540C	401129		
262423021	**DGWC-69**	SM 2540C	401129		
262423023	**DGWC-40**	SM 2540C	401129		
262423025	**DGWC-48**	SM 2540C	401129		
262423001	**DGWC-37**	EPA 300.0	1994		
262423003	**DGWC-23**	EPA 300.0	1994		
262423005	**DGWC-47**	EPA 300.0	1994		
262423007	**DGWC-39**	EPA 300.0	1994		
262423009	**DGWC-38**	EPA 300.0	1994		
262423011	**FD-3**	EPA 300.0	1994		
262423013	**FB-3**	EPA 300.0	1994		
262423015	**EB-3**	EPA 300.0	1994		
262423017	**DGWC-67**	EPA 300.0	1994		
262423019	**DGWC-68A**	EPA 300.0	1994		
262423021	**DGWC-69**	EPA 300.0	1994		
262423023	**DGWC-40**	EPA 300.0	1994		
262423025	**DGWC-48**	EPA 300.0	1994		

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		P Metals App. III & IV (EPA 6020/7470)	P Cl, F, SO4, & TDS (EPA 300.0 & SM 2540C)	P Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
CONTAINER TYPE:								P	P	P	
PRESERVATION:								3	7	3	
03/01/18	0950	GW		x	DGWC-37	4		1	1	2	
03/01/18	1005	GW		x	DGWC-23	4		1	1	4	
03/01/18	1245	GW		x	DGWC-47	4		1	1	2	
03/01/18	1315	GW		x	DGWC-39	4		1	1	2	
03/01/18	1140	GW		x	DGWC-38	4		1	1	2	
03/01/18	–	GW		x	FD-3	4		1	1	2	
03/01/18	0955	W		x	FB-3	4		1	1	2	
03/01/18	1355	W		x	EB-3	4		1	1	2	
03/02/18	0940	GW		x	DGWC-67	4		1	1	2	
03/02/18	1110	GW		x	DGWC-68A	4		1	1	2	
03/02/18	1230	GW		x	DGWC-69	4		1	1	2	
03/02/18	0940	GW		x	DGWC-40	4		1	1	2	
03/02/18	1105	GW		x	DGWC-48	4		1	1	2	

Extra Radium

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

WO# : 262423

262423

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 3/2/2018
RELINQUISHED BY: Devin O'Neill
DATE/TIME: 1530 3-2-18

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

RECEIVED BY LAB: Laburman
DATE/TIME: 03/02/18 1530
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH Checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 1.3 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

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

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project #

WO# : 262423

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

Tracking #:

PM: BM Due Date: 03/09/18

CLIENT: GAPower-CCR

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

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

Thermometer Used 8.3 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 3.2 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 3/2/18 MR

Comments:

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

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

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

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

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	JC2
Date:	3/13/2018
Worklist:	40438
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1424476
MB concentration:	0.259
M/B Counting Uncertainty:	0.232
MB MDC:	0.428
MB Numerical Performance Indicator:	2.19
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS40438	**LCSD40438**
Count Date:	3/14/2018	
Spike I.D.:	17-030	
Spike Concentration (pCi/mL):	80.175	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.508	
Target Conc. (pCi/L, g, F):	15.792	
Uncertainty (Calculated):	1.455	
Result (pCi/L, g, F):	13.680	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.154	
Numerical Performance Indicator:	-2.23	
Percent Recovery:	86.63%	
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:	
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.:	262423006	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	262423006DUP	
Sample Result (pCi/L, g, F):	1.030	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.365	
Sample Duplicate Result (pCi/L, g, F):	0.981	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.346	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.194	262423006
Duplicate RPD:	4.95%	262423006DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:

TAR DW QC
Printed: 3/14/2018 5:28 PM

JW 3-14-18

1 of 1

CW 3/15/18

TAR_40438_W
Total Alpha Radium (R104-2 17Mar2014).xls

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	3/15/2018
Worklist:	40440
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1424478
MB concentration:	0.410
M/B Counting Uncertainty:	0.328
MB MDC:	0.667
MB Numerical Performance Indicator:	2.45
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS40440	**LCSD40440**
Count Date:	3/20/2018	3/20/2018
Spike I.D.:	17-033	17-033
Spike Concentration (pCi/mL):	22.099	22.099
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.812	0.805
Target Conc. (pCi/L, g, F):	5.442	5.488
Uncertainty (Calculated):	0.392	0.395
Result (pCi/L, g, F):	6.878	5.209
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.719	0.639
Numerical Performance Indicator:	3.44	-0.73
Percent Recovery:	126.39%	94.91%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	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:	

Duplicate Sample Assessment		
Sample I.D.:	LCS40440	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD40440	
Sample Result (pCi/L, g, F):	6.878	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.719	
Sample Duplicate Result (pCi/L, g, F):	5.209	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.639	
Are sample and/or duplicate results below MDC?.	NO	
Duplicate Numerical Performance Indicator:	3.399	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	28.45%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

3/21/18

JJY 3-21-18

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	3/21/2018
Worklist:	40510
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1425571
MB concentration:	0.247
M/B Counting Uncertainty:	0.301
MB MDC:	0.638
MB Numerical Performance Indicator:	1.61
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS40510	**LCSD40510**
Count Date:	3/26/2018	3/26/2018
Spike I.D.:	17-033	17-033
Spike Concentration (pCi/mL):	22.054	22.054
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.804	0.806
Target Conc. (pCi/L, g, F):	5.487	5.472
Uncertainty (Calculated):	0.395	0.394
Result (pCi/L, g, F):	4.634	5.129
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.650	0.644
Numerical Performance Indicator:	-2.20	-0.89
Percent Recovery:	84.45%	93.73%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	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:	

Duplicate Sample Assessment		
Sample I.D.:	LCS40510	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD40510	
Sample Result (pCi/L, g, F):	4.634	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.650	
Sample Duplicate Result (pCi/L, g, F):	5.129	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.644	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-1.060	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	10.41%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:	

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

Comments:

CMW36718

JJY 3-27-18

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

July 05, 2019

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

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 262659

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on March 08, 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.

REV07052019_report revised per consultant request to correct MDL settings.

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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

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

CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262659

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

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
Florida: Cert E871149 SEKS WET
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

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262659

Lab ID	Sample ID	Matrix	Date Collected	Date Received
262659001	**DGWA-53**	Water	03/08/18 12:55	03/08/18 15:10
262659002	**DGWA-53**	Water	03/08/18 12:55	03/08/18 15:10

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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 262659

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
262659001	**DGWA-53**	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
262659002	**DGWA-53**	EPA 9315	JC2	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262659

Sample: DGWA-53 **Lab ID: 262659001** Collected: 03/08/18 12:55 Received: 03/08/18 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/14/18 10:10	03/17/18 17:55	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/14/18 10:10	03/17/18 17:55	7440-38-2	
Barium	**0.19**	mg/L	0.010	0.00078	1	03/14/18 10:10	03/17/18 17:55	7440-39-3	
Beryllium	ND	mg/L	0.015	0.00025	5	03/14/18 10:10	03/20/18 12:59	7440-41-7	D3
Boron	**0.13J**	mg/L	0.20	0.020	5	03/14/18 10:10	03/20/18 12:59	7440-42-8	D3
Cadmium	ND	mg/L	0.0010	0.000093	1	03/14/18 10:10	03/17/18 17:55	7440-43-9	
Calcium	**39.8**	mg/L	25.0	0.69	50	03/14/18 10:10	03/17/18 18:01	7440-70-2	M6
Chromium	ND	mg/L	0.010	0.0016	1	03/14/18 10:10	03/17/18 17:55	7440-47-3	
Cobalt	**0.027**	mg/L	0.010	0.00052	1	03/14/18 10:10	03/17/18 17:55	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/14/18 10:10	03/17/18 17:55	7439-92-1	
Lithium	**0.011J**	mg/L	0.25	0.0049	5	03/14/18 10:10	03/20/18 12:59	7439-93-2	D3
Molybdenum	**0.035**	mg/L	0.010	0.0019	1	03/14/18 10:10	03/17/18 17:55	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/14/18 10:10	03/17/18 17:55	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/14/18 10:10	03/17/18 17:55	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/16/18 11:47	03/16/18 15:47	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**213**	mg/L	25.0	25.0	1		03/14/18 00:17		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.4**	mg/L	0.25	0.024	1		03/13/18 22:28	16887-00-6	
Fluoride	**0.25J**	mg/L	0.30	0.029	1		03/13/18 22:28	16984-48-8	
Sulfate	**9.7**	mg/L	1.0	0.017	1		03/13/18 22:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262659

QC Batch: 2540 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 262659001

METHOD BLANK: 13358 Matrix: Water
Associated Lab Samples: 262659001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	03/16/18 15:09	

LABORATORY CONTROL SAMPLE: 13359

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 13429 13430

Parameter	Units	262779001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0024	0.0024	98	97	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262659

QC Batch: 2491
QC Batch Method: EPA 3005A
Associated Lab Samples: 262659001

Analysis Method: EPA 6020B
Analysis Description: 6020B MET

METHOD BLANK: 13190
Associated Lab Samples: 262659001

Matrix: Water

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	03/17/18 17:44	
Arsenic	mg/L	ND	0.0050	0.00057	03/17/18 17:44	
Barium	mg/L	ND	0.010	0.00078	03/17/18 17:44	
Beryllium	mg/L	ND	0.0030	0.000050	03/17/18 17:44	
Boron	mg/L	ND	0.040	0.0039	03/17/18 17:44	
Cadmium	mg/L	ND	0.0010	0.000093	03/17/18 17:44	
Calcium	mg/L	ND	0.50	0.014	03/17/18 17:44	
Chromium	mg/L	ND	0.010	0.0016	03/17/18 17:44	
Cobalt	mg/L	ND	0.010	0.00052	03/17/18 17:44	
Lead	mg/L	ND	0.0050	0.00027	03/17/18 17:44	
Lithium	mg/L	ND	0.050	0.00097	03/17/18 17:44	
Molybdenum	mg/L	ND	0.010	0.0019	03/17/18 17:44	
Selenium	mg/L	ND	0.010	0.0014	03/17/18 17:44	
Thallium	mg/L	ND	0.0010	0.00014	03/17/18 17:44	

LABORATORY CONTROL SAMPLE: 13191

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	104	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.097	97	80-120	
Boron	mg/L	1	1.0	101	80-120	
Cadmium	mg/L	0.1	0.10	104	80-120	
Calcium	mg/L	1	1.0	102	80-120	
Chromium	mg/L	0.1	0.11	109	80-120	
Cobalt	mg/L	0.1	0.11	107	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Lithium	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.11	105	80-120	
Selenium	mg/L	0.1	0.10	100	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 13245 13246

Parameter	Units	262659001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.11	0.10	105	103	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262659

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 13245 13246

Parameter	Units	262659001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	102	99	75-125	2	20	
Barium	mg/L	0.19	0.1	0.1	0.29	0.29	99	98	75-125	0	20	
Beryllium	mg/L	ND	0.1	0.1	0.091	0.10	91	104	75-125	14	20	
Boron	mg/L	0.13J	1	1	0.99	1.2	86	103	75-125	15	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	105	103	75-125	2	20	
Calcium	mg/L	39.8	1	1	37.2	37.2	-267	-265	75-125	0	20	M6
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	104	104	75-125	0	20	
Cobalt	mg/L	0.027	0.1	0.1	0.13	0.13	103	103	75-125	0	20	
Lead	mg/L	ND	0.1	0.1	0.097	0.097	97	97	75-125	0	20	
Lithium	mg/L	0.011J	0.1	0.1	0.10	0.11J	90	100	75-125		20	
Molybdenum	mg/L	0.035	0.1	0.1	0.14	0.14	104	105	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	102	101	75-125	1	20	
Thallium	mg/L	ND	0.1	0.1	0.099	0.096	98	96	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262659

QC Batch: 401810 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 262659001

METHOD BLANK: 2228706 Matrix: Water
Associated Lab Samples: 262659001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	03/14/18 00:17	

LABORATORY CONTROL SAMPLE: 2228707

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	242	97	90-110	

SAMPLE DUPLICATE: 2228708

Parameter	Units	262612001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	76.0	72.0	5	5	

SAMPLE DUPLICATE: 2228709

Parameter	Units	92376343001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	153	150	2	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 262659

QC Batch: 2447
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 262659001

METHOD BLANK: 12983
Matrix: Water
Associated Lab Samples: 262659001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.058J	0.25	0.024	03/13/18 21:05	
Fluoride	mg/L	ND	0.30	0.029	03/13/18 21:05	
Sulfate	mg/L	0.018J	1.0	0.017	03/13/18 21:05	

LABORATORY CONTROL SAMPLE: 12984

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.4	104	90-110	
Fluoride	mg/L	10	10.1	101	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 12985 12986

Parameter	Units	262659001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.4	10	10	12.2	12.2	98	97	90-110	0	15	
Fluoride	mg/L	0.25J	10	10	10.4	10.4	102	101	90-110	1	15	
Sulfate	mg/L	9.7	10	10	18.8	18.7	91	91	90-110	0	15	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262659

Sample: DGWA-53 **Lab ID: 262659002** Collected: 03/08/18 12:55 Received: 03/08/18 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.372 ± 0.199 (0.282) C:86% T:NA**	pCi/L	03/19/18 08:23	13982-63-3	
Radium-228	EPA 9320	**1.77 ± 0.547 (0.688) C:77% T:89%**	pCi/L	03/27/18 14:58	15262-20-1	
Total Radium	Total Radium Calculation	**2.14 ± 0.746 (0.970)**	pCi/L	03/28/18 13:56	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262659

QC Batch: 291352 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 262659002

METHOD BLANK: 1425981 Matrix: Water
Associated Lab Samples: 262659002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.280 ± 0.165 (0.214) C:87% T:NA	pCi/L	03/19/18 08:20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 262659

QC Batch: 291249 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 262659002

METHOD BLANK: 1425571 Matrix: Water
Associated Lab Samples: 262659002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.247 ± 0.304 (0.638) C:75% T:80%	pCi/L	03/26/18 15:46	

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QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 262659

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-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.
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 McDonough Ash Ponds
Pace Project No.: 262659

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
262659001	**DGWA-53**	EPA 3005A	2491	EPA 6020B	2728
262659001	**DGWA-53**	EPA 7470A	2540	EPA 7470A	2686
262659002	**DGWA-53**	EPA 9315	291352		
262659002	**DGWA-53**	EPA 9320	291249		
262659002	**DGWA-53**	Total Radium Calculation	292811		
262659001	**DGWA-53**	SM 2540C	401810		
262659001	**DGWA-53**	EPA 300.0	2447		

CHAIN OF CUSTODY RECORD

Pace Analytical®

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com)
CC: kjurinko@golder.com

REQUESTED COMPLETION DATE: Standard TAT
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	CONTAINER TYPE	PRESERVATION	# of CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4, & TDS_KM (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	TDS						LAB NUMBER
						P	P	P	P									
						3	7	3	7									
03/08/18	1255	GW		x	DGWA-53	KM 4S		1	1	2	1							

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

WO# : 262659

262659

SAMPLED BY AND TITLE: Karim Minkara Field Lead
DATE/TIME: 3/2/2018

RECEIVED BY:
DATE/TIME:

RECEIVED BY LAB: A Laburan
DATE/TIME: 03/08/18 1510

RELINQUISHED BY: Karim
DATE/TIME: 3-8-18 1510

RELINQUISHED BY:
DATE/TIME:

pH Checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 4.9 Max:

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
Custody Seal: Intact Broken Not Present
# of Coolers
Cooler ID:

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

March 8 Plant McDonough COC Phase II CCR

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 262659

PM: BM Due Date: 03/15/18

CLIENT: GAPower-CCR

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

Tracking #:

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

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 4.9

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 3/8/18 MR

Temp should be above freezing to 6°C

Comments:

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

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

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

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

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JLW
Date:	3/21/2018
Worklist:	40510
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1425571
MB concentration:	0.247
M/B Counting Uncertainty:	0.301
MB MDC:	0.638
MB Numerical Performance Indicator:	1.61
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS40510	**LCSD40510**
Count Date:	3/26/2018	3/26/2018
Spike I.D.:	17-033	17-033
Spike Concentration (pCi/mL):	22.054	22.054
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.804	0.806
Target Conc. (pCi/L, g, F):	5.487	5.472
Uncertainty (Calculated):	0.395	0.394
Result (pCi/L, g, F):	4.634	5.129
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.650	0.644
Numerical Performance Indicator:	-2.20	-0.89
Percent Recovery:	84.45%	93.73%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

Duplicate Sample Assessment		
Sample I.D.:	LCS40510	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD40510	
Sample Result (pCi/L, g, F):	4.634	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.650	
Sample Duplicate Result (pCi/L, g, F):	5.129	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.644	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-1.060	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	10.41%	
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:	
(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:

CNW3b718

JJY 3-27-18

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	JC2
Date:	3/16/2018
Worklist:	40531
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1425981
MB concentration:	0.280
M/B Counting Uncertainty:	0.160
MB MDC:	0.214
MB Numerical Performance Indicator:	3.43
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS40531	**LCSD40531**
Count Date:	3/19/2018	3/19/2018
Spike I.D.:	17-030	17-030
Spike Concentration (pCi/mL):	80.175	80.175
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.503	0.505
Target Conc. (pCi/L, g, F):	15.945	15.885
Uncertainty (Calculated):	1.469	1.463
Result (pCi/L, g, F):	13.517	13.458
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.991	0.966
Numerical Performance Indicator:	-2.69	-2.71
Percent Recovery:	84.77%	84.72%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	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:	

Duplicate Sample Assessment		
Sample I.D.:	LCS40531	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD40531	
Sample Result (pCi/L, g, F):	13.517	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.991	
Sample Duplicate Result (pCi/L, g, F):	13.458	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.966	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	0.083	262514014
Duplicate RPD:	0.43%	262514014DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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:

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

JW 3.20.18

VAM 3-20-18

LABORATORY ANALYTICAL DATA

July 2018

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

July 18, 2018

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

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on July 11, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

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

CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

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

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

Lab ID	Sample ID	Matrix	Date Collected	Date Received
266979001	**DGWA-70A**	Water	07/10/18 11:00	07/11/18 10:45
266979002	**DGWA-71**	Water	07/10/18 09:40	07/11/18 10:45
266979003	**DGWC-4**	Water	07/10/18 09:25	07/11/18 10:45
266979004	**DGWC-5**	Water	07/10/18 11:05	07/11/18 10:45
266979005	**DGWC-8**	Water	07/10/18 14:10	07/11/18 10:45
266979006	**FD-1**	Water	07/10/18 00:00	07/11/18 10:45
266979007	**FB-1**	Water	07/10/18 11:50	07/11/18 10:45
266979008	**EB-1**	Water	07/10/18 15:35	07/11/18 10:45
266979009	**DGWC-10**	Water	07/10/18 12:50	07/11/18 10:45
266979010	**DGWC-11**	Water	07/10/18 15:00	07/11/18 10:45
266979011	**DGWC-13**	Water	07/10/18 15:00	07/11/18 10:45

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

Lab ID	Sample ID	Method	Analysts	Analytes Reported
266979001	DGWA-70A	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
266979002	DGWA-71	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
266979003	DGWC-4	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB, RLC	3
266979004	DGWC-5	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB, RLC	3
266979005	DGWC-8	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB, RLC	3
266979006	FD-1	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB, RLC	3
266979007	FB-1	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
266979008	EB-1	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
266979009	DGWC-10	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB, RLC	3
266979010	DGWC-11	EPA 6020B	CSW	14

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

SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB, RLC	3
266979011	**DGWC-13**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	MWB, RLC	3

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

Sample: DGWA-70A **Lab ID: 266979001** Collected: 07/10/18 11:00 Received: 07/11/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 15:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 15:02	7440-38-2	
Barium	**0.037**	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 15:02	7440-39-3	
Beryllium	**0.000095J**	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 15:02	7440-41-7	
Boron	**0.0077J**	mg/L	0.040	0.0039	1	07/13/18 10:44	07/16/18 15:02	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 15:02	7440-43-9	
Calcium	**5.0**	mg/L	0.50	0.014	1	07/13/18 10:44	07/16/18 15:02	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 15:02	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 15:02	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 15:02	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 15:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 15:02	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 15:02	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 15:02	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000055J**	mg/L	0.00050	0.000036	1	07/12/18 09:30	07/13/18 12:09	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**80.0**	mg/L	25.0	10.0	1		07/14/18 09:58		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**1.9**	mg/L	0.25	0.024	1		07/12/18 16:01	16887-00-6	B
Fluoride	**0.082J**	mg/L	0.30	0.029	1		07/12/18 16:01	16984-48-8	
Sulfate	**0.25J**	mg/L	1.0	0.017	1		07/12/18 16:01	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

Sample: DGWA-71 **Lab ID: 266979002** Collected: 07/10/18 09:40 Received: 07/11/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 15:14	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 15:14	7440-38-2	
Barium	**0.027**	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 15:14	7440-39-3	
Beryllium	**0.000091J**	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 15:14	7440-41-7	
Boron	**0.0059J**	mg/L	0.040	0.0039	1	07/13/18 10:44	07/16/18 15:14	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 15:14	7440-43-9	
Calcium	**5.7**	mg/L	2.5	0.069	5	07/13/18 10:44	07/17/18 14:39	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 15:14	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 15:14	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 15:14	7439-92-1	
Lithium	**0.0012J**	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 15:14	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 15:14	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 15:14	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 15:14	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.00010J**	mg/L	0.00050	0.000036	1	07/12/18 09:30	07/13/18 12:28	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**88.0**	mg/L	25.0	10.0	1		07/14/18 09:58		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.5**	mg/L	0.25	0.024	1		07/12/18 17:03	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/12/18 17:03	16984-48-8	
Sulfate	**7.2**	mg/L	1.0	0.017	1		07/12/18 17:03	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

Sample: DGWC-4 **Lab ID: 266979003** Collected: 07/10/18 09:25 Received: 07/11/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 15:25	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 15:25	7440-38-2	
Barium	**0.036**	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 15:25	7440-39-3	
Beryllium	**0.00017J**	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 15:25	7440-41-7	
Boron	**4.5**	mg/L	0.040	0.0039	1	07/13/18 10:44	07/16/18 15:25	7440-42-8	
Cadmium	**0.00065J**	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 15:25	7440-43-9	
Calcium	**275**	mg/L	125	3.4	250	07/13/18 10:44	07/17/18 14:45	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 15:25	7440-47-3	
Cobalt	**0.0018J**	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 15:25	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 15:25	7439-92-1	
Lithium	**0.0030J**	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 15:25	7439-93-2	
Molybdenum	**0.0044J**	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 15:25	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 15:25	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 15:25	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000055J**	mg/L	0.00050	0.000036	1	07/12/18 09:30	07/13/18 12:30	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1390**	mg/L	25.0	10.0	1		07/14/18 09:58		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**24.9**	mg/L	0.25	0.024	1		07/12/18 17:24	16887-00-6	
Fluoride	**0.36**	mg/L	0.30	0.029	1		07/12/18 17:24	16984-48-8	
Sulfate	**787**	mg/L	50.0	0.85	50		07/16/18 21:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

Sample: DGWC-5 **Lab ID: 266979004** Collected: 07/10/18 11:05 Received: 07/11/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 15:36	7440-36-0	
Arsenic	**0.0057**	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 15:36	7440-38-2	
Barium	**0.015**	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 15:36	7440-39-3	
Beryllium	**0.0048**	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 15:36	7440-41-7	
Boron	**3.2**	mg/L	0.040	0.0039	1	07/13/18 10:44	07/16/18 15:36	7440-42-8	
Cadmium	**0.00034J**	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 15:36	7440-43-9	
Calcium	**71.4**	mg/L	25.0	0.69	50	07/13/18 10:44	07/16/18 15:42	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 15:36	7440-47-3	
Cobalt	**0.025**	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 15:36	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 15:36	7439-92-1	
Lithium	**0.0034J**	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 15:36	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 15:36	7439-98-7	
Selenium	**0.019**	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 15:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 15:36	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.00018J**	mg/L	0.00050	0.000036	1	07/12/18 09:30	07/13/18 12:32	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**635**	mg/L	25.0	10.0	1		07/14/18 09:58		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**9.7**	mg/L	0.25	0.024	1		07/12/18 17:45	16887-00-6	
Fluoride	**0.42**	mg/L	0.30	0.029	1		07/12/18 17:45	16984-48-8	
Sulfate	**400**	mg/L	20.0	0.34	20		07/16/18 21:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

Sample: DGWC-8 **Lab ID: 266979005** Collected: 07/10/18 14:10 Received: 07/11/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 16:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 16:01	7440-38-2	
Barium	**0.030**	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 16:01	7440-39-3	
Beryllium	**0.0030**	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 16:01	7440-41-7	
Boron	**1.8**	mg/L	0.040	0.0039	1	07/13/18 10:44	07/16/18 16:01	7440-42-8	
Cadmium	**0.0025**	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 16:01	7440-43-9	
Calcium	**59.3**	mg/L	25.0	0.69	50	07/13/18 10:44	07/16/18 16:07	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 16:01	7440-47-3	
Cobalt	**0.072**	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 16:01	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 16:01	7439-92-1	
Lithium	**0.0061J**	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 16:01	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 16:01	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 16:01	7782-49-2	
Thallium	**0.00027J**	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 16:01	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000082J**	mg/L	0.00050	0.000036	1	07/12/18 09:30	07/13/18 12:35	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**472**	mg/L	25.0	10.0	1		07/14/18 09:58		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**8.7**	mg/L	0.25	0.024	1		07/12/18 18:05	16887-00-6	
Fluoride	**0.14J**	mg/L	0.30	0.029	1		07/12/18 18:05	16984-48-8	
Sulfate	**280**	mg/L	10.0	0.17	10		07/16/18 22:10	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

Sample: FD-1 **Lab ID: 266979006** Collected: 07/10/18 00:00 Received: 07/11/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 16:12	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 16:12	7440-38-2	
Barium	**0.076**	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 16:12	7440-39-3	
Beryllium	**0.000072J**	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 16:12	7440-41-7	
Boron	**1.2**	mg/L	0.040	0.0039	1	07/13/18 10:44	07/16/18 16:12	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 16:12	7440-43-9	
Calcium	**59.5**	mg/L	25.0	0.69	50	07/13/18 10:44	07/16/18 16:18	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 16:12	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 16:12	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 16:12	7439-92-1	
Lithium	**0.0020J**	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 16:12	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 16:12	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 16:12	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 16:12	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000051J**	mg/L	0.00050	0.000036	1	07/12/18 09:30	07/13/18 12:37	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**408**	mg/L	25.0	10.0	1		07/14/18 09:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**13.7**	mg/L	0.25	0.024	1		07/12/18 18:26	16887-00-6	
Fluoride	**0.057J**	mg/L	0.30	0.029	1		07/12/18 18:26	16984-48-8	
Sulfate	**225**	mg/L	10.0	0.17	10		07/16/18 22:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

Sample: FB-1 **Lab ID: 266979007** Collected: 07/10/18 11:50 Received: 07/11/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 16:24	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 16:24	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 16:24	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 16:24	7440-41-7	
Boron	**0.0044J**	mg/L	0.040	0.0039	1	07/13/18 10:44	07/16/18 16:24	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 16:24	7440-43-9	
Calcium	**0.021J**	mg/L	0.50	0.014	1	07/13/18 10:44	07/16/18 16:24	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 16:24	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 16:24	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 16:24	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 16:24	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 16:24	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 16:24	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 16:24	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000053J**	mg/L	0.00050	0.000036	1	07/12/18 09:30	07/13/18 12:40	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**19.0J**	mg/L	25.0	10.0	1		07/14/18 09:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.29**	mg/L	0.25	0.024	1		07/12/18 18:47	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/12/18 18:47	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		07/12/18 18:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

Sample: EB-1 **Lab ID: 266979008** Collected: 07/10/18 15:35 Received: 07/11/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 16:29	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 16:29	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 16:29	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 16:29	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	07/13/18 10:44	07/16/18 16:29	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 16:29	7440-43-9	
Calcium	**0.030J**	mg/L	0.50	0.014	1	07/13/18 10:44	07/16/18 16:29	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 16:29	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 16:29	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 16:29	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 16:29	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 16:29	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 16:29	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 16:29	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000045J**	mg/L	0.00050	0.000036	1	07/12/18 09:30	07/13/18 12:42	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		07/14/18 09:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.32**	mg/L	0.25	0.024	1		07/12/18 19:07	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/12/18 19:07	16984-48-8	
Sulfate	**0.090J**	mg/L	1.0	0.017	1		07/12/18 19:07	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

Sample: DGWC-10 **Lab ID: 266979009** Collected: 07/10/18 12:50 Received: 07/11/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 16:35	7440-36-0	
Arsenic	**0.0036J**	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 16:35	7440-38-2	
Barium	**0.027**	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 16:35	7440-39-3	
Beryllium	**0.012**	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 16:35	7440-41-7	
Boron	**2.4**	mg/L	0.040	0.0039	1	07/13/18 10:44	07/16/18 16:35	7440-42-8	
Cadmium	**0.0016**	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 16:35	7440-43-9	
Calcium	**95.3**	mg/L	25.0	0.69	50	07/13/18 10:44	07/16/18 16:41	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 16:35	7440-47-3	
Cobalt	**0.20**	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 16:35	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 16:35	7439-92-1	
Lithium	**0.0047J**	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 16:35	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 16:35	7439-98-7	
Selenium	**0.023**	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 16:35	7782-49-2	
Thallium	**0.00032J**	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 16:35	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000051J**	mg/L	0.00050	0.000036	1	07/12/18 09:30	07/13/18 12:44	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**510**	mg/L	25.0	10.0	1		07/14/18 09:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**11.0**	mg/L	0.25	0.024	1		07/12/18 20:51	16887-00-6	
Fluoride	**2.0**	mg/L	0.30	0.029	1		07/12/18 20:51	16984-48-8	
Sulfate	**301**	mg/L	20.0	0.34	20		07/16/18 22:52	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

Sample: DGWC-11 **Lab ID: 266979010** Collected: 07/10/18 15:00 Received: 07/11/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 16:47	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 16:47	7440-38-2	
Barium	**0.073**	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 16:47	7440-39-3	
Beryllium	**0.000076J**	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 16:47	7440-41-7	
Boron	**1.1**	mg/L	0.040	0.0039	1	07/13/18 10:44	07/16/18 16:47	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 16:47	7440-43-9	
Calcium	**56.2**	mg/L	25.0	0.69	50	07/13/18 10:44	07/16/18 16:52	7440-70-2	M6
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 16:47	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 16:47	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 16:47	7439-92-1	
Lithium	**0.0019J**	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 16:47	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 16:47	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 16:47	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 16:47	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000047J**	mg/L	0.00050	0.000036	1	07/12/18 09:30	07/13/18 12:47	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**422**	mg/L	25.0	10.0	1		07/14/18 09:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**13.7**	mg/L	0.25	0.024	1		07/12/18 21:11	16887-00-6	
Fluoride	**0.047J**	mg/L	0.30	0.029	1		07/12/18 21:11	16984-48-8	
Sulfate	**240**	mg/L	10.0	0.17	10		07/16/18 23:12	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

Sample: DGWC-13 **Lab ID: 266979011** Collected: 07/10/18 15:00 Received: 07/11/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.0014J**	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 17:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 17:56	7440-38-2	
Barium	**0.035**	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 17:56	7440-39-3	
Beryllium	**0.000050J**	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 17:56	7440-41-7	
Boron	**0.72**	mg/L	0.20	0.020	5	07/13/18 10:44	07/17/18 14:50	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 17:56	7440-43-9	
Calcium	**42.6**	mg/L	25.0	0.69	50	07/13/18 10:44	07/16/18 18:02	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 17:56	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 17:56	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 17:56	7439-92-1	
Lithium	**0.0028J**	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 17:56	7439-93-2	
Molybdenum	**0.024**	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 17:56	7439-98-7	
Selenium	**0.0028J**	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 17:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 17:56	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000054J**	mg/L	0.00050	0.000036	1	07/12/18 09:30	07/13/18 13:36	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**306**	mg/L	25.0	10.0	1		07/14/18 09:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**14.8**	mg/L	0.25	0.024	1		07/12/18 21:53	16887-00-6	
Fluoride	**0.32**	mg/L	0.30	0.029	1		07/12/18 21:53	16984-48-8	
Sulfate	**152**	mg/L	10.0	0.17	10		07/16/18 23:33	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

QC Batch: 9654 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 266979001, 266979002, 266979003, 266979004, 266979005, 266979006, 266979007, 266979008, 266979009, 266979010, 266979011

METHOD BLANK: 43845 Matrix: Water
Associated Lab Samples: 266979001, 266979002, 266979003, 266979004, 266979005, 266979006, 266979007, 266979008, 266979009, 266979010, 266979011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	0.000060J	0.00050	0.000036	07/13/18 12:04	

LABORATORY CONTROL SAMPLE: 43846

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0028	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 43847 43848

Parameter	Units	266979001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	0.000055J	.0025	.0025	0.0023	0.0024	88	95	75-125	7	20	

SAMPLE DUPLICATE: 43850

Parameter	Units	266946001 Result	Dup Result	RPD	Max RPD	Qualifiers
Mercury	mg/L	ND	0.000054J		20	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

QC Batch: 9743 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 266979001, 266979002, 266979003, 266979004, 266979005, 266979006, 266979007, 266979008, 266979009, 266979010, 266979011

METHOD BLANK: 44231 Matrix: Water
Associated Lab Samples: 266979001, 266979002, 266979003, 266979004, 266979005, 266979006, 266979007, 266979008, 266979009, 266979010, 266979011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	07/16/18 14:51	
Arsenic	mg/L	ND	0.0050	0.00057	07/16/18 14:51	
Barium	mg/L	ND	0.010	0.00078	07/16/18 14:51	
Beryllium	mg/L	ND	0.0030	0.000050	07/16/18 14:51	
Boron	mg/L	ND	0.040	0.0039	07/16/18 14:51	
Cadmium	mg/L	ND	0.0010	0.000093	07/16/18 14:51	
Calcium	mg/L	ND	0.50	0.014	07/16/18 14:51	
Chromium	mg/L	ND	0.010	0.0016	07/16/18 14:51	
Cobalt	mg/L	ND	0.010	0.00052	07/16/18 14:51	
Lead	mg/L	ND	0.0050	0.00027	07/16/18 14:51	
Lithium	mg/L	ND	0.050	0.00097	07/16/18 14:51	
Molybdenum	mg/L	ND	0.010	0.0019	07/16/18 14:51	
Selenium	mg/L	ND	0.010	0.0014	07/16/18 14:51	
Thallium	mg/L	ND	0.0010	0.00014	07/16/18 14:51	

LABORATORY CONTROL SAMPLE: 44232

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	105	80-120	
Barium	mg/L	.1	0.098	98	80-120	
Beryllium	mg/L	.1	0.10	104	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	100	80-120	
Chromium	mg/L	.1	0.10	101	80-120	
Cobalt	mg/L	.1	0.10	101	80-120	
Lead	mg/L	.1	0.10	103	80-120	
Lithium	mg/L	.1	0.10	103	80-120	
Molybdenum	mg/L	.1	0.10	103	80-120	
Selenium	mg/L	.1	0.11	106	80-120	
Thallium	mg/L	.1	0.10	102	80-120	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44233 44234

Parameter	Units	266979010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.11	0.11	110	112	75-125	2	20	
Arsenic	mg/L	ND	.1	.1	0.11	0.11	107	108	75-125	1	20	
Barium	mg/L	0.073	.1	.1	0.19	0.20	119	124	75-125	3	20	
Beryllium	mg/L	0.000076J	.1	.1	0.10	0.11	102	105	75-125	3	20	
Boron	mg/L	1.1	1	1	2.1	2.1	95	96	75-125	0	20	
Cadmium	mg/L	ND	.1	.1	0.11	0.11	108	106	75-125	2	20	
Calcium	mg/L	56.2	1	1	62.7	62.4	658	621	75-125	1	20	M6
Chromium	mg/L	ND	.1	.1	0.11	0.11	108	107	75-125	1	20	
Cobalt	mg/L	ND	.1	.1	0.11	0.11	106	106	75-125	0	20	
Lead	mg/L	ND	.1	.1	0.11	0.10	105	104	75-125	1	20	
Lithium	mg/L	0.0019J	.1	.1	0.11	0.11	107	105	75-125	2	20	
Molybdenum	mg/L	ND	.1	.1	0.10	0.11	105	107	75-125	2	20	
Selenium	mg/L	ND	.1	.1	0.11	0.11	108	108	75-125	0	20	
Thallium	mg/L	ND	.1	.1	0.11	0.11	107	107	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

QC Batch: 9832 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 266979001, 266979002, 266979003, 266979004, 266979005, 266979006, 266979007, 266979008, 266979009, 266979010, 266979011

LABORATORY CONTROL SAMPLE: 44632

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	401	100	84-108	

SAMPLE DUPLICATE: 44633

Parameter	Units	267013001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	659	646	2	10	

SAMPLE DUPLICATE: 44888

Parameter	Units	266979008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

QC Batch: 9668 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 266979001, 266979002, 266979003, 266979004, 266979005, 266979006, 266979007, 266979008, 266979009, 266979010, 266979011

METHOD BLANK: 43921 Matrix: Water
Associated Lab Samples: 266979001, 266979002, 266979003, 266979004, 266979005, 266979006, 266979007, 266979008, 266979009, 266979010, 266979011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.29	0.25	0.024	07/12/18 15:20	
Fluoride	mg/L	ND	0.30	0.029	07/12/18 15:20	
Sulfate	mg/L	ND	1.0	0.017	07/12/18 15:20	

LABORATORY CONTROL SAMPLE: 43922

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	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 43923 43924

Parameter	Units	266979001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.9	10	10	12.0	12.0	100	101	90-110	0	15	
Fluoride	mg/L	0.082J	10	10	10.5	10.5	104	104	90-110	0	15	
Sulfate	mg/L	0.25J	10	10	10.2	10.1	99	99	90-110	0	15	

MATRIX SPIKE SAMPLE: 43925

Parameter	Units	266979002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	10	12.5	100	90-110	
Fluoride	mg/L	ND	10	10.2	102	90-110	
Sulfate	mg/L	7.2	10	16.3	92	90-110	

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REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

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.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 266979

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
266979001	DGWA-70A	EPA 3005A	9743	EPA 6020B	9880
266979002	DGWA-71	EPA 3005A	9743	EPA 6020B	9880
266979003	DGWC-4	EPA 3005A	9743	EPA 6020B	9880
266979004	DGWC-5	EPA 3005A	9743	EPA 6020B	9880
266979005	DGWC-8	EPA 3005A	9743	EPA 6020B	9880
266979006	FD-1	EPA 3005A	9743	EPA 6020B	9880
266979007	FB-1	EPA 3005A	9743	EPA 6020B	9880
266979008	EB-1	EPA 3005A	9743	EPA 6020B	9880
266979009	DGWC-10	EPA 3005A	9743	EPA 6020B	9880
266979010	DGWC-11	EPA 3005A	9743	EPA 6020B	9880
266979011	DGWC-13	EPA 3005A	9743	EPA 6020B	9880
266979001	DGWA-70A	EPA 7470A	9654	EPA 7470A	9687
266979002	DGWA-71	EPA 7470A	9654	EPA 7470A	9687
266979003	DGWC-4	EPA 7470A	9654	EPA 7470A	9687
266979004	DGWC-5	EPA 7470A	9654	EPA 7470A	9687
266979005	DGWC-8	EPA 7470A	9654	EPA 7470A	9687
266979006	FD-1	EPA 7470A	9654	EPA 7470A	9687
266979007	FB-1	EPA 7470A	9654	EPA 7470A	9687
266979008	EB-1	EPA 7470A	9654	EPA 7470A	9687
266979009	DGWC-10	EPA 7470A	9654	EPA 7470A	9687
266979010	DGWC-11	EPA 7470A	9654	EPA 7470A	9687
266979011	DGWC-13	EPA 7470A	9654	EPA 7470A	9687
266979001	DGWA-70A	SM 2540C	9832		
266979002	DGWA-71	SM 2540C	9832		
266979003	DGWC-4	SM 2540C	9832		
266979004	DGWC-5	SM 2540C	9832		
266979005	DGWC-8	SM 2540C	9832		
266979006	FD-1	SM 2540C	9832		
266979007	FB-1	SM 2540C	9832		
266979008	EB-1	SM 2540C	9832		
266979009	DGWC-10	SM 2540C	9832		
266979010	DGWC-11	SM 2540C	9832		
266979011	DGWC-13	SM 2540C	9832		
266979001	DGWA-70A	EPA 300.0	9668		
266979002	DGWA-71	EPA 300.0	9668		
266979003	DGWC-4	EPA 300.0	9668		
266979004	DGWC-5	EPA 300.0	9668		
266979005	DGWC-8	EPA 300.0	9668		
266979006	FD-1	EPA 300.0	9668		
266979007	FB-1	EPA 300.0	9668		
266979008	EB-1	EPA 300.0	9668		
266979009	DGWC-10	EPA 300.0	9668		
266979010	DGWC-11	EPA 300.0	9668		
266979011	DGWC-13	EPA 300.0	9668		

CHAIN OF CUSTODY RECORD

Pace Analytical®

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4, & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P		
PRESERVATION:								3	7	3		
07/10/18	1100	GW		x	DGWA-70A	4		1	1	2		
07/10/18	0940	GW		x	DGWA-71	4		1	1	4		Extra Radium
07/10/18	0925	GW		x	DGWC-4	4		1	1	2		
07/10/18	1105	GW		x	DGWC-5	4		1	1	2		
07/10/18	1410	GW		x	DGWC-8	4		1	1	2		
07/10/18	–	GW		x	FD-1	4		1	1	2		
07/10/18	1150	W		x	FB-1	4		1	1	2		
07/10/18	1535	W		x	EB-1	4		1	1	2		
07/10/18	1250	GW		x	DGWC-10	4		1	1	2		
07/10/18	1500	GW		x	DGWC-11	4		1	1	2		
07/10/18	1500	GW		x	DGWC-13	4		1	1	2		

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

WO# : 266979

266979

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 7/10/18 1700
RELINQUISHED BY: Ben Hodges
DATE/TIME: 7/11/18 0815

RECEIVED BY: M. BAH
DATE/TIME: 7-11-18, 8:20
RELINQUISHED BY: M. BAH
DATE/TIME: 7-11-18 10:45

RECEIVED BY/LAB: MQalman
DATE/TIME: 07/11/18 1045
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 1.1 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

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

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 266979

PM: BM **Due Date: 07/18/18**

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 ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.1 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 7/11/18 MR

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

Client Notification/ Resolution: Field Data Required? Y N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

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

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

August 08, 2018

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

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 266980

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on July 11, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

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CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 266980

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 McDonough Ash Ponds
Pace Project No.: 266980

Lab ID	Sample ID	Matrix	Date Collected	Date Received
266980001	**DGWA-70A**	Water	07/10/18 11:00	07/11/18 10:45
266980002	**DGWA-71**	Water	07/10/18 09:40	07/11/18 10:45
266980003	**DGWC-4**	Water	07/10/18 09:25	07/11/18 10:45
266980004	**DGWC-5**	Water	07/10/18 11:05	07/11/18 10:45
266980005	**DGWC-8**	Water	07/10/18 14:10	07/11/18 10:45
266980006	**FD-1**	Water	07/10/18 00:00	07/11/18 10:45
266980007	**FB-1**	Water	07/10/18 11:50	07/11/18 10:45
266980008	**EB-1**	Water	07/10/18 15:35	07/11/18 10:45
266980009	**DGWC-10**	Water	07/10/18 12:50	07/11/18 10:45
266980010	**DGWC-11**	Water	07/10/18 15:00	07/11/18 10:45
266980011	**DGWC-13**	Water	07/10/18 15:00	07/11/18 10:45

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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 266980

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
266980001	DGWA-70A	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266980002	DGWA-71	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266980003	DGWC-4	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266980004	DGWC-5	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266980005	DGWC-8	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266980006	FD-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266980007	FB-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266980008	EB-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266980009	DGWC-10	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266980010	DGWC-11	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
266980011	DGWC-13	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 266980

Sample: DGWA-70A **Lab ID: 266980001** Collected: 07/10/18 11:00 Received: 07/11/18 10:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.362 ± 0.166 (0.195) C:100% T:NA**	pCi/L	07/24/18 08:23	13982-63-3	
Radium-228	EPA 9320	**-0.0842 ± 0.333 (0.794) C:73% T:84%**	pCi/L	08/01/18 15:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.362 ± 0.499 (0.989)**	pCi/L	08/03/18 15:07	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 266980

Sample: DGWA-71 **Lab ID: 266980002** Collected: 07/10/18 09:40 Received: 07/11/18 10:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.324 ± 0.161 (0.203) C:94% T:NA**	pCi/L	07/24/18 08:23	13982-63-3	
Radium-228	EPA 9320	**0.102 ± 0.479 (1.09) C:71% T:65%**	pCi/L	08/01/18 15:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.426 ± 0.640 (1.29)**	pCi/L	08/03/18 15:07	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 266980

Sample: DGWC-4 **Lab ID: 266980003** Collected: 07/10/18 09:25 Received: 07/11/18 10:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.588 ± 0.225 (0.242) C:90% T:NA**	pCi/L	07/24/18 08:23	13982-63-3	
Radium-228	EPA 9320	**0.777 ± 0.459 (0.852) C:72% T:81%**	pCi/L	08/01/18 15:00	15262-20-1	
Total Radium	Total Radium Calculation	**1.37 ± 0.684 (1.09)**	pCi/L	08/03/18 15:07	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 266980

Sample: DGWC-5 **Lab ID: 266980004** Collected: 07/10/18 11:05 Received: 07/11/18 10:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.357 ± 0.165 (0.188) C:99% T:NA**	pCi/L	07/24/18 08:23	13982-63-3	
Radium-228	EPA 9320	**0.677 ± 0.526 (1.06) C:78% T:76%**	pCi/L	08/01/18 15:00	15262-20-1	
Total Radium	Total Radium Calculation	**1.03 ± 0.691 (1.25)**	pCi/L	08/03/18 15:07	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 266980

Sample: DGWC-8 **Lab ID: 266980005** Collected: 07/10/18 14:10 Received: 07/11/18 10:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.363 ± 0.167 (0.189) C:93% T:NA**	pCi/L	07/24/18 08:23	13982-63-3	
Radium-228	EPA 9320	**-0.0736 ± 0.355 (0.844) C:73% T:84%**	pCi/L	08/01/18 15:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.363 ± 0.522 (1.03)**	pCi/L	08/03/18 15:07	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 266980

Sample: FD-1 **Lab ID: 266980006** Collected: 07/10/18 00:00 Received: 07/11/18 10:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.374 ± 0.188 (0.266) C:89% T:NA**	pCi/L	07/24/18 08:23	13982-63-3	
Radium-228	EPA 9320	**0.216 ± 0.387 (0.847) C:72% T:76%**	pCi/L	08/01/18 15:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.590 ± 0.575 (1.11)**	pCi/L	08/03/18 15:07	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 266980

Sample: FB-1 **Lab ID: 266980007** Collected: 07/10/18 11:50 Received: 07/11/18 10:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.104 ± 0.110 (0.216) C:100% T:NA**	pCi/L	07/24/18 08:23	13982-63-3	
Radium-228	EPA 9320	**0.226 ± 0.449 (0.988) C:74% T:70%**	pCi/L	08/01/18 15:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.330 ± 0.559 (1.20)**	pCi/L	08/03/18 15:07	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 266980

Sample: EB-1 **Lab ID: 266980008** Collected: 07/10/18 15:35 Received: 07/11/18 10:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.275 ± 0.150 (0.209) C:97% T:NA**	pCi/L	07/24/18 08:23	13982-63-3	
Radium-228	EPA 9320	**-0.0851 ± 0.437 (1.04) C:69% T:67%**	pCi/L	08/01/18 15:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.275 ± 0.587 (1.25)**	pCi/L	08/03/18 15:07	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 266980

Sample: DGWC-10 **Lab ID: 266980009** Collected: 07/10/18 12:50 Received: 07/11/18 10:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.685 ± 0.233 (0.198) C:97% T:NA**	pCi/L	07/24/18 08:23	13982-63-3	
Radium-228	EPA 9320	**0.960 ± 0.442 (0.737) C:72% T:85%**	pCi/L	08/01/18 15:00	15262-20-1	
Total Radium	Total Radium Calculation	**1.65 ± 0.675 (0.935)**	pCi/L	08/03/18 15:07	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 266980

Sample: DGWC-11 **Lab ID: 266980010** Collected: 07/10/18 15:00 Received: 07/11/18 10:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.277 ± 0.174 (0.292) C:95% T:NA**	pCi/L	07/24/18 08:54	13982-63-3	
Radium-228	EPA 9320	**0.218 ± 0.423 (0.928) C:76% T:79%**	pCi/L	08/01/18 15:01	15262-20-1	
Total Radium	Total Radium Calculation	**0.495 ± 0.597 (1.22)**	pCi/L	08/03/18 15:07	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 266980

Sample: DGWC-13 **Lab ID: 266980011** Collected: 07/10/18 15:00 Received: 07/11/18 10:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.327 ± 0.164 (0.231) C:100% T:NA**	pCi/L	07/24/18 08:53	13982-63-3	
Radium-228	EPA 9320	**0.419 ± 0.389 (0.791) C:71% T:79%**	pCi/L	08/01/18 15:01	15262-20-1	
Total Radium	Total Radium Calculation	**0.746 ± 0.553 (1.02)**	pCi/L	08/03/18 15:07	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 266980

QC Batch: 306308 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 266980001, 266980002, 266980003, 266980004, 266980005, 266980006, 266980007, 266980008, 266980009, 266980010, 266980011

METHOD BLANK: 1497598 Matrix: Water
Associated Lab Samples: 266980001, 266980002, 266980003, 266980004, 266980005, 266980006, 266980007, 266980008, 266980009, 266980010, 266980011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0802 ± 0.324 (0.736) C:75% T:82%	pCi/L	08/01/18 15:00	

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 McDonough Ash Ponds
Pace Project No.: 266980

QC Batch: 306307 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 266980001, 266980002, 266980003, 266980004, 266980005, 266980006, 266980007, 266980008, 266980009, 266980010, 266980011

METHOD BLANK: 1497597 Matrix: Water
Associated Lab Samples: 266980001, 266980002, 266980003, 266980004, 266980005, 266980006, 266980007, 266980008, 266980009, 266980010, 266980011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.203 ± 0.124 (0.168) C:102% T:NA	pCi/L	07/24/18 08:23	

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.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 266980

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 266980

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
266980001	**DGWA-70A**	EPA 9315	306307		
266980002	**DGWA-71**	EPA 9315	306307		
266980003	**DGWC-4**	EPA 9315	306307		
266980004	**DGWC-5**	EPA 9315	306307		
266980005	**DGWC-8**	EPA 9315	306307		
266980006	**FD-1**	EPA 9315	306307		
266980007	**FB-1**	EPA 9315	306307		
266980008	**EB-1**	EPA 9315	306307		
266980009	**DGWC-10**	EPA 9315	306307		
266980010	**DGWC-11**	EPA 9315	306307		
266980011	**DGWC-13**	EPA 9315	306307		
266980001	**DGWA-70A**	EPA 9320	306308		
266980002	**DGWA-71**	EPA 9320	306308		
266980003	**DGWC-4**	EPA 9320	306308		
266980004	**DGWC-5**	EPA 9320	306308		
266980005	**DGWC-8**	EPA 9320	306308		
266980006	**FD-1**	EPA 9320	306308		
266980007	**FB-1**	EPA 9320	306308		
266980008	**EB-1**	EPA 9320	306308		
266980009	**DGWC-10**	EPA 9320	306308		
266980010	**DGWC-11**	EPA 9320	306308		
266980011	**DGWC-13**	EPA 9320	306308		
266980001	**DGWA-70A**	Total Radium Calculation	308377		
266980002	**DGWA-71**	Total Radium Calculation	308377		
266980003	**DGWC-4**	Total Radium Calculation	308377		
266980004	**DGWC-5**	Total Radium Calculation	308377		
266980005	**DGWC-8**	Total Radium Calculation	308377		
266980006	**FD-1**	Total Radium Calculation	308377		
266980007	**FB-1**	Total Radium Calculation	308377		
266980008	**EB-1**	Total Radium Calculation	308377		
266980009	**DGWC-10**	Total Radium Calculation	308377		
266980010	**DGWC-11**	Total Radium Calculation	308377		
266980011	**DGWC-13**	Total Radium Calculation	308377		

CHAIN OF CUSTODY RECORD

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: kiurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB ID NUMBER
CONTAINER TYPE:								P	P	P						
PRESERVATION:								3	7	3						
07/10/18	1100	GW		x	DGWA-70A	4		1	1	2						
07/10/18	0940	GW		x	DGWA-71	4		1	1	4						
07/10/18	0925	GW		x	DGWC-4	4		1	1	2						
07/10/18	1105	GW		x	DGWC-5	4		1	1	2						
07/10/18	1410	GW		x	DGWC-8	4		1	1	2						
07/10/18	–	GW		x	FD-1	4		1	1	2						
07/10/18	1150	W		x	FB-1	4		1	1	2						
07/10/18	1535	W		x	EB-1	4		1	1	2						
07/10/18	1250	GW		x	DGWC-10	4		1	1	2						
07/10/18	1500	GW		x	DGWC-11	4		1	1	2						
07/10/18	1500	GW		x	DGWC-13	4		1	1	2						

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

Extra Radium

WO# : 266980

266980

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 7/10/18 1700
RELINQUISHED BY: Ben Hodges
DATE/TIME: 7/11/18 0815

RECEIVED BY: M. BAH
DATE/TIME: 7-11-18, 8:20
RELINQUISHED BY: M. BAH
DATE/TIME: 7-11-18 10:45

RECEIVED BY/LAB: MQalman
DATE/TIME: 07/11/18 1045
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 1.1 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

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

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 266980

PM: BM **Due Date: 08/08/18**

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 1.1 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 7/11/18 MR

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

Client Notification/ Resolution: Field Data Required? Y N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

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

F-ALL-C-003rev.3, 11September2006

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

July 23, 2018

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

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

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

CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

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

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Lab ID	Sample ID	Matrix	Date Collected	Date Received
267056001	**DGWC-2**	Water	07/11/18 09:15	07/12/18 11:30
267056002	**DGWC-9**	Water	07/11/18 12:50	07/12/18 11:30
267056003	**DGWC-12**	Water	07/11/18 17:15	07/12/18 11:30
267056004	**DGWC-14**	Water	07/11/18 09:35	07/12/18 11:30
267056005	**DGWC-15**	Water	07/11/18 11:45	07/12/18 11:30
267056006	**FD-2**	Water	07/11/18 00:00	07/12/18 11:30
267056007	**FB-2**	Water	07/11/18 12:00	07/12/18 11:30
267056008	**EB-2**	Water	07/11/18 16:00	07/12/18 11:30
267056009	**DGWC-17**	Water	07/11/18 11:20	07/12/18 11:30
267056010	**DGWC-19**	Water	07/11/18 13:50	07/12/18 11:30
267056011	**DGWC-20**	Water	07/11/18 15:10	07/12/18 11:30
267056012	**DGWC-21**	Water	07/11/18 15:15	07/12/18 11:30
267056013	**DGWC-42**	Water	07/11/18 13:45	07/12/18 11:30

Pace Analytical Services, LLC
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(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Lab ID	Sample ID	Method	Analysts	Analytes Reported
267056001	DGWC-2	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267056002	DGWC-9	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267056003	DGWC-12	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267056004	DGWC-14	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267056005	DGWC-15	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267056006	FD-2	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267056007	FB-2	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267056008	EB-2	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267056009	DGWC-17	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267056010	DGWC-19	EPA 6020B	CSW	14

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267056011	**DGWC-20**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267056012	**DGWC-21**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267056013	**DGWC-42**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Sample: DGWC-2 **Lab ID: 267056001** Collected: 07/11/18 09:15 Received: 07/12/18 11:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 14:47	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 14:47	7440-38-2	
Barium	**0.022**	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 14:47	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 14:47	7440-41-7	
Boron	**0.82**	mg/L	0.040	0.0039	1	07/16/18 12:41	07/18/18 14:47	7440-42-8	
Cadmium	**0.00018J**	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 14:47	7440-43-9	
Calcium	**55.0**	mg/L	25.0	0.69	50	07/16/18 12:41	07/18/18 14:53	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 14:47	7440-47-3	
Cobalt	**0.020**	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 14:47	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/16/18 12:41	07/18/18 14:47	7439-92-1	
Lithium	**0.033J**	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 14:47	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 14:47	7439-98-7	
Selenium	**0.0045J**	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 14:47	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/16/18 12:41	07/18/18 14:47	7440-28-0	
7470 Mercury	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 12:05	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**334**	mg/L	25.0	10.0	1		07/16/18 12:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.3**	mg/L	0.25	0.024	1		07/14/18 07:09	16887-00-6	
Fluoride	**0.60**	mg/L	0.30	0.029	1		07/14/18 07:09	16984-48-8	
Sulfate	**162**	mg/L	10.0	0.17	10		07/19/18 21:17	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Sample: DGWC-9 **Lab ID: 267056002** Collected: 07/11/18 12:50 Received: 07/12/18 11:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 14:59	7440-36-0	
Arsenic	**0.016**	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 14:59	7440-38-2	
Barium	**0.017**	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 14:59	7440-39-3	
Beryllium	**0.0058**	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 14:59	7440-41-7	
Boron	**1.4**	mg/L	0.040	0.0039	1	07/16/18 12:41	07/18/18 14:59	7440-42-8	
Cadmium	**0.00067J**	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 14:59	7440-43-9	
Calcium	**88.5**	mg/L	25.0	0.69	50	07/16/18 12:41	07/18/18 15:05	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 14:59	7440-47-3	
Cobalt	**0.18**	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 14:59	7440-48-4	
Lead	ND	mg/L	0.025	0.0014	5	07/16/18 12:41	07/19/18 13:37	7439-92-1	D3
Lithium	**0.028J**	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 14:59	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 14:59	7439-98-7	
Selenium	**0.045**	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 14:59	7782-49-2	
Thallium	ND	mg/L	0.0050	0.00071	5	07/16/18 12:41	07/19/18 13:37	7440-28-0	D3
7470 Mercury	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 12:07	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**532**	mg/L	25.0	10.0	1		07/16/18 12:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**10.5**	mg/L	0.25	0.024	1		07/14/18 07:30	16887-00-6	
Fluoride	**1.3**	mg/L	0.30	0.029	1		07/14/18 07:30	16984-48-8	
Sulfate	**344**	mg/L	10.0	0.17	10		07/19/18 21:38	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Sample: DGWC-12 **Lab ID: 267056003** Collected: 07/11/18 17:15 Received: 07/12/18 11:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 15:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 15:10	7440-38-2	
Barium	**0.026**	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 15:10	7440-39-3	
Beryllium	**0.00020J**	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 15:10	7440-41-7	
Boron	**10.2**	mg/L	2.0	0.20	50	07/16/18 12:41	07/18/18 15:16	7440-42-8	
Cadmium	**0.00033J**	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 15:10	7440-43-9	
Calcium	**93.6**	mg/L	25.0	0.69	50	07/16/18 12:41	07/18/18 15:16	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 15:10	7440-47-3	
Cobalt	**0.0020J**	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 15:10	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/16/18 12:41	07/18/18 15:10	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 15:10	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 15:10	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 15:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/16/18 12:41	07/18/18 15:10	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000036J**	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 12:09	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**593**	mg/L	25.0	10.0	1		07/16/18 12:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**11.3**	mg/L	0.25	0.024	1		07/14/18 07:52	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		07/14/18 07:52	16984-48-8	
Sulfate	**344**	mg/L	10.0	0.17	10		07/19/18 21:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Sample: DGWC-14 **Lab ID: 267056004** Collected: 07/11/18 09:35 Received: 07/12/18 11:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 15:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 15:22	7440-38-2	
Barium	**0.061**	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 15:22	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 15:22	7440-41-7	
Boron	**0.057**	mg/L	0.040	0.0039	1	07/16/18 12:41	07/18/18 15:22	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 15:22	7440-43-9	
Calcium	**9.9**	mg/L	5.0	0.14	10	07/16/18 12:41	07/19/18 13:45	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 15:22	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 15:22	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/16/18 12:41	07/18/18 15:22	7439-92-1	
Lithium	**0.0034J**	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 15:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 15:22	7439-98-7	
Selenium	**0.0020J**	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 15:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/16/18 12:41	07/18/18 15:22	7440-28-0	
7470 Mercury	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 12:12	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**119**	mg/L	25.0	10.0	1		07/16/18 12:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.2**	mg/L	0.25	0.024	1		07/14/18 08:14	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		07/14/18 08:14	16984-48-8	
Sulfate	**40.6**	mg/L	1.0	0.017	1		07/14/18 08:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Sample: DGWC-15 **Lab ID: 267056005** Collected: 07/11/18 11:45 Received: 07/12/18 11:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 15:57	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 15:57	7440-38-2	
Barium	**0.050**	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 15:57	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 15:57	7440-41-7	
Boron	**1.4**	mg/L	0.040	0.0039	1	07/16/18 12:41	07/18/18 15:57	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 15:57	7440-43-9	
Calcium	**37.5**	mg/L	25.0	0.69	50	07/16/18 12:41	07/18/18 16:03	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 15:57	7440-47-3	
Cobalt	**0.0018J**	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 15:57	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/16/18 12:41	07/18/18 15:57	7439-92-1	
Lithium	**0.0058J**	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 15:57	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 15:57	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 15:57	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/16/18 12:41	07/18/18 15:57	7440-28-0	
7470 Mercury	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 12:14	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**320**	mg/L	25.0	10.0	1		07/16/18 12:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**21.4**	mg/L	0.25	0.024	1		07/14/18 10:03	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		07/14/18 10:03	16984-48-8	
Sulfate	**154**	mg/L	10.0	0.17	10		07/19/18 22:19	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Sample: FD-2 **Lab ID: 267056006** Collected: 07/11/18 00:00 Received: 07/12/18 11:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 16:08	7440-36-0	
Arsenic	**0.015**	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 16:08	7440-38-2	
Barium	**0.017**	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 16:08	7440-39-3	
Beryllium	**0.0056**	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 16:08	7440-41-7	
Boron	**1.4**	mg/L	0.040	0.0039	1	07/16/18 12:41	07/18/18 16:08	7440-42-8	
Cadmium	**0.00065J**	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 16:08	7440-43-9	
Calcium	**86.5**	mg/L	25.0	0.69	50	07/16/18 12:41	07/18/18 16:14	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 16:08	7440-47-3	
Cobalt	**0.17**	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 16:08	7440-48-4	
Lead	ND	mg/L	0.025	0.0014	5	07/16/18 12:41	07/19/18 13:51	7439-92-1	D3
Lithium	**0.028J**	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 16:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 16:08	7439-98-7	
Selenium	**0.047**	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 16:08	7782-49-2	
Thallium	ND	mg/L	0.0050	0.00071	5	07/16/18 12:41	07/19/18 13:51	7440-28-0	D3
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000046J**	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 12:16	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**526**	mg/L	25.0	10.0	1		07/16/18 12:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**11.0**	mg/L	0.25	0.024	1		07/14/18 10:25	16887-00-6	
Fluoride	**1.3**	mg/L	0.30	0.029	1		07/14/18 10:25	16984-48-8	
Sulfate	**339**	mg/L	10.0	0.17	10		07/19/18 22:40	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Sample: FB-2 **Lab ID: 267056007** Collected: 07/11/18 12:00 Received: 07/12/18 11:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 16:20	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 16:20	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 16:20	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 16:20	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	07/16/18 12:41	07/18/18 16:20	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 16:20	7440-43-9	
Calcium	**0.017J**	mg/L	0.50	0.014	1	07/16/18 12:41	07/18/18 16:20	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 16:20	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 16:20	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/16/18 12:41	07/18/18 16:20	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 16:20	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 16:20	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 16:20	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/16/18 12:41	07/18/18 16:20	7440-28-0	
7470 Mercury	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 12:24	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**10.0J**	mg/L	25.0	10.0	1		07/16/18 12:51		D6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.10J**	mg/L	0.25	0.024	1		07/14/18 11:08	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/14/18 11:08	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		07/14/18 11:08	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Sample: EB-2 **Lab ID: 267056008** Collected: 07/11/18 16:00 Received: 07/12/18 11:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 16:25	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 16:25	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 16:25	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 16:25	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	07/16/18 12:41	07/18/18 16:25	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 16:25	7440-43-9	
Calcium	**0.036J**	mg/L	0.50	0.014	1	07/16/18 12:41	07/18/18 16:25	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 16:25	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 16:25	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/16/18 12:41	07/18/18 16:25	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 16:25	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 16:25	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 16:25	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/16/18 12:41	07/18/18 16:25	7440-28-0	
7470 Mercury	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 12:26	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		07/16/18 12:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.082J**	mg/L	0.25	0.024	1		07/14/18 11:30	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/14/18 11:30	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		07/14/18 11:30	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Sample: DGWC-17 **Lab ID: 267056009** Collected: 07/11/18 11:20 Received: 07/12/18 11:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 16:31	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 16:31	7440-38-2	
Barium	**0.053**	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 16:31	7440-39-3	
Beryllium	**0.00058J**	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 16:31	7440-41-7	
Boron	**0.79**	mg/L	0.040	0.0039	1	07/16/18 12:41	07/18/18 16:31	7440-42-8	
Cadmium	**0.00029J**	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 16:31	7440-43-9	
Calcium	**13.0J**	mg/L	25.0	0.69	50	07/16/18 12:41	07/18/18 16:37	7440-70-2	D3
Chromium	**0.0024J**	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 16:31	7440-47-3	
Cobalt	**0.025**	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 16:31	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/16/18 12:41	07/18/18 16:31	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 16:31	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 16:31	7439-98-7	
Selenium	**0.0070J**	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 16:31	7782-49-2	
Thallium	**0.00017J**	mg/L	0.0010	0.00014	1	07/16/18 12:41	07/18/18 16:31	7440-28-0	
7470 Mercury	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 12:28	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**393**	mg/L	25.0	10.0	1		07/16/18 12:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**19.5**	mg/L	0.25	0.024	1		07/14/18 11:52	16887-00-6	
Fluoride	**0.15J**	mg/L	0.30	0.029	1		07/14/18 11:52	16984-48-8	
Sulfate	**234**	mg/L	10.0	0.17	10		07/19/18 23:00	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Sample: DGWC-19 **Lab ID: 267056010** Collected: 07/11/18 13:50 Received: 07/12/18 11:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 16:43	7440-36-0	
Arsenic	**0.00090J**	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 16:43	7440-38-2	
Barium	**0.023**	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 16:43	7440-39-3	
Beryllium	**0.0020J**	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 16:43	7440-41-7	
Boron	**3.7**	mg/L	2.0	0.20	50	07/16/18 12:41	07/18/18 16:48	7440-42-8	
Cadmium	**0.00039J**	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 16:43	7440-43-9	
Calcium	**82.7**	mg/L	25.0	0.69	50	07/16/18 12:41	07/18/18 16:48	7440-70-2	
Chromium	**0.0022J**	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 16:43	7440-47-3	
Cobalt	**0.051**	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 16:43	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/16/18 12:41	07/18/18 16:43	7439-92-1	
Lithium	**0.0034J**	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 16:43	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 16:43	7439-98-7	
Selenium	**0.0036J**	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 16:43	7782-49-2	
Thallium	**0.00050J**	mg/L	0.0010	0.00014	1	07/16/18 12:41	07/18/18 16:43	7440-28-0	
7470 Mercury	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 12:31	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**457**	mg/L	25.0	10.0	1		07/16/18 12:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**38.2**	mg/L	0.25	0.024	1		07/14/18 12:14	16887-00-6	
Fluoride	**0.37**	mg/L	0.30	0.029	1		07/14/18 12:14	16984-48-8	
Sulfate	**249**	mg/L	10.0	0.17	10		07/20/18 00:44	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Sample: DGWC-20 **Lab ID: 267056011** Collected: 07/11/18 15:10 Received: 07/12/18 11:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 17:08	7440-36-0	
Arsenic	**0.0055**	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 17:08	7440-38-2	
Barium	**0.010**	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 17:08	7440-39-3	
Beryllium	**0.0026J**	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 17:08	7440-41-7	
Boron	**5.7**	mg/L	0.20	0.020	5	07/16/18 12:41	07/19/18 13:57	7440-42-8	
Cadmium	**0.0018**	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 17:08	7440-43-9	
Calcium	**92.4**	mg/L	25.0	0.69	50	07/16/18 12:41	07/18/18 17:14	7440-70-2	M6
Chromium	ND	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 17:08	7440-47-3	
Cobalt	**0.47**	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 17:08	7440-48-4	
Lead	ND	mg/L	0.025	0.0014	5	07/16/18 12:41	07/19/18 13:57	7439-92-1	D3
Lithium	**0.0022J**	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 17:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 17:08	7439-98-7	
Selenium	**0.022**	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 17:08	7782-49-2	
Thallium	ND	mg/L	0.0050	0.00071	5	07/16/18 12:41	07/19/18 13:57	7440-28-0	D3
7470 Mercury	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 12:33	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**826**	mg/L	25.0	10.0	1		07/16/18 12:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**20.4**	mg/L	0.25	0.024	1		07/14/18 12:35	16887-00-6	
Fluoride	**1.3**	mg/L	0.30	0.029	1		07/14/18 12:35	16984-48-8	
Sulfate	**501**	mg/L	10.0	0.17	10		07/20/18 01:04	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Sample: DGWC-21 **Lab ID: 267056012** Collected: 07/11/18 15:15 Received: 07/12/18 11:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.0013J**	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 17:48	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 17:48	7440-38-2	
Barium	**0.027**	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 17:48	7440-39-3	
Beryllium	**0.00016J**	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 17:48	7440-41-7	
Boron	**8.3**	mg/L	2.0	0.20	50	07/16/18 12:41	07/18/18 17:54	7440-42-8	
Cadmium	**0.00054J**	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 17:48	7440-43-9	
Calcium	**82.3**	mg/L	25.0	0.69	50	07/16/18 12:41	07/18/18 17:54	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 17:48	7440-47-3	
Cobalt	**0.0097J**	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 17:48	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/16/18 12:41	07/18/18 17:48	7439-92-1	
Lithium	**0.0057J**	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 17:48	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 17:48	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 17:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/16/18 12:41	07/18/18 17:48	7440-28-0	
7470 Mercury	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 12:35	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**485**	mg/L	25.0	10.0	1		07/16/18 13:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**20.9**	mg/L	0.25	0.024	1		07/14/18 12:57	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		07/14/18 12:57	16984-48-8	
Sulfate	**277**	mg/L	10.0	0.17	10		07/20/18 01:25	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Sample: DGWC-42 **Lab ID: 267056013** Collected: 07/11/18 13:45 Received: 07/12/18 11:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 18:21	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 18:21	7440-38-2	
Barium	**0.020**	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 18:21	7440-39-3	
Beryllium	**0.0029J**	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 18:21	7440-41-7	
Boron	**0.83**	mg/L	0.040	0.0039	1	07/16/18 12:41	07/18/18 18:21	7440-42-8	
Cadmium	**0.0024**	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 18:21	7440-43-9	
Calcium	**47.8**	mg/L	25.0	0.69	50	07/16/18 12:41	07/18/18 18:26	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 18:21	7440-47-3	
Cobalt	**0.019**	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 18:21	7440-48-4	
Lead	**0.00052J**	mg/L	0.0050	0.00027	1	07/16/18 12:41	07/18/18 18:21	7439-92-1	
Lithium	**0.010J**	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 18:21	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 18:21	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 18:21	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/16/18 12:41	07/18/18 18:21	7440-28-0	
7470 Mercury	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 12:38	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**638**	mg/L	25.0	10.0	1		07/16/18 13:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**29.3**	mg/L	0.25	0.024	1		07/14/18 13:19	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		07/14/18 13:19	16984-48-8	
Sulfate	**366**	mg/L	10.0	0.17	10		07/20/18 01:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

QC Batch: 9889 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 267056001, 267056002, 267056003, 267056004, 267056005, 267056006, 267056007, 267056008, 267056009, 267056010, 267056011, 267056012, 267056013

METHOD BLANK: 44843 Matrix: Water
Associated Lab Samples: 267056001, 267056002, 267056003, 267056004, 267056005, 267056006, 267056007, 267056008, 267056009, 267056010, 267056011, 267056012, 267056013

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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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

QC Batch: 9869 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 267056001, 267056002, 267056003, 267056004, 267056005, 267056006, 267056007, 267056008, 267056009, 267056010, 267056011, 267056012, 267056013

METHOD BLANK: 44771 Matrix: Water
Associated Lab Samples: 267056001, 267056002, 267056003, 267056004, 267056005, 267056006, 267056007, 267056008, 267056009, 267056010, 267056011, 267056012, 267056013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	07/18/18 14:36	
Arsenic	mg/L	ND	0.0050	0.00057	07/18/18 14:36	
Barium	mg/L	ND	0.010	0.00078	07/18/18 14:36	
Beryllium	mg/L	ND	0.0030	0.000050	07/18/18 14:36	
Boron	mg/L	ND	0.040	0.0039	07/18/18 14:36	
Cadmium	mg/L	ND	0.0010	0.000093	07/18/18 14:36	
Calcium	mg/L	ND	0.50	0.014	07/18/18 14:36	
Chromium	mg/L	ND	0.010	0.0016	07/18/18 14:36	
Cobalt	mg/L	ND	0.010	0.00052	07/18/18 14:36	
Lead	mg/L	ND	0.0050	0.00027	07/18/18 14:36	
Lithium	mg/L	ND	0.050	0.00097	07/18/18 14:36	
Molybdenum	mg/L	ND	0.010	0.0019	07/18/18 14:36	
Selenium	mg/L	ND	0.010	0.0014	07/18/18 14:36	
Thallium	mg/L	ND	0.0010	0.00014	07/18/18 14:36	

LABORATORY CONTROL SAMPLE: 44772

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	102	80-120	
Barium	mg/L	.1	0.10	104	80-120	
Beryllium	mg/L	.1	0.11	107	80-120	
Boron	mg/L	1	1.0	105	80-120	
Cadmium	mg/L	.1	0.11	108	80-120	
Calcium	mg/L	1	1.0	103	80-120	
Chromium	mg/L	.1	0.10	100	80-120	
Cobalt	mg/L	.1	0.098	98	80-120	
Lead	mg/L	.1	0.10	104	80-120	
Lithium	mg/L	.1	0.10	101	80-120	
Molybdenum	mg/L	.1	0.10	105	80-120	
Selenium	mg/L	.1	0.10	105	80-120	
Thallium	mg/L	.1	0.10	103	80-120	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44773 44774

Parameter	Units	267056011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.11	0.11	107	107	75-125	0	20	
Arsenic	mg/L	0.0055	.1	.1	0.11	0.11	103	100	75-125	4	20	
Barium	mg/L	0.010	.1	.1	0.12	0.11	105	104	75-125	1	20	
Beryllium	mg/L	0.0026J	.1	.1	0.10	0.097	98	95	75-125	3	20	
Boron	mg/L	5.7	1	1	8.6	9.3	125	197	75-125	8	20	
Cadmium	mg/L	0.0018	.1	.1	0.11	0.11	105	104	75-125	0	20	
Calcium	mg/L	92.4	1	1	89.8	96.8	-255	444	75-125	7	20	M6
Chromium	mg/L	ND	.1	.1	0.098	0.094	96	92	75-125	4	20	
Cobalt	mg/L	0.47	.1	.1	0.55	0.55	81	84	75-125	1	20	
Lead	mg/L	ND	.1	.1	0.090	0.087	90	87	75-125	3	20	
Lithium	mg/L	0.0022J	.1	.1	0.099	0.095	97	92	75-125	4	20	
Molybdenum	mg/L	ND	.1	.1	0.11	0.11	109	108	75-125	1	20	
Selenium	mg/L	0.022	.1	.1	0.13	0.13	109	104	75-125	4	20	
Thallium	mg/L	ND	.1	.1	0.092	0.089	91	88	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

QC Batch: 9854 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 267056001, 267056002, 267056003, 267056004, 267056005, 267056006, 267056007, 267056008, 267056009, 267056010, 267056011

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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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

QC Batch: 9855 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 267056012, 267056013

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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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

QC Batch: 9752 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 267056001, 267056002, 267056003, 267056004, 267056005, 267056006, 267056007, 267056008, 267056009, 267056010, 267056011, 267056012, 267056013

METHOD BLANK: 44266 Matrix: Water
Associated Lab Samples: 267056001, 267056002, 267056003, 267056004, 267056005, 267056006, 267056007, 267056008, 267056009, 267056010, 267056011, 267056012, 267056013

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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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267056001	DGWC-2	EPA 3005A	9869	EPA 6020B	10019
267056002	DGWC-9	EPA 3005A	9869	EPA 6020B	10019
267056003	DGWC-12	EPA 3005A	9869	EPA 6020B	10019
267056004	DGWC-14	EPA 3005A	9869	EPA 6020B	10019
267056005	DGWC-15	EPA 3005A	9869	EPA 6020B	10019
267056006	FD-2	EPA 3005A	9869	EPA 6020B	10019
267056007	FB-2	EPA 3005A	9869	EPA 6020B	10019
267056008	EB-2	EPA 3005A	9869	EPA 6020B	10019
267056009	DGWC-17	EPA 3005A	9869	EPA 6020B	10019
267056010	DGWC-19	EPA 3005A	9869	EPA 6020B	10019
267056011	DGWC-20	EPA 3005A	9869	EPA 6020B	10019
267056012	DGWC-21	EPA 3005A	9869	EPA 6020B	10019
267056013	DGWC-42	EPA 3005A	9869	EPA 6020B	10019
267056001	DGWC-2	EPA 7470A	9889	EPA 7470A	9933
267056002	DGWC-9	EPA 7470A	9889	EPA 7470A	9933
267056003	DGWC-12	EPA 7470A	9889	EPA 7470A	9933
267056004	DGWC-14	EPA 7470A	9889	EPA 7470A	9933
267056005	DGWC-15	EPA 7470A	9889	EPA 7470A	9933
267056006	FD-2	EPA 7470A	9889	EPA 7470A	9933
267056007	FB-2	EPA 7470A	9889	EPA 7470A	9933
267056008	EB-2	EPA 7470A	9889	EPA 7470A	9933
267056009	DGWC-17	EPA 7470A	9889	EPA 7470A	9933
267056010	DGWC-19	EPA 7470A	9889	EPA 7470A	9933
267056011	DGWC-20	EPA 7470A	9889	EPA 7470A	9933
267056012	DGWC-21	EPA 7470A	9889	EPA 7470A	9933
267056013	DGWC-42	EPA 7470A	9889	EPA 7470A	9933
267056001	DGWC-2	SM 2540C	9854		
267056002	DGWC-9	SM 2540C	9854		
267056003	DGWC-12	SM 2540C	9854		
267056004	DGWC-14	SM 2540C	9854		
267056005	DGWC-15	SM 2540C	9854		
267056006	FD-2	SM 2540C	9854		
267056007	FB-2	SM 2540C	9854		
267056008	EB-2	SM 2540C	9854		
267056009	DGWC-17	SM 2540C	9854		
267056010	DGWC-19	SM 2540C	9854		
267056011	DGWC-20	SM 2540C	9854		
267056012	DGWC-21	SM 2540C	9855		
267056013	DGWC-42	SM 2540C	9855		
267056001	DGWC-2	EPA 300.0	9752		
267056002	DGWC-9	EPA 300.0	9752		
267056003	DGWC-12	EPA 300.0	9752		
267056004	DGWC-14	EPA 300.0	9752		
267056005	DGWC-15	EPA 300.0	9752		
267056006	FD-2	EPA 300.0	9752		
267056007	FB-2	EPA 300.0	9752		
267056008	EB-2	EPA 300.0	9752		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 267056

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267056009	**DGWC-17**	EPA 300.0	9752		
267056010	**DGWC-19**	EPA 300.0	9752		
267056011	**DGWC-20**	EPA 300.0	9752		
267056012	**DGWC-21**	EPA 300.0	9752		
267056013	**DGWC-42**	EPA 300.0	9752		

CHAIN OF CUSTODY RECORD

Pace Analytical®

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

CLIENT NAME: Georgia Power

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

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4 & TDS (EPA 3000 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB ID NUMBER
CONTAINER TYPE:								P	P	P						
PRESERVATION:								3	7	3						
07/11/18	0915	GW		x	DGWC-2	6		1	1	4						
07/11/18	1250	GW		x	DGWC-9	4		1	1	2						
07/11/18	1715	GW		x	DGWC-12	4		1	1	2						
07/11/18	0935	GW		x	DGWC-14	4		1	1	2						
07/11/18	1145	GW		x	DGWC-15	4		1	1	2						
07/11/18	–	GW		x	FD-2	4		1	1	2						
07/11/18	1200	W		x	FB-2	4		1	1	2						
07/11/18	1600	W		x	EB-2	4		1	1	2						
07/11/18	1120	GW		x	DGWC-17	4		1	1	2						
07/11/18	1350	GW		x	DGWC-19	4		1	1	2						
07/11/18	1510	GW		x	DGWC-20	4		1	1	2						

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

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

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

REMARKS/ADDITIONAL INFORMATION
Extra Radium

WO# : 267056

267056

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: ~~7/10/18 1700~~ 7/11/18 1800

RELINQUISHED BY: Devin Thomas
DATE/TIME: 7-12-18/0920

RECEIVED BY: Mike Nguyen
DATE/TIME: 7/12/18 0920

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB: Malman
DATE/TIME: 07/12/18 1130

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

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0.4 Max:

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

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

CHAIN OF CUSTODY RECORD

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(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER
CONTAINER TYPE:								P	P	P							
PRESERVATION:								3	7	3							
07/11/18	1515	GW		x	DGWC-21	4		1	1	2							
07/11/18	1345	GW		x	DGWC-42	4		1	1	2							

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

REMARKS/ADDITIONAL INFORMATION

WO# : 267056

PM: BM Due Date: 07/19/18

CLIENT: GAPower-CCR

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 7/11/18 1800

RELINQUISHED BY: Dawn Thomas
DATE/TIME: 7-12-18/0920

RECEIVED BY: Mike Nguyen
DATE/TIME: 7/12/18 0920

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Mzaiman
DATE/TIME: 07/12/18 1130

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0.4 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Sample Condition Upon Receipt

Face Analytical

Client Name: GA Power

Project #

WO#: 267056

PM: BM Due Date: 07/19/18

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 ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.4 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:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☐Yes	☑No	☐N/A	12. See Comment
-Includes date/time/ID/Analysis Matrix: GW				
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☑No		Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: Field Data Required? Y N

Person Contacted: Date/Time:

Comments/ Resolution: The 2 Rads containers for DGWC-15 were labeled DGWC-18 with the collection Date/Time as 07/11/18 @ 1145 by the Client and they were received in a same bag with metals, TDS, IC containers matching Collection Date/Time. Those 2 Rads were logged in as DGWC-15.

Project Manager Review: **Date:**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

August 09, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

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CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

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 McDonough Ash Ponds
Pace Project No.: 267057

Lab ID	Sample ID	Matrix	Date Collected	Date Received
267057001	**DGWC-2**	Water	07/11/18 09:15	07/12/18 11:30
267057002	**DGWC-9**	Water	07/11/18 12:50	07/12/18 11:30
267057003	**DGWC-12**	Water	07/11/18 17:15	07/12/18 11:30
267057004	**DGWC-14**	Water	07/11/18 09:35	07/12/18 11:30
267057005	**DGWC-15**	Water	07/11/18 11:45	07/12/18 11:30
267057006	**FD-2**	Water	07/11/18 00:00	07/12/18 11:30
267057007	**FB-2**	Water	07/11/18 12:00	07/12/18 11:30
267057008	**EB-2**	Water	07/11/18 16:00	07/12/18 11:30
267057009	**DGWC-17**	Water	07/11/18 11:20	07/12/18 11:30
267057010	**DGWC-19**	Water	07/11/18 13:50	07/12/18 11:30
267057011	**DGWC-20**	Water	07/11/18 15:10	07/12/18 11:30
267057012	**DGWC-21**	Water	07/11/18 15:15	07/12/18 11:30
267057013	**DGWC-42**	Water	07/11/18 13:45	07/12/18 11:30

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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
267057001	DGWC-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267057002	DGWC-9	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267057003	DGWC-12	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267057004	DGWC-14	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267057005	DGWC-15	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267057006	FD-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267057007	FB-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267057008	EB-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267057009	DGWC-17	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267057010	DGWC-19	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267057011	DGWC-20	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267057012	DGWC-21	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267057013	DGWC-42	EPA 9315	LAL	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

Sample: DGWC-2 **Lab ID: 267057001** Collected: 07/11/18 09:15 Received: 07/12/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.663 ± 0.268 (0.289) C:95% T:NA**	pCi/L	07/26/18 08:29	13982-63-3	
Radium-228	EPA 9320	**-0.560 ± 0.559 (1.34) C:69% T:76%**	pCi/L	08/01/18 12:57	15262-20-1	
Total Radium	Total Radium Calculation	**0.663 ± 0.827 (1.63)**	pCi/L	08/06/18 12:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

Sample: DGWC-9 **Lab ID: 267057002** Collected: 07/11/18 12:50 Received: 07/12/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.667 ± 0.278 (0.307) C:89% T:NA**	pCi/L	07/26/18 08:29	13982-63-3	
Radium-228	EPA 9320	**1.14 ± 0.560 (0.995) C:71% T:76%**	pCi/L	08/01/18 12:57	15262-20-1	
Total Radium	Total Radium Calculation	**1.81 ± 0.838 (1.30)**	pCi/L	08/06/18 12:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

Sample: DGWC-12 **Lab ID: 267057003** Collected: 07/11/18 17:15 Received: 07/12/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.258 ± 0.170 (0.251) C:98% T:NA**	pCi/L	07/26/18 08:29	13982-63-3	
Radium-228	EPA 9320	**0.470 ± 0.438 (0.901) C:73% T:84%**	pCi/L	08/01/18 12:57	15262-20-1	
Total Radium	Total Radium Calculation	**0.728 ± 0.608 (1.15)**	pCi/L	08/06/18 12:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

Sample: DGWC-14 **Lab ID: 267057004** Collected: 07/11/18 09:35 Received: 07/12/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.414 ± 0.236 (0.360) C:97% T:NA**	pCi/L	07/26/18 08:29	13982-63-3	
Radium-228	EPA 9320	**0.624 ± 0.498 (1.01) C:79% T:79%**	pCi/L	08/01/18 12:57	15262-20-1	
Total Radium	Total Radium Calculation	**1.04 ± 0.734 (1.37)**	pCi/L	08/06/18 12:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

Sample: DGWC-15 **Lab ID: 267057005** Collected: 07/11/18 11:45 Received: 07/12/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.513 ± 0.246 (0.278) C:87% T:NA**	pCi/L	07/26/18 08:30	13982-63-3	
Radium-228	EPA 9320	**1.62 ± 0.689 (1.17) C:72% T:71%**	pCi/L	08/01/18 12:57	15262-20-1	
Total Radium	Total Radium Calculation	**2.13 ± 0.935 (1.45)**	pCi/L	08/06/18 12:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

Sample: FD-2 **Lab ID: 267057006** Collected: 07/11/18 00:00 Received: 07/12/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.278 ± 0.176 (0.258) C:94% T:NA**	pCi/L	07/26/18 08:30	13982-63-3	
Radium-228	EPA 9320	**0.609 ± 0.470 (0.938) C:70% T:85%**	pCi/L	08/01/18 12:57	15262-20-1	
Total Radium	Total Radium Calculation	**0.887 ± 0.646 (1.20)**	pCi/L	08/06/18 12:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

Sample: FB-2 **Lab ID: 267057007** Collected: 07/11/18 12:00 Received: 07/12/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0581 ± 0.133 (0.315) C:88% T:NA**	pCi/L	07/26/18 08:30	13982-63-3	
Radium-228	EPA 9320	**0.178 ± 0.415 (0.922) C:72% T:76%**	pCi/L	08/01/18 12:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.236 ± 0.548 (1.24)**	pCi/L	08/06/18 12:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

Sample: EB-2 **Lab ID: 267057008** Collected: 07/11/18 16:00 Received: 07/12/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.242 ± 0.198 (0.358) C:87% T:NA**	pCi/L	07/26/18 08:30	13982-63-3	
Radium-228	EPA 9320	**-0.00856 ± 0.374 (0.869) C:76% T:74%**	pCi/L	08/01/18 12:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.242 ± 0.572 (1.23)**	pCi/L	08/06/18 12:13	7440-14-4	

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

Sample: DGWC-17 **Lab ID: 267057009** Collected: 07/11/18 11:20 Received: 07/12/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.165 ± 0.172 (0.337) C:83% T:NA**	pCi/L	07/26/18 08:30	13982-63-3	
Radium-228	EPA 9320	**0.475 ± 0.460 (0.947) C:69% T:76%**	pCi/L	08/01/18 12:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.640 ± 0.632 (1.28)**	pCi/L	08/06/18 12:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

Sample: DGWC-19 **Lab ID: 267057010** Collected: 07/11/18 13:50 Received: 07/12/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.267 ± 0.202 (0.339) C:77% T:NA**	pCi/L	07/26/18 08:30	13982-63-3	
Radium-228	EPA 9320	**0.484 ± 0.463 (0.955) C:72% T:74%**	pCi/L	08/01/18 12:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.751 ± 0.665 (1.29)**	pCi/L	08/06/18 12:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

Sample: DGWC-20 **Lab ID: 267057011** Collected: 07/11/18 15:10 Received: 07/12/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.310 ± 0.201 (0.325) C:93% T:NA**	pCi/L	07/26/18 08:30	13982-63-3	
Radium-228	EPA 9320	**0.992 ± 0.474 (0.822) C:69% T:87%**	pCi/L	08/01/18 12:52	15262-20-1	
Total Radium	Total Radium Calculation	**1.30 ± 0.675 (1.15)**	pCi/L	08/06/18 12:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

Sample: DGWC-21 **Lab ID: 267057012** Collected: 07/11/18 15:15 Received: 07/12/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.305 ± 0.198 (0.305) C:85% T:NA**	pCi/L	07/26/18 08:30	13982-63-3	
Radium-228	EPA 9320	**1.28 ± 0.491 (0.755) C:75% T:82%**	pCi/L	08/01/18 12:52	15262-20-1	
Total Radium	Total Radium Calculation	**1.59 ± 0.689 (1.06)**	pCi/L	08/06/18 12:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

Sample: DGWC-42 **Lab ID: 267057013** Collected: 07/11/18 13:45 Received: 07/12/18 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.556 ± 0.240 (0.303) C:102% T:NA**	pCi/L	07/26/18 08:30	13982-63-3	
Radium-228	EPA 9320	**0.368 ± 0.430 (0.906) C:71% T:77%**	pCi/L	08/01/18 12:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.924 ± 0.670 (1.21)**	pCi/L	08/06/18 12:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

QC Batch: 306537 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 267057001, 267057002, 267057003, 267057004, 267057005, 267057006, 267057007, 267057008, 267057009, 267057010, 267057011, 267057012, 267057013

METHOD BLANK: 1498640 Matrix: Water
Associated Lab Samples: 267057001, 267057002, 267057003, 267057004, 267057005, 267057006, 267057007, 267057008, 267057009, 267057010, 267057011, 267057012, 267057013

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

QC Batch: 306538 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 267057001, 267057002, 267057003, 267057004, 267057005, 267057006, 267057007, 267057008, 267057009, 267057010, 267057011, 267057012, 267057013

METHOD BLANK: 1498641 Matrix: Water
Associated Lab Samples: 267057001, 267057002, 267057003, 267057004, 267057005, 267057006, 267057007, 267057008, 267057009, 267057010, 267057011, 267057012, 267057013

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 267057

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267057001	**DGWC-2**	EPA 9315	306538		
267057002	**DGWC-9**	EPA 9315	306538		
267057003	**DGWC-12**	EPA 9315	306538		
267057004	**DGWC-14**	EPA 9315	306538		
267057005	**DGWC-15**	EPA 9315	306538		
267057006	**FD-2**	EPA 9315	306538		
267057007	**FB-2**	EPA 9315	306538		
267057008	**EB-2**	EPA 9315	306538		
267057009	**DGWC-17**	EPA 9315	306538		
267057010	**DGWC-19**	EPA 9315	306538		
267057011	**DGWC-20**	EPA 9315	306538		
267057012	**DGWC-21**	EPA 9315	306538		
267057013	**DGWC-42**	EPA 9315	306538		
267057001	**DGWC-2**	EPA 9320	306537		
267057002	**DGWC-9**	EPA 9320	306537		
267057003	**DGWC-12**	EPA 9320	306537		
267057004	**DGWC-14**	EPA 9320	306537		
267057005	**DGWC-15**	EPA 9320	306537		
267057006	**FD-2**	EPA 9320	306537		
267057007	**FB-2**	EPA 9320	306537		
267057008	**EB-2**	EPA 9320	306537		
267057009	**DGWC-17**	EPA 9320	306537		
267057010	**DGWC-19**	EPA 9320	306537		
267057011	**DGWC-20**	EPA 9320	306537		
267057012	**DGWC-21**	EPA 9320	306537		
267057013	**DGWC-42**	EPA 9320	306537		
267057001	**DGWC-2**	Total Radium Calculation	308496		
267057002	**DGWC-9**	Total Radium Calculation	308496		
267057003	**DGWC-12**	Total Radium Calculation	308496		
267057004	**DGWC-14**	Total Radium Calculation	308496		
267057005	**DGWC-15**	Total Radium Calculation	308496		
267057006	**FD-2**	Total Radium Calculation	308496		
267057007	**FB-2**	Total Radium Calculation	308496		
267057008	**EB-2**	Total Radium Calculation	308496		
267057009	**DGWC-17**	Total Radium Calculation	308496		
267057010	**DGWC-19**	Total Radium Calculation	308496		
267057011	**DGWC-20**	Total Radium Calculation	308496		
267057012	**DGWC-21**	Total Radium Calculation	308496		
267057013	**DGWC-42**	Total Radium Calculation	308496		

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

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER
CONTAINER TYPE:								P	P	P							
PRESERVATION:								3	7	3							
07/11/18	0915	GW		x	DGWC-2	6		1	1	4							
07/11/18	1250	GW		x	DGWC-9	4		1	1	2							
07/11/18	1715	GW		x	DGWC-12	4		1	1	2							
07/11/18	0935	GW		x	DGWC-14	4		1	1	2							
07/11/18	1145	GW		x	DGWC-15	4		1	1	2							
07/11/18	–	GW		x	FD-2	4		1	1	2							
07/11/18	1200	W		x	FB-2	4		1	1	2							
07/11/18	1600	W		x	EB-2	4		1	1	2							
07/11/18	1120	GW		x	DGWC-17	4		1	1	2							
07/11/18	1350	GW		x	DGWC-19	4		1	1	2							
07/11/18	1510	GW		x	DGWC-20	4		1	1	2							

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES:
DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

REMARKS/ADDITIONAL INFORMATION
Extra Radium

WO#: 267057
267057

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: ~~7/10/18 1700~~ 7/11/18 1800

RELINQUISHED BY: Devin Thomas
DATE/TIME: 7-12-18/0920

RECEIVED BY: Mike Nagem
DATE/TIME: 7/12/18 0920

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Mzahman
DATE/TIME: 07/12/18 1130

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0.4 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

CHAIN OF CUSTODY RECORD

Pace Analytical

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4, & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
CONTAINER TYPE:								P	P	P	
PRESERVATION:								3	7	3	
07/11/18	1515	GW		x	DGWC-21	4		1	1	2	
07/11/18	1345	GW		x	DGWC-42	4		1	1	2	

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES: DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

WO# : 267057

PM: BM Due Date: 08/09/18

CLIENT: GAPower-CCR

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 7/11/18 1800

RELINQUISHED BY: Dawn Thomas
DATE/TIME: 7-12-18/0920

RECEIVED BY: Mike Nowman
DATE/TIME: 7/12/18 0920

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Nowman
DATE/TIME: 07/12/18 1130

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0.4 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered Into LIMS:
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 267057

PM: BM Due Date: 08/09/18

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 ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.4 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:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☐Yes	☑No	☐N/A	12. See Comment
-Includes date/time/ID/Analysis Matrix: GW				
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☑No		Initial when completed: Lot # of added preservative:
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: Field Data Required? Y N

Person Contacted: Date/Time:

Comments/ Resolution: The 2 Rads containers for DGWC-15 were labeled DGWC-18 with the collection Date/Time as 07/11/18 @ 1145 by the Client and they were received in a same bag with metals, TDS, IC containers matching Collection Date/Time. Those 2 Rads were logged in as DGWC-15.

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).

FrmALL-000 (rev. 3.1) 11 September2006

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

July 21, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

Lab ID	Sample ID	Matrix	Date Collected	Date Received
267122001	**DGWA-53**	Water	07/12/18 08:40	07/13/18 11:10
267122002	**DGWC-37**	Water	07/12/18 13:35	07/13/18 11:10
267122003	**DGWC-38**	Water	07/12/18 13:40	07/13/18 11:10
267122004	**DGWC-39**	Water	07/12/18 11:30	07/13/18 11:10
267122005	**DGWC-40**	Water	07/12/18 12:40	07/13/18 11:10
267122006	**FD-3**	Water	07/12/18 00:00	07/13/18 11:10
267122007	**FB-3**	Water	07/12/18 10:25	07/13/18 11:10
267122008	**EB-3**	Water	07/12/18 14:00	07/13/18 11:10
267122009	**DGWC-47**	Water	07/12/18 08:45	07/13/18 11:10
267122010	**DGWC-48**	Water	07/12/18 10:55	07/13/18 11:10
267122011	**DGWC-23**	Water	07/12/18 10:15	07/13/18 11:10
267122012	**DGWC-22**	Water	07/12/18 08:40	07/13/18 11:10

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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

Lab ID	Sample ID	Method	Analysts	Analytes Reported
267122001	DGWA-53	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267122002	DGWC-37	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267122003	DGWC-38	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267122004	DGWC-39	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267122005	DGWC-40	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267122006	FD-3	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267122007	FB-3	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267122008	EB-3	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267122009	DGWC-47	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267122010	DGWC-48	EPA 6020B	CSW	14

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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267122011	**DGWC-23**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267122012	**DGWC-22**	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 McDonough Ash Ponds
Pace Project No.: 267122

Sample: DGWA-53 **Lab ID: 267122001** Collected: 07/12/18 08:40 Received: 07/13/18 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 20:59	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 20:59	7440-38-2	
Barium	**0.18**	mg/L	0.050	0.0039	5	07/17/18 11:31	07/20/18 13:34	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 20:59	7440-41-7	
Boron	**0.076**	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 20:59	7440-42-8	
Cadmium	**0.00013J**	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 20:59	7440-43-9	
Calcium	**34.7**	mg/L	2.5	0.069	5	07/17/18 11:31	07/20/18 13:34	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 20:59	7440-47-3	
Cobalt	**0.024**	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 20:59	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 20:59	7439-92-1	
Lithium	**0.0084J**	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 20:59	7439-93-2	
Molybdenum	**0.034**	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 20:59	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 20:59	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 20:59	7440-28-0	
7470 Mercury	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 17:30	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**198**	mg/L	25.0	10.0	1		07/17/18 12:13		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.2**	mg/L	0.25	0.024	1		07/17/18 21:18	16887-00-6	
Fluoride	**0.071J**	mg/L	0.30	0.029	1		07/17/18 21:18	16984-48-8	
Sulfate	**8.0**	mg/L	1.0	0.017	1		07/17/18 21:18	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

Sample: DGWC-37 **Lab ID: 267122002** Collected: 07/12/18 13:35 Received: 07/13/18 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 21:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 21:10	7440-38-2	
Barium	**0.11**	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 21:10	7440-39-3	
Beryllium	**0.000070J**	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 21:10	7440-41-7	
Boron	**1.5**	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 21:10	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 21:10	7440-43-9	
Calcium	**59.1**	mg/L	25.0	0.69	50	07/17/18 11:31	07/19/18 21:16	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 21:10	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 21:10	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 21:10	7439-92-1	
Lithium	**0.0028J**	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 21:10	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 21:10	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 21:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 21:10	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000044J**	mg/L	0.00050	0.000036	1	07/18/18 10:37	07/18/18 17:32	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**290**	mg/L	25.0	10.0	1		07/17/18 12:13		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.8**	mg/L	0.25	0.024	1		07/17/18 21:38	16887-00-6	
Fluoride	**0.32**	mg/L	0.30	0.029	1		07/17/18 21:38	16984-48-8	
Sulfate	**89.2**	mg/L	5.0	0.085	5		07/20/18 14:03	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

Sample: DGWC-38 **Lab ID: 267122003** Collected: 07/12/18 13:40 Received: 07/13/18 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 21:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 21:22	7440-38-2	
Barium	**0.034**	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 21:22	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 21:22	7440-41-7	
Boron	**2.8**	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 21:22	7440-42-8	
Cadmium	**0.00024J**	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 21:22	7440-43-9	
Calcium	**86.7**	mg/L	25.0	0.69	50	07/17/18 11:31	07/19/18 21:28	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 21:22	7440-47-3	
Cobalt	**0.0015J**	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 21:22	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 21:22	7439-92-1	
Lithium	**0.0034J**	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 21:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 21:22	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 21:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 21:22	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000040J**	mg/L	0.00050	0.000036	1	07/18/18 10:37	07/18/18 18:42	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**478**	mg/L	25.0	10.0	1		07/17/18 12:13		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**8.0**	mg/L	0.25	0.024	1		07/17/18 21:59	16887-00-6	
Fluoride	**0.23J**	mg/L	0.30	0.029	1		07/17/18 21:59	16984-48-8	
Sulfate	**256**	mg/L	10.0	0.17	10		07/20/18 14:24	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

Sample: DGWC-39 **Lab ID: 267122004** Collected: 07/12/18 11:30 Received: 07/13/18 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 21:33	7440-36-0	
Arsenic	**0.00057J**	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 21:33	7440-38-2	
Barium	**0.094**	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 21:33	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 21:33	7440-41-7	
Boron	**3.0**	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 21:33	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 21:33	7440-43-9	
Calcium	**89.8**	mg/L	25.0	0.69	50	07/17/18 11:31	07/19/18 21:39	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 21:33	7440-47-3	
Cobalt	**0.0059J**	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 21:33	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 21:33	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 21:33	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 21:33	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 21:33	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 21:33	7440-28-0	
7470 Mercury	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 18:45	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**463**	mg/L	25.0	10.0	1		07/17/18 12:13		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**7.7**	mg/L	0.25	0.024	1		07/17/18 22:19	16887-00-6	
Fluoride	**0.13J**	mg/L	0.30	0.029	1		07/17/18 22:19	16984-48-8	
Sulfate	**169**	mg/L	10.0	0.17	10		07/20/18 14:44	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

Sample: DGWC-40 **Lab ID: 267122005** Collected: 07/12/18 12:40 Received: 07/13/18 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 21:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 21:56	7440-38-2	
Barium	**0.018**	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 21:56	7440-39-3	
Beryllium	**0.0032**	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 21:56	7440-41-7	
Boron	**0.92**	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 21:56	7440-42-8	
Cadmium	**0.00087J**	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 21:56	7440-43-9	
Calcium	**47.1**	mg/L	25.0	0.69	50	07/17/18 11:31	07/19/18 22:02	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 21:56	7440-47-3	
Cobalt	**0.044**	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 21:56	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 21:56	7439-92-1	
Lithium	**0.0022J**	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 21:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 21:56	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 21:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 21:56	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000045J**	mg/L	0.00050	0.000036	1	07/18/18 10:37	07/18/18 18:47	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**365**	mg/L	25.0	10.0	1		07/17/18 12:13		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**19.9**	mg/L	0.25	0.024	1		07/17/18 22:40	16887-00-6	
Fluoride	**0.57**	mg/L	0.30	0.029	1		07/17/18 22:40	16984-48-8	
Sulfate	**222**	mg/L	10.0	0.17	10		07/20/18 15:05	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

Sample: FD-3 **Lab ID: 267122006** Collected: 07/12/18 00:00 Received: 07/13/18 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 22:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 22:08	7440-38-2	
Barium	**0.032**	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 22:08	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 22:08	7440-41-7	
Boron	**2.6**	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 22:08	7440-42-8	
Cadmium	**0.00019J**	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 22:08	7440-43-9	
Calcium	**80.7**	mg/L	25.0	0.69	50	07/17/18 11:31	07/19/18 22:13	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 22:08	7440-47-3	
Cobalt	**0.0014J**	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 22:08	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 22:08	7439-92-1	
Lithium	**0.0032J**	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 22:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 22:08	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 22:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 22:08	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000042J**	mg/L	0.00050	0.000036	1	07/18/18 10:37	07/18/18 18:50	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**511**	mg/L	25.0	10.0	1		07/17/18 12:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**8.0**	mg/L	0.25	0.024	1		07/18/18 00:23	16887-00-6	
Fluoride	**0.23J**	mg/L	0.30	0.029	1		07/18/18 00:23	16984-48-8	
Sulfate	**253**	mg/L	10.0	0.17	10		07/20/18 15:25	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

Sample: FB-3 **Lab ID: 267122007** Collected: 07/12/18 10:25 Received: 07/13/18 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:24	07/19/18 19:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:24	07/19/18 19:08	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	07/17/18 11:24	07/19/18 19:08	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:24	07/19/18 19:08	7440-41-7	
Boron	**0.0069J**	mg/L	0.040	0.0039	1	07/17/18 11:24	07/19/18 19:08	7440-42-8	
Cadmium	**0.00017J**	mg/L	0.0010	0.000093	1	07/17/18 11:24	07/19/18 19:08	7440-43-9	
Calcium	**0.021J**	mg/L	0.50	0.014	1	07/17/18 11:24	07/19/18 19:08	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:24	07/19/18 19:08	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/17/18 11:24	07/19/18 19:08	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:24	07/19/18 19:08	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/17/18 11:24	07/19/18 19:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:24	07/19/18 19:08	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:24	07/19/18 19:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:24	07/19/18 19:08	7440-28-0	
7470 Mercury	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 18:52	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		07/17/18 12:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.13J**	mg/L	0.25	0.024	1		07/18/18 00:44	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/18/18 00:44	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		07/18/18 00:44	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

Sample: EB-3 **Lab ID: 267122008** Collected: 07/12/18 14:00 Received: 07/13/18 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:24	07/19/18 19:14	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:24	07/19/18 19:14	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	07/17/18 11:24	07/19/18 19:14	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:24	07/19/18 19:14	7440-41-7	
Boron	**0.0056J**	mg/L	0.040	0.0039	1	07/17/18 11:24	07/19/18 19:14	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/17/18 11:24	07/19/18 19:14	7440-43-9	
Calcium	**0.071J**	mg/L	0.50	0.014	1	07/17/18 11:24	07/19/18 19:14	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:24	07/19/18 19:14	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/17/18 11:24	07/19/18 19:14	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:24	07/19/18 19:14	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/17/18 11:24	07/19/18 19:14	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:24	07/19/18 19:14	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:24	07/19/18 19:14	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:24	07/19/18 19:14	7440-28-0	
7470 Mercury	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 18:54	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**14.0J**	mg/L	25.0	10.0	1		07/17/18 12:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.12J**	mg/L	0.25	0.024	1		07/18/18 01:25	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/18/18 01:25	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		07/18/18 01:25	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

Sample: DGWC-47 **Lab ID: 267122009** Collected: 07/12/18 08:45 Received: 07/13/18 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:24	07/19/18 19:19	7440-36-0	
Arsenic	**0.0023J**	mg/L	0.0050	0.00057	1	07/17/18 11:24	07/19/18 19:19	7440-38-2	
Barium	**0.015**	mg/L	0.010	0.00078	1	07/17/18 11:24	07/19/18 19:19	7440-39-3	
Beryllium	**0.013**	mg/L	0.0030	0.000050	1	07/17/18 11:24	07/19/18 19:19	7440-41-7	
Boron	**0.26**	mg/L	0.040	0.0039	1	07/17/18 11:24	07/19/18 19:19	7440-42-8	
Cadmium	**0.0021**	mg/L	0.0010	0.000093	1	07/17/18 11:24	07/19/18 19:19	7440-43-9	
Calcium	**41.6**	mg/L	25.0	0.69	50	07/17/18 11:24	07/19/18 19:25	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:24	07/19/18 19:19	7440-47-3	
Cobalt	**0.36**	mg/L	0.010	0.00052	1	07/17/18 11:24	07/19/18 19:19	7440-48-4	
Lead	**0.0010J**	mg/L	0.0050	0.00027	1	07/17/18 11:24	07/19/18 19:19	7439-92-1	
Lithium	**0.073**	mg/L	0.050	0.00097	1	07/17/18 11:24	07/19/18 19:19	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:24	07/19/18 19:19	7439-98-7	
Selenium	**0.015**	mg/L	0.010	0.0014	1	07/17/18 11:24	07/19/18 19:19	7782-49-2	
Thallium	**0.00031J**	mg/L	0.0010	0.00014	1	07/17/18 11:24	07/19/18 19:19	7440-28-0	
7470 Mercury	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 18:57	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**372**	mg/L	25.0	10.0	1		07/17/18 12:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**9.5**	mg/L	0.25	0.024	1		07/18/18 01:46	16887-00-6	
Fluoride	**0.96**	mg/L	0.30	0.029	1		07/18/18 01:46	16984-48-8	
Sulfate	**240**	mg/L	10.0	0.17	10		07/20/18 15:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

Sample: DGWC-48 **Lab ID: 267122010** Collected: 07/12/18 10:55 Received: 07/13/18 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:24	07/19/18 19:31	7440-36-0	
Arsenic	**0.0015J**	mg/L	0.0050	0.00057	1	07/17/18 11:24	07/19/18 19:31	7440-38-2	
Barium	**0.013**	mg/L	0.010	0.00078	1	07/17/18 11:24	07/19/18 19:31	7440-39-3	
Beryllium	**0.0086**	mg/L	0.0030	0.000050	1	07/17/18 11:24	07/19/18 19:31	7440-41-7	
Boron	**0.82**	mg/L	0.040	0.0039	1	07/17/18 11:24	07/19/18 19:31	7440-42-8	
Cadmium	**0.0032**	mg/L	0.0010	0.000093	1	07/17/18 11:24	07/19/18 19:31	7440-43-9	
Calcium	**89.1**	mg/L	25.0	0.69	50	07/17/18 11:24	07/19/18 19:37	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:24	07/19/18 19:31	7440-47-3	
Cobalt	**0.46**	mg/L	0.010	0.00052	1	07/17/18 11:24	07/19/18 19:31	7440-48-4	
Lead	**0.0014J**	mg/L	0.0050	0.00027	1	07/17/18 11:24	07/19/18 19:31	7439-92-1	
Lithium	**0.12**	mg/L	0.050	0.00097	1	07/17/18 11:24	07/19/18 19:31	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:24	07/19/18 19:31	7439-98-7	
Selenium	**0.013**	mg/L	0.010	0.0014	1	07/17/18 11:24	07/19/18 19:31	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:24	07/19/18 19:31	7440-28-0	
7470 Mercury	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 18:59	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**705**	mg/L	25.0	10.0	1		07/17/18 12:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**11.7**	mg/L	0.25	0.024	1		07/18/18 02:07	16887-00-6	
Fluoride	**0.65**	mg/L	0.30	0.029	1		07/18/18 02:07	16984-48-8	
Sulfate	**409**	mg/L	10.0	0.17	10		07/20/18 16:07	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

Sample: DGWC-23 **Lab ID: 267122011** Collected: 07/12/18 10:15 Received: 07/13/18 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:24	07/19/18 19:42	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:24	07/19/18 19:42	7440-38-2	
Barium	**0.022**	mg/L	0.010	0.00078	1	07/17/18 11:24	07/19/18 19:42	7440-39-3	
Beryllium	**0.00035J**	mg/L	0.0030	0.000050	1	07/17/18 11:24	07/19/18 19:42	7440-41-7	
Boron	**4.0**	mg/L	0.040	0.0039	1	07/17/18 11:24	07/19/18 19:42	7440-42-8	
Cadmium	**0.00028J**	mg/L	0.0010	0.000093	1	07/17/18 11:24	07/19/18 19:42	7440-43-9	
Calcium	**72.0**	mg/L	25.0	0.69	50	07/17/18 11:24	07/19/18 19:48	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:24	07/19/18 19:42	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/17/18 11:24	07/19/18 19:42	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:24	07/19/18 19:42	7439-92-1	
Lithium	**0.0047J**	mg/L	0.050	0.00097	1	07/17/18 11:24	07/19/18 19:42	7439-93-2	
Molybdenum	**0.012**	mg/L	0.010	0.0019	1	07/17/18 11:24	07/19/18 19:42	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:24	07/19/18 19:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:24	07/19/18 19:42	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.00016J**	mg/L	0.00050	0.000036	1	07/18/18 10:37	07/18/18 19:01	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**432**	mg/L	25.0	10.0	1		07/17/18 12:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**15.2**	mg/L	0.25	0.024	1		07/18/18 02:27	16887-00-6	
Fluoride	**0.25J**	mg/L	0.30	0.029	1		07/18/18 02:27	16984-48-8	
Sulfate	**202**	mg/L	10.0	0.17	10		07/20/18 16:27	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

Sample: DGWC-22 **Lab ID: 267122012** Collected: 07/12/18 08:40 Received: 07/13/18 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:24	07/19/18 20:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:24	07/19/18 20:05	7440-38-2	
Barium	**0.036**	mg/L	0.010	0.00078	1	07/17/18 11:24	07/19/18 20:05	7440-39-3	
Beryllium	**0.00018J**	mg/L	0.0030	0.000050	1	07/17/18 11:24	07/19/18 20:05	7440-41-7	
Boron	**3.6**	mg/L	0.040	0.0039	1	07/17/18 11:24	07/19/18 20:05	7440-42-8	
Cadmium	**0.00091J**	mg/L	0.0010	0.000093	1	07/17/18 11:24	07/19/18 20:05	7440-43-9	
Calcium	**71.0**	mg/L	25.0	0.69	50	07/17/18 11:24	07/19/18 20:11	7440-70-2	M6
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:24	07/19/18 20:05	7440-47-3	
Cobalt	**0.011**	mg/L	0.010	0.00052	1	07/17/18 11:24	07/19/18 20:05	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:24	07/19/18 20:05	7439-92-1	
Lithium	**0.0036J**	mg/L	0.050	0.00097	1	07/17/18 11:24	07/19/18 20:05	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:24	07/19/18 20:05	7439-98-7	
Selenium	**0.0017J**	mg/L	0.010	0.0014	1	07/17/18 11:24	07/19/18 20:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:24	07/19/18 20:05	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000055J**	mg/L	0.00050	0.000036	1	07/18/18 10:37	07/18/18 19:09	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**486**	mg/L	25.0	10.0	1		07/17/18 12:14		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**26.1**	mg/L	0.25	0.024	1		07/18/18 02:48	16887-00-6	
Fluoride	**0.13J**	mg/L	0.30	0.029	1		07/18/18 02:48	16984-48-8	
Sulfate	**197**	mg/L	10.0	0.17	10		07/20/18 18:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

QC Batch: 10002 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 267122001, 267122002, 267122003, 267122004, 267122005, 267122006, 267122007, 267122008, 267122009, 267122010, 267122011, 267122012

METHOD BLANK: 45320 Matrix: Water
Associated Lab Samples: 267122001, 267122002, 267122003, 267122004, 267122005, 267122006, 267122007, 267122008, 267122009, 267122010, 267122011, 267122012

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.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

QC Batch: 9923 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 267122001, 267122002, 267122003, 267122004, 267122005, 267122006

METHOD BLANK: 44985 Matrix: Water
Associated Lab Samples: 267122001, 267122002, 267122003, 267122004, 267122005, 267122006

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 Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44987 44988

Parameter	Units	267107001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

QC Batch: 9925 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 267122007, 267122008, 267122009, 267122010, 267122011, 267122012

METHOD BLANK: 44989 Matrix: Water
Associated Lab Samples: 267122007, 267122008, 267122009, 267122010, 267122011, 267122012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	07/19/18 18:57	
Arsenic	mg/L	ND	0.0050	0.00057	07/19/18 18:57	
Barium	mg/L	ND	0.010	0.00078	07/19/18 18:57	
Beryllium	mg/L	ND	0.0030	0.000050	07/19/18 18:57	
Boron	mg/L	ND	0.040	0.0039	07/19/18 18:57	
Cadmium	mg/L	ND	0.0010	0.000093	07/19/18 18:57	
Calcium	mg/L	ND	0.50	0.014	07/19/18 18:57	
Chromium	mg/L	ND	0.010	0.0016	07/19/18 18:57	
Cobalt	mg/L	ND	0.010	0.00052	07/19/18 18:57	
Lead	mg/L	ND	0.0050	0.00027	07/19/18 18:57	
Lithium	mg/L	ND	0.050	0.00097	07/19/18 18:57	
Molybdenum	mg/L	ND	0.010	0.0019	07/19/18 18:57	
Selenium	mg/L	ND	0.010	0.0014	07/19/18 18:57	
Thallium	mg/L	ND	0.0010	0.00014	07/19/18 18:57	

LABORATORY CONTROL SAMPLE: 44990

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	101	80-120	
Beryllium	mg/L	.1	0.10	105	80-120	
Boron	mg/L	1	1.1	105	80-120	
Cadmium	mg/L	.1	0.11	105	80-120	
Calcium	mg/L	1	1.0	104	80-120	
Chromium	mg/L	.1	0.099	99	80-120	
Cobalt	mg/L	.1	0.10	100	80-120	
Lead	mg/L	.1	0.10	102	80-120	
Lithium	mg/L	.1	0.10	100	80-120	
Molybdenum	mg/L	.1	0.11	105	80-120	
Selenium	mg/L	.1	0.11	105	80-120	
Thallium	mg/L	.1	0.10	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44993 44994

Parameter	Units	267122012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.11	0.11	106	109	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44993 44994

Parameter	Units	267122012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	.1	.1	0.11	0.11	108	110	75-125	2	20	
Barium	mg/L	0.036	.1	.1	0.14	0.13	101	98	75-125	2	20	
Beryllium	mg/L	0.00018J	.1	.1	0.094	0.095	94	95	75-125	2	20	
Boron	mg/L	3.6	1	1	4.5	4.5	92	96	75-125	1	20	
Cadmium	mg/L	0.00091J	.1	.1	0.11	0.11	105	109	75-125	3	20	
Calcium	mg/L	71.0	1	1	69.6	69.9	-140	-112	75-125	0	20	M6
Chromium	mg/L	ND	.1	.1	0.098	0.099	97	98	75-125	1	20	
Cobalt	mg/L	0.011	.1	.1	0.11	0.11	98	100	75-125	2	20	
Lead	mg/L	ND	.1	.1	0.10	0.10	100	100	75-125	0	20	
Lithium	mg/L	0.0036J	.1	.1	0.094	0.097	90	93	75-125	3	20	
Molybdenum	mg/L	ND	.1	.1	0.10	0.11	104	108	75-125	3	20	
Selenium	mg/L	0.0017J	.1	.1	0.11	0.11	105	108	75-125	4	20	
Thallium	mg/L	ND	.1	.1	0.10	0.10	102	103	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

QC Batch: 9943 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 267122001, 267122002, 267122003, 267122004, 267122005, 267122006, 267122007, 267122008, 267122009, 267122010, 267122011, 267122012

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

QC Batch: 9906 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 267122001, 267122002, 267122003, 267122004, 267122005, 267122006, 267122007, 267122008, 267122009, 267122010, 267122011, 267122012

METHOD BLANK: 44919 Matrix: Water
Associated Lab Samples: 267122001, 267122002, 267122003, 267122004, 267122005, 267122006, 267122007, 267122008, 267122009, 267122010, 267122011, 267122012

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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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

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.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267122001	**DGWA-53**	EPA 3005A	9923	EPA 6020B	10127
267122002	**DGWC-37**	EPA 3005A	9923	EPA 6020B	10127
267122003	**DGWC-38**	EPA 3005A	9923	EPA 6020B	10127
267122004	**DGWC-39**	EPA 3005A	9923	EPA 6020B	10127
267122005	**DGWC-40**	EPA 3005A	9923	EPA 6020B	10127
267122006	**FD-3**	EPA 3005A	9923	EPA 6020B	10127
267122007	**FB-3**	EPA 3005A	9925	EPA 6020B	10137
267122008	**EB-3**	EPA 3005A	9925	EPA 6020B	10137
267122009	**DGWC-47**	EPA 3005A	9925	EPA 6020B	10137
267122010	**DGWC-48**	EPA 3005A	9925	EPA 6020B	10137
267122011	**DGWC-23**	EPA 3005A	9925	EPA 6020B	10137
267122012	**DGWC-22**	EPA 3005A	9925	EPA 6020B	10137
267122001	**DGWA-53**	EPA 7470A	10002	EPA 7470A	10028
267122002	**DGWC-37**	EPA 7470A	10002	EPA 7470A	10028
267122003	**DGWC-38**	EPA 7470A	10002	EPA 7470A	10028
267122004	**DGWC-39**	EPA 7470A	10002	EPA 7470A	10028
267122005	**DGWC-40**	EPA 7470A	10002	EPA 7470A	10028
267122006	**FD-3**	EPA 7470A	10002	EPA 7470A	10028
267122007	**FB-3**	EPA 7470A	10002	EPA 7470A	10028
267122008	**EB-3**	EPA 7470A	10002	EPA 7470A	10028
267122009	**DGWC-47**	EPA 7470A	10002	EPA 7470A	10028
267122010	**DGWC-48**	EPA 7470A	10002	EPA 7470A	10028
267122011	**DGWC-23**	EPA 7470A	10002	EPA 7470A	10028
267122012	**DGWC-22**	EPA 7470A	10002	EPA 7470A	10028
267122001	**DGWA-53**	SM 2540C	9943		
267122002	**DGWC-37**	SM 2540C	9943		
267122003	**DGWC-38**	SM 2540C	9943		
267122004	**DGWC-39**	SM 2540C	9943		
267122005	**DGWC-40**	SM 2540C	9943		
267122006	**FD-3**	SM 2540C	9943		
267122007	**FB-3**	SM 2540C	9943		
267122008	**EB-3**	SM 2540C	9943		
267122009	**DGWC-47**	SM 2540C	9943		
267122010	**DGWC-48**	SM 2540C	9943		
267122011	**DGWC-23**	SM 2540C	9943		
267122012	**DGWC-22**	SM 2540C	9943		
267122001	**DGWA-53**	EPA 300.0	9906		
267122002	**DGWC-37**	EPA 300.0	9906		
267122003	**DGWC-38**	EPA 300.0	9906		
267122004	**DGWC-39**	EPA 300.0	9906		
267122005	**DGWC-40**	EPA 300.0	9906		
267122006	**FD-3**	EPA 300.0	9906		
267122007	**FB-3**	EPA 300.0	9906		
267122008	**EB-3**	EPA 300.0	9906		
267122009	**DGWC-47**	EPA 300.0	9906		
267122010	**DGWC-48**	EPA 300.0	9906		
267122011	**DGWC-23**	EPA 300.0	9906		

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 267122

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267122012	**DGWC-22**	EPA 300.0	9906		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4, & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER
CONTAINER TYPE:								P	P	P							
PRESERVATION:								3	7	3							
07/12/18	0840	GW		x	DGWA-53	4		1	1	2							
07/12/18	1335	GW		x	DGWC-37	4		1	1	2							
07/12/18	1340	GW		x	DGWC-38	4		1	1	2							
07/12/18	1130	GW		x	DGWC-39	4		1	1	2							
07/12/18	1240	GW		x	DGWC-40	4		1	1	2							
07/12/18	–	GW		x	FD-3	4		1	1	2							
07/12/18	1025	W		x	EB-3	4		1	1	2							
07/12/18	1400	W		x	EB-3	4		1	1	2							
07/12/18	0845	GW		x	DGWC-47	6		1	1	4							
07/12/18	1055	GW		x	DGWC-48	4		1	1	2							
07/12/18	1015	GW		x	DGWC-23	4		1	1	2							
07/12/18	0840	GW		x	DGWC-22	4		1	1	2							

CONTAINER TYPE
P - PLASTIC
A - AMBER GLASS
G - CLEAR GLASS
V - VOA VIAL
S - STERILE
O - OTHER

PRESERVATION
1 - HCl, ≤6°C
2 - H_2SO_4, ≤6°C
3 - HNO_3
4 - NaOH, ≤6°C
5 - NaOH/ZnAc, ≤6°C
6 - $Na_2S_2O_3$, ≤6°C
7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER
WW - WASTEWATER
GW - GROUNDWATER
SW - SURFACE WATER
ST - STORM WATER
W - WATER
S - SOIL
SL - SLUDGE
SD - SOLID
A - AIR
L - LIQUID
P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

Extra Radium

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 7/12/18 1800

RELINQUISHED BY:
DATE/TIME: 7/13/18 0920

RECEIVED BY: Mike Nauren
DATE/TIME: 7/13/18 0920

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: MZalman
DATE/TIME: 07/13/18 1110

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 1.5 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: WO#: 267122
267122

Sample Condition Upon Receipt

Face Analytical

Client Name: GA Power

Project #

WO#: 267122

PM: BM Due Date: 07/20/18

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace Other

Tracking #:

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐

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

Date and Initials of person examining contents: 7/13/18 MR

			Comments:
Chain of Custody Present:	☑Yes	☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No ☐N/A	7.
Sufficient Volume:	☑Yes	☐No ☐N/A	8.
Correct Containers Used:	☑Yes	☐No ☐N/A	9.
-Pace Containers Used:	☑Yes	☐No ☐N/A	
Containers Intact:	☑Yes	☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No ☑N/A	11.
Sample Labels match COC:	☑Yes	☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: GW			
All containers needing preservation have been checked.	☑Yes	☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No ☑N/A	15.
Trip Blank Present:	☐Yes	☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution: Field Data Required? Y N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

August 09, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

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CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

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 McDonough Ash Ponds
Pace Project No.: 267124

Lab ID	Sample ID	Matrix	Date Collected	Date Received
267124001	**DGWA-53**	Water	07/12/18 08:40	07/13/18 11:10
267124002	**DGWC-37**	Water	07/12/18 13:35	07/13/18 11:10
267124003	**DGWC-38**	Water	07/12/18 13:40	07/13/18 11:10
267124004	**DGWC-39**	Water	07/12/18 11:30	07/13/18 11:10
267124005	**DGWC-40**	Water	07/12/18 12:40	07/13/18 11:10
267124006	**FD-3**	Water	07/12/18 00:00	07/13/18 11:10
267124007	**FB-3**	Water	07/12/18 10:25	07/13/18 11:10
267124008	**EB-3**	Water	07/12/18 14:00	07/13/18 11:10
267124009	**DGWC-47**	Water	07/12/18 08:45	07/13/18 11:10
267124010	**DGWC-48**	Water	07/12/18 10:55	07/13/18 11:10
267124011	**DGWC-23**	Water	07/12/18 10:15	07/13/18 11:10
267124012	**DGWC-22**	Water	07/12/18 08:40	07/13/18 11:10

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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
267124001	**DGWA-53**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267124002	**DGWC-37**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267124003	**DGWC-38**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267124004	**DGWC-39**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267124005	**DGWC-40**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267124006	**FD-3**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267124007	**FB-3**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267124008	**EB-3**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267124009	**DGWC-47**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267124010	**DGWC-48**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267124011	**DGWC-23**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267124012	**DGWC-22**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

Sample: DGWA-53 **Lab ID: 267124001** Collected: 07/12/18 08:40 Received: 07/13/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**2.18 ± 0.467 (0.174) C:86% T:NA**	pCi/L	07/30/18 09:31	13982-63-3	
Radium-228	EPA 9320	**2.47 ± 0.878 (1.27) C:49% T:82%**	pCi/L	08/02/18 16:27	15262-20-1	
Total Radium	Total Radium Calculation	**4.65 ± 1.35 (1.44)**	pCi/L	08/06/18 12:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

Sample: DGWC-37 **Lab ID: 267124002** Collected: 07/12/18 13:35 Received: 07/13/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.273 ± 0.135 (0.167) C:91% T:NA**	pCi/L	07/30/18 09:31	13982-63-3	
Radium-228	EPA 9320	**0.293 ± 0.583 (1.28) C:59% T:83%**	pCi/L	08/02/18 18:48	15262-20-1	
Total Radium	Total Radium Calculation	**0.566 ± 0.718 (1.45)**	pCi/L	08/06/18 12:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

Sample: DGWC-38 **Lab ID: 267124003** Collected: 07/12/18 13:40 Received: 07/13/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.283 ± 0.133 (0.156) C:96% T:NA**	pCi/L	07/30/18 09:31	13982-63-3	
Radium-228	EPA 9320	**0.332 ± 0.702 (1.55) C:56% T:74%**	pCi/L	08/02/18 18:48	15262-20-1	
Total Radium	Total Radium Calculation	**0.615 ± 0.835 (1.71)**	pCi/L	08/06/18 12:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

Sample: DGWC-39 **Lab ID: 267124004** Collected: 07/12/18 11:30 Received: 07/13/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.196 ± 0.121 (0.167) C:80% T:NA**	pCi/L	07/30/18 09:31	13982-63-3	
Radium-228	EPA 9320	**0.739 ± 0.683 (1.38) C:57% T:76%**	pCi/L	08/02/18 18:48	15262-20-1	
Total Radium	Total Radium Calculation	**0.935 ± 0.804 (1.55)**	pCi/L	08/06/18 12:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

Sample: DGWC-40 **Lab ID: 267124005** Collected: 07/12/18 12:40 Received: 07/13/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.231 ± 0.128 (0.171) C:85% T:NA**	pCi/L	07/30/18 09:31	13982-63-3	
Radium-228	EPA 9320	**-0.236 ± 0.628 (1.53) C:54% T:79%**	pCi/L	08/02/18 18:48	15262-20-1	
Total Radium	Total Radium Calculation	**0.231 ± 0.756 (1.70)**	pCi/L	08/06/18 12:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

Sample: FD-3 **Lab ID: 267124006** Collected: 07/12/18 00:00 Received: 07/13/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.414 ± 0.172 (0.209) C:91% T:NA**	pCi/L	07/30/18 09:31	13982-63-3	
Radium-228	EPA 9320	**-0.0728 ± 0.665 (1.53) C:58% T:80%**	pCi/L	08/02/18 13:09	15262-20-1	
Total Radium	Total Radium Calculation	**0.414 ± 0.837 (1.74)**	pCi/L	08/06/18 12:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

Sample: FB-3 **Lab ID: 267124007** Collected: 07/12/18 10:25 Received: 07/13/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.139 ± 0.0987 (0.169) C:123% T:NA**	pCi/L	07/30/18 09:31	13982-63-3	
Radium-228	EPA 9320	**0.819 ± 0.543 (1.05) C:63% T:83%**	pCi/L	08/02/18 13:09	15262-20-1	
Total Radium	Total Radium Calculation	**0.958 ± 0.642 (1.22)**	pCi/L	08/06/18 12:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

Sample: EB-3 **Lab ID: 267124008** Collected: 07/12/18 14:00 Received: 07/13/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.111 ± 0.0981 (0.180) C:97% T:NA**	pCi/L	07/30/18 09:31	13982-63-3	
Radium-228	EPA 9320	**0.421 ± 0.636 (1.37) C:51% T:80%**	pCi/L	08/02/18 13:09	15262-20-1	
Total Radium	Total Radium Calculation	**0.532 ± 0.734 (1.55)**	pCi/L	08/06/18 12:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

Sample: DGWC-47 **Lab ID: 267124009** Collected: 07/12/18 08:45 Received: 07/13/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.435 ± 0.180 (0.208) C:87% T:NA**	pCi/L	07/30/18 09:31	13982-63-3	
Radium-228	EPA 9320	**1.29 ± 0.567 (0.935) C:66% T:76%**	pCi/L	08/02/18 13:03	15262-20-1	
Total Radium	Total Radium Calculation	**1.73 ± 0.747 (1.14)**	pCi/L	08/06/18 12:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

Sample: DGWC-48 **Lab ID: 267124010** Collected: 07/12/18 10:55 Received: 07/13/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.401 ± 0.158 (0.155) C:89% T:NA**	pCi/L	07/30/18 12:11	13982-63-3	
Radium-228	EPA 9320	**1.41 ± 0.674 (1.21) C:65% T:82%**	pCi/L	08/02/18 13:09	15262-20-1	
Total Radium	Total Radium Calculation	**1.81 ± 0.832 (1.37)**	pCi/L	08/06/18 12:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

Sample: DGWC-23 **Lab ID: 267124011** Collected: 07/12/18 10:15 Received: 07/13/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.335 ± 0.155 (0.198) C:88% T:NA**	pCi/L	07/30/18 12:11	13982-63-3	
Radium-228	EPA 9320	**0.583 ± 0.601 (1.26) C:66% T:73%**	pCi/L	08/02/18 13:09	15262-20-1	
Total Radium	Total Radium Calculation	**0.918 ± 0.756 (1.46)**	pCi/L	08/06/18 12:31	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

Sample: DGWC-22 **Lab ID: 267124012** Collected: 07/12/18 08:40 Received: 07/13/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.374 ± 0.114 (0.0938) C:96% T:NA**	pCi/L	07/30/18 13:25	13982-63-3	
Radium-228	EPA 9320	**0.607 ± 0.558 (1.15) C:65% T:76%**	pCi/L	08/02/18 13:09	15262-20-1	
Total Radium	Total Radium Calculation	**0.981 ± 0.672 (1.24)**	pCi/L	08/06/18 12:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

QC Batch: 306540 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 267124001, 267124002, 267124003, 267124004, 267124005, 267124006, 267124007, 267124008, 267124009, 267124010, 267124011, 267124012

METHOD BLANK: 1498647 Matrix: Water
Associated Lab Samples: 267124001, 267124002, 267124003, 267124004, 267124005, 267124006, 267124007, 267124008, 267124009, 267124010, 267124011, 267124012

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

QC Batch: 306539 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 267124001, 267124002, 267124003, 267124004, 267124005, 267124006, 267124007, 267124008, 267124009, 267124010, 267124011, 267124012

METHOD BLANK: 1498646 Matrix: Water
Associated Lab Samples: 267124001, 267124002, 267124003, 267124004, 267124005, 267124006, 267124007, 267124008, 267124009, 267124010, 267124011, 267124012

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 McDonough Ash Ponds
Pace Project No.: 267124

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 267124

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267124001	**DGWA-53**	EPA 9315	306540		
267124002	**DGWC-37**	EPA 9315	306540		
267124003	**DGWC-38**	EPA 9315	306540		
267124004	**DGWC-39**	EPA 9315	306540		
267124005	**DGWC-40**	EPA 9315	306540		
267124006	**FD-3**	EPA 9315	306540		
267124007	**FB-3**	EPA 9315	306540		
267124008	**EB-3**	EPA 9315	306540		
267124009	**DGWC-47**	EPA 9315	306540		
267124010	**DGWC-48**	EPA 9315	306540		
267124011	**DGWC-23**	EPA 9315	306540		
267124012	**DGWC-22**	EPA 9315	306540		
267124001	**DGWA-53**	EPA 9320	306539		
267124002	**DGWC-37**	EPA 9320	306539		
267124003	**DGWC-38**	EPA 9320	306539		
267124004	**DGWC-39**	EPA 9320	306539		
267124005	**DGWC-40**	EPA 9320	306539		
267124006	**FD-3**	EPA 9320	306539		
267124007	**FB-3**	EPA 9320	306539		
267124008	**EB-3**	EPA 9320	306539		
267124009	**DGWC-47**	EPA 9320	306539		
267124010	**DGWC-48**	EPA 9320	306539		
267124011	**DGWC-23**	EPA 9320	306539		
267124012	**DGWC-22**	EPA 9320	306539		
267124001	**DGWA-53**	Total Radium Calculation	308501		
267124002	**DGWC-37**	Total Radium Calculation	308501		
267124003	**DGWC-38**	Total Radium Calculation	308501		
267124004	**DGWC-39**	Total Radium Calculation	308501		
267124005	**DGWC-40**	Total Radium Calculation	308501		
267124006	**FD-3**	Total Radium Calculation	308501		
267124007	**FB-3**	Total Radium Calculation	308501		
267124008	**EB-3**	Total Radium Calculation	308501		
267124009	**DGWC-47**	Total Radium Calculation	308504		
267124010	**DGWC-48**	Total Radium Calculation	308504		
267124011	**DGWC-23**	Total Radium Calculation	308504		
267124012	**DGWC-22**	Total Radium Calculation	308504		

CHAIN OF CUSTODY RECORD

Pace Analytical®

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(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III & IV (EPA 6020/7470)	Cl, F, SO4, & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)							LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P								
PRESERVATION:								3	7	3								
07/12/18	0840	GW		x	DGWA-53	4		1	1	2								
07/12/18	1335	GW		x	DGWC-37	4		1	1	2								
07/12/18	1340	GW		x	DGWC-38	4		1	1	2								
07/12/18	1130	GW		x	DGWC-39	4		1	1	2								
07/12/18	1240	GW		x	DGWC-40	4		1	1	2								
07/12/18	–	GW		x	FD-3	4		1	1	2								
~~07/12/18~~	~~1025~~	~~W~~		~~x~~	~~FB-3~~	~~4~~		~~1~~	~~1~~	~~2~~								
07/12/18	1400	W		x	EB-3	4		1	1	2								
07/12/18	0845	GW		x	DGWC-47	6		1	1	4								Extra Radium
07/12/18	1055	GW		x	DGWC-48	4		1	1	2								
07/12/18	1015	GW		x	DGWC-23	4		1	1	2								
~~07/12/18~~	~~0840~~	~~GW~~		~~x~~	~~DGWC-22~~	~~4~~		~~1~~	~~1~~	~~2~~								

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 7/12/18 1800
RELINQUISHED BY:
DATE/TIME: 7/13/18 0920

RECEIVED BY: Mike Nguyen
DATE/TIME: 7/13/18 0920
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Malman
DATE/TIME: 07/13/18 1110
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 1.5 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

WO# : 267124

267124

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 267124

PM: BM Due Date: 08/10/18

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 ☐ 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 DR

Temp should be above freezing to 6°C

			Comments:
Chain of Custody Present:	☑Yes	☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No ☐N/A	7.
Sufficient Volume:	☑Yes	☐No ☐N/A	8.
Correct Containers Used:	☑Yes	☐No ☐N/A	9.
-Pace Containers Used:	☑Yes	☐No ☐N/A	
Containers Intact:	☑Yes	☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No ☑N/A	11.
Sample Labels match COC:	☑Yes	☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: GW			
All containers needing preservation have been checked.	☑Yes	☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No ☑N/A	15.
Trip Blank Present:	☐Yes	☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution: Field Data Required? Y N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

August 09, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 267129

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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267129

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267129

Lab ID	Sample ID	Matrix	Date Collected	Date Received
267129001	**DGWA-53 Filtered**	Water	07/12/18 08:40	07/13/18 11:10

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 267129

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
267129001	**DGWA-53 Filtered**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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110 Technology Parkway
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267129

Sample: DGWA-53 Filtered **Lab ID: 267129001** Collected: 07/12/18 08:40 Received: 07/13/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**1.97 ± 0.426 (0.209) C:94% T:NA**	pCi/L	07/30/18 08:58	13982-63-3	
Radium-228	EPA 9320	**0.946 ± 0.611 (1.17) C:57% T:76%**	pCi/L	08/02/18 13:03	15262-20-1	
Total Radium	Total Radium Calculation	**2.92 ± 1.04 (1.38)**	pCi/L	08/06/18 12:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267129

QC Batch: 306540 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 267129001

METHOD BLANK: 1498647 Matrix: Water
Associated Lab Samples: 267129001

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.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 267129

QC Batch: 306539 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 267129001

METHOD BLANK: 1498646 Matrix: Water
Associated Lab Samples: 267129001

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.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 267129

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 267129

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267129001	**DGWA-53 Filtered**	EPA 9315	306540		
267129001	**DGWA-53 Filtered**	EPA 9320	306539		
267129001	**DGWA-53 Filtered**	Total Radium Calculation	308501		

CHAIN OF CUSTODY RECORD

Pace Analytical

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Dawn Prell (Dawn_Prell@golder.com
CC: kjurinko@golder.com

REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant McDonough AP

PROJECT #: Phase II CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Dissolved Metals App. III & IV (EPA 6020/7470)	Cl, F, SO_4, & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						LAB ID NUMBER
CONTAINER TYPE:								P	P	P						
PRESERVATION:								3	7	3						
07/12/18	0840	GW		x	DGWA-53 FILTERED	4		1	1	2						

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

FIELD FILTERED

WO# : 267129

267129

SAMPLED BY AND TITLE: Ben Hodges Field Lead
DATE/TIME: 7/12/18 1800

RELINQUISHED BY:
DATE/TIME: 7/13/18 0920

RECEIVED BY: Mike Nguyen
DATE/TIME: 7/13/18 0920

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Palmer
DATE/TIME: 07/13/18 1110

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 1.5 Max:
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO# : 267129

PM: BM Due Date: 08/10/18

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 ☐ 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:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☑Yes	☐No	☑N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: GW				
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☑No		Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: Field Data Required? Y N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

LABORATORY ANALYTICAL DATA

November 2018

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

November 14, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on November 07, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2611269001	**DGWC-2**	Water	11/06/18 15:05	11/07/18 10:30
2611269002	**DGWC-4**	Water	11/06/18 11:20	11/07/18 10:30
2611269003	**DGWC-5**	Water	11/06/18 13:05	11/07/18 10:30
2611269004	**DGWC-8**	Water	11/06/18 15:35	11/07/18 10:30
2611269005	**DGWC-9**	Water	11/06/18 11:00	11/07/18 10:30
2611269006	**DGWC-10**	Water	11/06/18 12:55	11/07/18 10:30
2611269007	**DGWC-11**	Water	11/06/18 14:20	11/07/18 10:30
2611269008	**FD-1**	Water	11/06/18 00:00	11/07/18 10:30
2611269009	**FB-1**	Water	11/06/18 15:45	11/07/18 10:30
2611269010	**EB-1**	Water	11/06/18 15:45	11/07/18 10:30

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2611269001	DGWC-2	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611269002	DGWC-4	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611269003	DGWC-5	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611269004	DGWC-8	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611269005	DGWC-9	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611269006	DGWC-10	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611269007	DGWC-11	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611269008	FD-1	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611269009	FB-1	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611269010	EB-1	EPA 6020B	CSW	14

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

Pace Analytical Services, LLC
110 Technology Parkway
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

Sample: DGWC-2 **Lab ID: 2611269001** Collected: 11/06/18 15:05 Received: 11/07/18 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/08/18 10:56	11/12/18 15:13	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/08/18 10:56	11/12/18 15:13	7440-38-2	
Barium	**0.021**	mg/L	0.010	0.00078	1	11/08/18 10:56	11/12/18 15:13	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	11/08/18 10:56	11/12/18 15:13	7440-41-7	
Boron	**0.90**	mg/L	0.040	0.0039	1	11/08/18 10:56	11/12/18 15:13	7440-42-8	
Cadmium	**0.00014J**	mg/L	0.0010	0.000093	1	11/08/18 10:56	11/12/18 15:13	7440-43-9	
Calcium	**54.5**	mg/L	25.0	0.69	50	11/08/18 10:56	11/12/18 15:18	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/08/18 10:56	11/12/18 15:13	7440-47-3	
Cobalt	**0.024**	mg/L	0.010	0.00052	1	11/08/18 10:56	11/12/18 15:13	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/08/18 10:56	11/12/18 15:13	7439-92-1	
Lithium	**0.037J**	mg/L	0.050	0.00097	1	11/08/18 10:56	11/12/18 15:13	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/08/18 10:56	11/12/18 15:13	7439-98-7	
Selenium	**0.0046J**	mg/L	0.010	0.0014	1	11/08/18 10:56	11/12/18 15:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/08/18 10:56	11/12/18 15:13	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.00064**	mg/L	0.00050	0.000036	1	11/08/18 16:01	11/09/18 13:17	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**334**	mg/L	25.0	10.0	1		11/12/18 09:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.7**	mg/L	0.25	0.024	1		11/13/18 02:21	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		11/13/18 02:21	16984-48-8	
Sulfate	**190**	mg/L	10.0	0.17	10		11/14/18 00:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

Sample: DGWC-4 **Lab ID: 2611269002** Collected: 11/06/18 11:20 Received: 11/07/18 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/08/18 10:56	11/12/18 15:24	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/08/18 10:56	11/12/18 15:24	7440-38-2	
Barium	**0.035**	mg/L	0.010	0.00078	1	11/08/18 10:56	11/12/18 15:24	7440-39-3	
Beryllium	**0.00021J**	mg/L	0.0030	0.000050	1	11/08/18 10:56	11/12/18 15:24	7440-41-7	B
Boron	**4.1**	mg/L	0.040	0.0039	1	11/08/18 10:56	11/12/18 15:24	7440-42-8	
Cadmium	**0.00071J**	mg/L	0.0010	0.000093	1	11/08/18 10:56	11/12/18 15:24	7440-43-9	
Calcium	**284**	mg/L	25.0	0.69	50	11/08/18 10:56	11/12/18 15:30	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/08/18 10:56	11/12/18 15:24	7440-47-3	
Cobalt	**0.0018J**	mg/L	0.010	0.00052	1	11/08/18 10:56	11/12/18 15:24	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/08/18 10:56	11/12/18 15:24	7439-92-1	
Lithium	**0.0029J**	mg/L	0.050	0.00097	1	11/08/18 10:56	11/12/18 15:24	7439-93-2	
Molybdenum	**0.0065J**	mg/L	0.010	0.0019	1	11/08/18 10:56	11/12/18 15:24	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/08/18 10:56	11/12/18 15:24	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/08/18 10:56	11/12/18 15:24	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.00059**	mg/L	0.00050	0.000036	1	11/08/18 16:01	11/09/18 13:20	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1480**	mg/L	25.0	10.0	1		11/12/18 09:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**24.8**	mg/L	0.25	0.024	1		11/13/18 02:44	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		11/13/18 02:44	16984-48-8	
Sulfate	**902**	mg/L	50.0	0.85	50		11/14/18 01:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

Sample: DGWC-5 **Lab ID: 2611269003** Collected: 11/06/18 13:05 Received: 11/07/18 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/08/18 10:56	11/12/18 15:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/08/18 10:56	11/12/18 15:53	7440-38-2	
Barium	**0.016**	mg/L	0.010	0.00078	1	11/08/18 10:56	11/12/18 15:53	7440-39-3	
Beryllium	**0.010**	mg/L	0.0030	0.000050	1	11/08/18 10:56	11/12/18 15:53	7440-41-7	
Boron	**4.2**	mg/L	0.040	0.0039	1	11/08/18 10:56	11/12/18 15:53	7440-42-8	
Cadmium	**0.00098J**	mg/L	0.0010	0.000093	1	11/08/18 10:56	11/12/18 15:53	7440-43-9	
Calcium	**124**	mg/L	25.0	0.69	50	11/08/18 10:56	11/12/18 15:59	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/08/18 10:56	11/12/18 15:53	7440-47-3	
Cobalt	**0.019**	mg/L	0.010	0.00052	1	11/08/18 10:56	11/12/18 15:53	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/08/18 10:56	11/12/18 15:53	7439-92-1	
Lithium	**0.0082J**	mg/L	0.050	0.00097	1	11/08/18 10:56	11/12/18 15:53	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/08/18 10:56	11/12/18 15:53	7439-98-7	
Selenium	**0.0026J**	mg/L	0.010	0.0014	1	11/08/18 10:56	11/13/18 14:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/08/18 10:56	11/12/18 15:53	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.00055**	mg/L	0.00050	0.000036	1	11/08/18 16:01	11/09/18 13:22	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**809**	mg/L	25.0	10.0	1		11/12/18 09:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**10.2**	mg/L	0.25	0.024	1		11/13/18 03:06	16887-00-6	
Fluoride	**0.040J**	mg/L	0.30	0.029	1		11/13/18 03:06	16984-48-8	
Sulfate	**556**	mg/L	25.0	0.42	25		11/14/18 03:02	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

Sample: DGWC-8 **Lab ID: 2611269004** Collected: 11/06/18 15:35 Received: 11/07/18 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/08/18 10:56	11/12/18 16:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/08/18 10:56	11/12/18 16:05	7440-38-2	
Barium	**0.027**	mg/L	0.010	0.00078	1	11/08/18 10:56	11/12/18 16:05	7440-39-3	
Beryllium	**0.0028J**	mg/L	0.0030	0.000050	1	11/08/18 10:56	11/12/18 16:05	7440-41-7	
Boron	**1.7**	mg/L	0.040	0.0039	1	11/08/18 10:56	11/12/18 16:05	7440-42-8	
Cadmium	**0.0027**	mg/L	0.0010	0.000093	1	11/08/18 10:56	11/12/18 16:05	7440-43-9	
Calcium	**57.0**	mg/L	25.0	0.69	50	11/08/18 10:56	11/12/18 16:10	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/08/18 10:56	11/12/18 16:05	7440-47-3	
Cobalt	**0.077**	mg/L	0.010	0.00052	1	11/08/18 10:56	11/12/18 16:05	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/08/18 10:56	11/12/18 16:05	7439-92-1	
Lithium	**0.0051J**	mg/L	0.050	0.00097	1	11/08/18 10:56	11/12/18 16:05	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/08/18 10:56	11/12/18 16:05	7439-98-7	
Selenium	**0.0019J**	mg/L	0.010	0.0014	1	11/08/18 10:56	11/13/18 14:54	7782-49-2	
Thallium	**0.00027J**	mg/L	0.0010	0.00014	1	11/08/18 10:56	11/12/18 16:05	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.00044J**	mg/L	0.00050	0.000036	1	11/08/18 16:01	11/09/18 13:24	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**456**	mg/L	25.0	10.0	1		11/12/18 09:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**10.5**	mg/L	0.25	0.024	1		11/13/18 03:29	16887-00-6	
Fluoride	**0.35**	mg/L	0.30	0.029	1		11/13/18 03:29	16984-48-8	
Sulfate	**307**	mg/L	20.0	0.34	20		11/14/18 03:25	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

Sample: DGWC-9 **Lab ID: 2611269005** Collected: 11/06/18 11:00 Received: 11/07/18 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/08/18 10:56	11/12/18 16:16	7440-36-0	
Arsenic	**0.017**	mg/L	0.0050	0.00057	1	11/08/18 10:56	11/12/18 16:16	7440-38-2	
Barium	**0.015**	mg/L	0.010	0.00078	1	11/08/18 10:56	11/12/18 16:16	7440-39-3	
Beryllium	**0.0060**	mg/L	0.0030	0.000050	1	11/08/18 10:56	11/12/18 16:16	7440-41-7	
Boron	**1.4**	mg/L	0.040	0.0039	1	11/08/18 10:56	11/12/18 16:16	7440-42-8	
Cadmium	**0.00060J**	mg/L	0.0010	0.000093	1	11/08/18 10:56	11/12/18 16:16	7440-43-9	
Calcium	**81.1**	mg/L	25.0	0.69	50	11/08/18 10:56	11/12/18 16:22	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/08/18 10:56	11/12/18 16:16	7440-47-3	
Cobalt	**0.20**	mg/L	0.010	0.00052	1	11/08/18 10:56	11/12/18 16:16	7440-48-4	
Lead	ND	mg/L	0.025	0.0014	5	11/08/18 10:56	11/13/18 15:00	7439-92-1	D3
Lithium	**0.028J**	mg/L	0.050	0.00097	1	11/08/18 10:56	11/12/18 16:16	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/08/18 10:56	11/12/18 16:16	7439-98-7	
Selenium	**0.12**	mg/L	0.050	0.0068	5	11/08/18 10:56	11/13/18 15:00	7782-49-2	
Thallium	ND	mg/L	0.0050	0.00071	5	11/08/18 10:56	11/13/18 15:00	7440-28-0	D3
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.00046J**	mg/L	0.00050	0.000036	1	11/08/18 16:01	11/09/18 13:27	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**554**	mg/L	25.0	10.0	1		11/12/18 09:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**8.7**	mg/L	0.25	0.024	1		11/13/18 03:52	16887-00-6	
Fluoride	**1.1**	mg/L	0.30	0.029	1		11/13/18 03:52	16984-48-8	
Sulfate	**438**	mg/L	25.0	0.42	25		11/14/18 03:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

Sample: DGWC-10 **Lab ID: 2611269006** Collected: 11/06/18 12:55 Received: 11/07/18 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/08/18 10:56	11/12/18 16:27	7440-36-0	
Arsenic	**0.0044J**	mg/L	0.0050	0.00057	1	11/08/18 10:56	11/12/18 16:27	7440-38-2	
Barium	**0.025**	mg/L	0.010	0.00078	1	11/08/18 10:56	11/12/18 16:27	7440-39-3	
Beryllium	**0.012**	mg/L	0.0030	0.000050	1	11/08/18 10:56	11/12/18 16:27	7440-41-7	
Boron	**2.1**	mg/L	0.040	0.0039	1	11/08/18 10:56	11/12/18 16:27	7440-42-8	
Cadmium	**0.0012**	mg/L	0.0010	0.000093	1	11/08/18 10:56	11/12/18 16:27	7440-43-9	
Calcium	**94.8**	mg/L	25.0	0.69	50	11/08/18 10:56	11/12/18 16:33	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/08/18 10:56	11/12/18 16:27	7440-47-3	
Cobalt	**0.20**	mg/L	0.010	0.00052	1	11/08/18 10:56	11/12/18 16:27	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/08/18 10:56	11/12/18 16:27	7439-92-1	
Lithium	**0.0049J**	mg/L	0.050	0.00097	1	11/08/18 10:56	11/12/18 16:27	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/08/18 10:56	11/12/18 16:27	7439-98-7	
Selenium	**0.049**	mg/L	0.010	0.0014	1	11/08/18 10:56	11/13/18 15:05	7782-49-2	
Thallium	**0.00039J**	mg/L	0.0010	0.00014	1	11/08/18 10:56	11/12/18 16:27	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.00034J**	mg/L	0.00050	0.000036	1	11/08/18 16:01	11/09/18 13:34	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**512**	mg/L	25.0	10.0	1		11/12/18 09:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**12.3**	mg/L	0.25	0.024	1		11/13/18 04:14	16887-00-6	
Fluoride	**2.0**	mg/L	0.30	0.029	1		11/13/18 04:14	16984-48-8	
Sulfate	**356**	mg/L	25.0	0.42	25		11/14/18 04:10	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

Sample: DGWC-11 **Lab ID: 2611269007** Collected: 11/06/18 14:20 Received: 11/07/18 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/08/18 10:56	11/12/18 16:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/08/18 10:56	11/12/18 16:39	7440-38-2	
Barium	**0.074**	mg/L	0.010	0.00078	1	11/08/18 10:56	11/12/18 16:39	7440-39-3	
Beryllium	**0.000094J**	mg/L	0.0030	0.000050	1	11/08/18 10:56	11/12/18 16:39	7440-41-7	B
Boron	**1.2**	mg/L	0.040	0.0039	1	11/08/18 10:56	11/12/18 16:39	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/08/18 10:56	11/12/18 16:39	7440-43-9	
Calcium	**62.6**	mg/L	25.0	0.69	50	11/08/18 10:56	11/12/18 16:45	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/08/18 10:56	11/12/18 16:39	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	11/08/18 10:56	11/12/18 16:39	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/08/18 10:56	11/12/18 16:39	7439-92-1	
Lithium	**0.0022J**	mg/L	0.050	0.00097	1	11/08/18 10:56	11/12/18 16:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/08/18 10:56	11/12/18 16:39	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/08/18 10:56	11/13/18 15:11	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/08/18 10:56	11/12/18 16:39	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.00028J**	mg/L	0.00050	0.000036	1	11/08/18 16:01	11/09/18 13:36	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**412**	mg/L	25.0	10.0	1		11/12/18 09:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**15.2**	mg/L	0.25	0.024	1		11/13/18 04:37	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		11/13/18 04:37	16984-48-8	
Sulfate	**302**	mg/L	25.0	0.42	25		11/14/18 04:32	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

Sample: FD-1 **Lab ID: 2611269008** Collected: 11/06/18 00:00 Received: 11/07/18 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/08/18 10:56	11/12/18 17:02	7440-36-0	
Arsenic	**0.018**	mg/L	0.0050	0.00057	1	11/08/18 10:56	11/12/18 17:02	7440-38-2	
Barium	**0.015**	mg/L	0.010	0.00078	1	11/08/18 10:56	11/12/18 17:02	7440-39-3	
Beryllium	**0.0064**	mg/L	0.0030	0.000050	1	11/08/18 10:56	11/12/18 17:02	7440-41-7	
Boron	**1.5**	mg/L	0.040	0.0039	1	11/08/18 10:56	11/12/18 17:02	7440-42-8	
Cadmium	**0.00059J**	mg/L	0.0010	0.000093	1	11/08/18 10:56	11/12/18 17:02	7440-43-9	
Calcium	**82.3**	mg/L	25.0	0.69	50	11/08/18 10:56	11/12/18 17:07	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/08/18 10:56	11/12/18 17:02	7440-47-3	
Cobalt	**0.20**	mg/L	0.010	0.00052	1	11/08/18 10:56	11/12/18 17:02	7440-48-4	
Lead	ND	mg/L	0.025	0.0014	5	11/08/18 10:56	11/13/18 15:17	7439-92-1	D3
Lithium	**0.030J**	mg/L	0.050	0.00097	1	11/08/18 10:56	11/12/18 17:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/08/18 10:56	11/12/18 17:02	7439-98-7	
Selenium	**0.11**	mg/L	0.050	0.0068	5	11/08/18 10:56	11/13/18 15:17	7782-49-2	
Thallium	ND	mg/L	0.0050	0.00071	5	11/08/18 10:56	11/13/18 15:17	7440-28-0	D3
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.00035J**	mg/L	0.00050	0.000036	1	11/08/18 16:01	11/09/18 13:39	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**550**	mg/L	25.0	10.0	1		11/12/18 09:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**8.6**	mg/L	0.25	0.024	1		11/13/18 06:30	16887-00-6	
Fluoride	**1.0**	mg/L	0.30	0.029	1		11/13/18 06:30	16984-48-8	
Sulfate	**437**	mg/L	25.0	0.42	25		11/14/18 04:55	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

Sample: FB-1 **Lab ID: 2611269009** Collected: 11/06/18 15:45 Received: 11/07/18 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/08/18 10:56	11/12/18 17:19	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/08/18 10:56	11/12/18 17:19	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	11/08/18 10:56	11/12/18 17:19	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	11/08/18 10:56	11/12/18 17:19	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	11/08/18 10:56	11/12/18 17:19	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/08/18 10:56	11/12/18 17:19	7440-43-9	
Calcium	**0.025J**	mg/L	0.50	0.014	1	11/08/18 10:56	11/12/18 17:19	7440-70-2	B
Chromium	ND	mg/L	0.010	0.0016	1	11/08/18 10:56	11/12/18 17:19	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	11/08/18 10:56	11/12/18 17:19	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/08/18 10:56	11/12/18 17:19	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	11/08/18 10:56	11/12/18 17:19	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/08/18 10:56	11/12/18 17:19	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/08/18 10:56	11/13/18 15:23	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/08/18 10:56	11/12/18 17:19	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.00019J**	mg/L	0.00050	0.000036	1	11/08/18 16:01	11/09/18 13:41	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**15.0J**	mg/L	25.0	10.0	1		11/12/18 09:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.14J**	mg/L	0.25	0.024	1		11/13/18 06:53	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		11/13/18 06:53	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		11/13/18 06:53	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

Sample: EB-1 **Lab ID: 2611269010** Collected: 11/06/18 15:45 Received: 11/07/18 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/08/18 10:56	11/12/18 17:25	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/08/18 10:56	11/12/18 17:25	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	11/08/18 10:56	11/12/18 17:25	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	11/08/18 10:56	11/12/18 17:25	7440-41-7	
Boron	**0.0063J**	mg/L	0.040	0.0039	1	11/08/18 10:56	11/12/18 17:25	7440-42-8	B
Cadmium	ND	mg/L	0.0010	0.000093	1	11/08/18 10:56	11/12/18 17:25	7440-43-9	
Calcium	**0.30J**	mg/L	0.50	0.014	1	11/08/18 10:56	11/12/18 17:25	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/08/18 10:56	11/12/18 17:25	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	11/08/18 10:56	11/12/18 17:25	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/08/18 10:56	11/12/18 17:25	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	11/08/18 10:56	11/12/18 17:25	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/08/18 10:56	11/12/18 17:25	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/08/18 10:56	11/13/18 15:28	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/08/18 10:56	11/12/18 17:25	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.00017J**	mg/L	0.00050	0.000036	1	11/08/18 16:01	11/09/18 13:43	7439-97-6	B
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**23.0J**	mg/L	25.0	10.0	1		11/12/18 09:57		D6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.082J**	mg/L	0.25	0.024	1		11/13/18 07:15	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		11/13/18 07:15	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		11/13/18 07:15	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

QC Batch: 16801 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2611269001, 2611269002, 2611269003, 2611269004, 2611269005, 2611269006, 2611269007, 2611269008, 2611269009, 2611269010

METHOD BLANK: 75423 Matrix: Water
Associated Lab Samples: 2611269001, 2611269002, 2611269003, 2611269004, 2611269005, 2611269006, 2611269007, 2611269008, 2611269009, 2611269010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	0.00012J	0.00050	0.000036	11/09/18 12:37	

LABORATORY CONTROL SAMPLE: 75424

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: 75425 75426

Parameter	Units	2611266001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	0.00071	.0025	.0025	0.0029	0.0031	89	96	75-125	5	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

QC Batch: 16835 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2611269001, 2611269002, 2611269003, 2611269004, 2611269005, 2611269006, 2611269007, 2611269008, 2611269009, 2611269010

METHOD BLANK: 75595 Matrix: Water
Associated Lab Samples: 2611269001, 2611269002, 2611269003, 2611269004, 2611269005, 2611269006, 2611269007, 2611269008, 2611269009, 2611269010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	11/09/18 13:59	
Arsenic	mg/L	ND	0.0050	0.00057	11/09/18 13:59	
Barium	mg/L	ND	0.010	0.00078	11/09/18 13:59	
Beryllium	mg/L	0.000058J	0.0030	0.000050	11/09/18 13:59	
Boron	mg/L	0.0055J	0.040	0.0039	11/09/18 13:59	
Cadmium	mg/L	ND	0.0010	0.000093	11/09/18 13:59	
Calcium	mg/L	0.021J	0.50	0.014	11/09/18 13:59	
Chromium	mg/L	ND	0.010	0.0016	11/09/18 13:59	
Cobalt	mg/L	ND	0.010	0.00052	11/09/18 13:59	
Lead	mg/L	ND	0.0050	0.00027	11/09/18 13:59	
Lithium	mg/L	ND	0.050	0.00097	11/09/18 13:59	
Molybdenum	mg/L	ND	0.010	0.0019	11/09/18 13:59	
Selenium	mg/L	ND	0.010	0.0014	11/09/18 13:59	
Thallium	mg/L	ND	0.0010	0.00014	11/09/18 13:59	

LABORATORY CONTROL SAMPLE: 75596

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	102	80-120	
Arsenic	mg/L	.1	0.10	100	80-120	
Barium	mg/L	.1	0.10	101	80-120	
Beryllium	mg/L	.1	0.11	111	80-120	
Boron	mg/L	1	1.1	112	80-120	
Cadmium	mg/L	.1	0.098	98	80-120	
Calcium	mg/L	1	1.0	102	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.098	98	80-120	
Lead	mg/L	.1	0.098	98	80-120	
Lithium	mg/L	.1	0.11	108	80-120	
Molybdenum	mg/L	.1	0.11	105	80-120	
Selenium	mg/L	.1	0.10	103	80-120	
Thallium	mg/L	.1	0.098	98	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 75597 75598

Parameter	Units	2611266001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.10	0.099	101	99	75-125	2	20	
Arsenic	mg/L	0.013	.1	.1	0.11	0.11	101	100	75-125	2	20	
Barium	mg/L	0.31	.1	.1	0.40	0.39	94	83	75-125	3	20	
Beryllium	mg/L	0.00077J	.1	.1	0.10	0.10	104	103	75-125	1	20	
Boron	mg/L	0.060	1	1	1.1	1.1	103	104	75-125	1	20	
Cadmium	mg/L	ND	.1	.1	0.097	0.097	97	97	75-125	0	20	
Calcium	mg/L	39.5	1	1	39.6	37.6	3	-193	75-125	5	20	M6
Chromium	mg/L	0.0017J	.1	.1	0.10	0.099	100	98	75-125	2	20	
Cobalt	mg/L	0.0048J	.1	.1	0.10	0.10	98	95	75-125	3	20	
Lead	mg/L	ND	.1	.1	0.096	0.094	96	94	75-125	2	20	
Lithium	mg/L	0.0038J	.1	.1	0.10	0.10	101	99	75-125	1	20	
Molybdenum	mg/L	ND	.1	.1	0.10	0.10	104	102	75-125	3	20	
Selenium	mg/L	0.0025J	.1	.1	0.11	0.11	111	106	75-125	5	20	
Thallium	mg/L	ND	.1	.1	0.096	0.094	96	94	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

QC Batch: 16942 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2611269001, 2611269002, 2611269003, 2611269004, 2611269005, 2611269006, 2611269007, 2611269008, 2611269009

LABORATORY CONTROL SAMPLE: 76543

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	416	104	84-108	

SAMPLE DUPLICATE: 76544

Parameter	Units	2611264001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	10100	10400	3	10	

SAMPLE DUPLICATE: 76545

Parameter	Units	2611269006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	512	505	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

QC Batch: 16943
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2611269010

LABORATORY CONTROL SAMPLE: 76546

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	405	101	84-108	

SAMPLE DUPLICATE: 76547

Parameter	Units	2611269010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	23.0J	18.0J	24	10	D6

SAMPLE DUPLICATE: 76548

Parameter	Units	2611389001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	504	495	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

QC Batch: 17031 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2611269001, 2611269002, 2611269003, 2611269004, 2611269005, 2611269006, 2611269007, 2611269008, 2611269009, 2611269010

METHOD BLANK: 76755 Matrix: Water
Associated Lab Samples: 2611269001, 2611269002, 2611269003, 2611269004, 2611269005, 2611269006, 2611269007, 2611269008, 2611269009, 2611269010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	11/12/18 19:11	
Fluoride	mg/L	ND	0.30	0.029	11/12/18 19:11	
Sulfate	mg/L	ND	1.0	0.017	11/12/18 19:11	

LABORATORY CONTROL SAMPLE: 76756

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.2	102	90-110	
Fluoride	mg/L	10	9.5	95	90-110	
Sulfate	mg/L	10	10.7	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 76757 76758

Parameter	Units	2611266001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	107	10	10	89.6	89.6	-172	-171	90-110	0	15	E,M1
Fluoride	mg/L	ND	10	10	10.8	10.8	108	108	90-110	1	15	
Sulfate	mg/L	136	10	10	101	101	-357	-357	90-110	0	15	E,M1

MATRIX SPIKE SAMPLE: 76759

Parameter	Units	2611266002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	32.6	10	1010	9810	90-110	E
Fluoride	mg/L	ND	10	6.7	67	90-110	M1
Sulfate	mg/L	4.3	10	341	3370	90-110	E,M1

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611269

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2611269001	**DGWC-2**	EPA 3005A	16835	EPA 6020B	16846
2611269002	**DGWC-4**	EPA 3005A	16835	EPA 6020B	16846
2611269003	**DGWC-5**	EPA 3005A	16835	EPA 6020B	16846
2611269004	**DGWC-8**	EPA 3005A	16835	EPA 6020B	16846
2611269005	**DGWC-9**	EPA 3005A	16835	EPA 6020B	16846
2611269006	**DGWC-10**	EPA 3005A	16835	EPA 6020B	16846
2611269007	**DGWC-11**	EPA 3005A	16835	EPA 6020B	16846
2611269008	**FD-1**	EPA 3005A	16835	EPA 6020B	16846
2611269009	**FB-1**	EPA 3005A	16835	EPA 6020B	16846
2611269010	**EB-1**	EPA 3005A	16835	EPA 6020B	16846
2611269001	**DGWC-2**	EPA 7470A	16801	EPA 7470A	16863
2611269002	**DGWC-4**	EPA 7470A	16801	EPA 7470A	16863
2611269003	**DGWC-5**	EPA 7470A	16801	EPA 7470A	16863
2611269004	**DGWC-8**	EPA 7470A	16801	EPA 7470A	16863
2611269005	**DGWC-9**	EPA 7470A	16801	EPA 7470A	16863
2611269006	**DGWC-10**	EPA 7470A	16801	EPA 7470A	16863
2611269007	**DGWC-11**	EPA 7470A	16801	EPA 7470A	16863
2611269008	**FD-1**	EPA 7470A	16801	EPA 7470A	16863
2611269009	**FB-1**	EPA 7470A	16801	EPA 7470A	16863
2611269010	**EB-1**	EPA 7470A	16801	EPA 7470A	16863
2611269001	**DGWC-2**	SM 2540C	16942		
2611269002	**DGWC-4**	SM 2540C	16942		
2611269003	**DGWC-5**	SM 2540C	16942		
2611269004	**DGWC-8**	SM 2540C	16942		
2611269005	**DGWC-9**	SM 2540C	16942		
2611269006	**DGWC-10**	SM 2540C	16942		
2611269007	**DGWC-11**	SM 2540C	16942		
2611269008	**FD-1**	SM 2540C	16942		
2611269009	**FB-1**	SM 2540C	16942		
2611269010	**EB-1**	SM 2540C	16943		
2611269001	**DGWC-2**	EPA 300.0	17031		
2611269002	**DGWC-4**	EPA 300.0	17031		
2611269003	**DGWC-5**	EPA 300.0	17031		
2611269004	**DGWC-8**	EPA 300.0	17031		
2611269005	**DGWC-9**	EPA 300.0	17031		
2611269006	**DGWC-10**	EPA 300.0	17031		
2611269007	**DGWC-11**	EPA 300.0	17031		
2611269008	**FD-1**	EPA 300.0	17031		
2611269009	**FB-1**	EPA 300.0	17031		
2611269010	**EB-1**	EPA 300.0	17031		

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A – Required Client Information:		Section B – Required Project Information:		Section C – Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	scsinvoices@southernco.com
Address:	2480 Maner Road Atlanta, GA 30339	Copy To:	Golder	Company Name:	
				Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant McDonough AP-2, 3/4	Pace Project Manager:	betsy.mcdaniel@pacelabs.com
Requested Due Date:	Standard TAT	Project #:	166849618	Pace Profile #:	332.1.2

Regulatory Agency: —

State / Location: GA

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved - Ice	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals App. III & App. IV	TDS, Cl, F, SO4	Radium 226/228	Residual Chlorine (Y/N)
1	DGWC-2	WT	G	11/6/2018	1505		4	X		X							X	X	X	
2	DGWC-4	WT	G	11/6/2018	1120		4	X		X							X	X	X	
3	DGWC-5	WT	G	11/6/2018	1305		4	X		X							X	X	X	
4	DGWC-8	WT	G	11/6/2018	1535		4	X		X							X	X	X	
5	DGWC-9	WT	G	11/6/2018	1100		4	X		X							X	X	X	
6	DGWC-10	WT	G	11/6/2018	1255		4	X		X							X	X	X	
7	DGWC-11	WT	G	11/6/2018	1420		4	X		X							X	X	X	
8	FD-1	WT	G	11/6/2018	–		4	X		X							X	X	X	
9	FB-1	WT	G	11/6/2018	1545		4	X		X							X	X	X	
10	EB-1	WT	G	11/6/2018	1545		4	X		X							X	X	X	
11																				
12																				

WO# : 2611269

2611269

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	[signature]	11-7-18	0956	Mike Nguyen / Pace	11/7/18	0956				
	Mike Nguyen	11/7/18	1030	[signature]	11/07/18	1030				
							0.8	Y	Y	Y

DATE Signed:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2611269

PM: BM Due Date: 11/14/18

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 ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.8 Biological Tissue is Frozen: Yes No Date and Initials of person examining contents: 11/07/18 MP

Temp should be above freezing to 6°C

			Comments:
Chain of Custody Present:	☑ Yes ☐ No ☐ N/A	1.	
Chain of Custody Filled Out:	☑ Yes ☐ No ☐ N/A	2.	
Chain of Custody Relinquished:	☑ Yes ☐ No ☐ N/A	3.	
Sampler Name & Signature on COC:	☐ Yes ☑ No ☐ N/A	4.	
Samples Arrived within Hold Time:	☑ Yes ☐ No ☐ N/A	5.	
Short Hold Time Analysis (<72hr):	☐ Yes ☑ No ☐ N/A	6.	
Rush Turn Around Time Requested:	☐ Yes ☑ No ☐ N/A	7.	
Sufficient Volume:	☑ Yes ☐ No ☐ N/A	8.	
Correct Containers Used:	☑ Yes ☐ No ☐ N/A	9.	
-Pace Containers Used:	☑ Yes ☐ No ☐ N/A		
Containers Intact:	☑ Yes ☐ No ☐ N/A	10.	
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☑ N/A	11.	
Sample Labels match COC:	☑ Yes ☐ No ☐ N/A	12.	
-Includes date/time/ID/Analysis Matrix: W			
All containers needing preservation have been checked.	☑ Yes ☐ No ☐ N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑ Yes ☐ No ☐ N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐ Yes ☑ No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	☐ Yes ☐ No ☑ N/A	14.	
Headspace in VOA Vials (>6mm):	☐ Yes ☐ No ☑ N/A	15.	
Trip Blank Present:	☐ Yes ☐ No ☑ N/A	16.	
Trip Blank Custody Seals Present	☐ Yes ☐ No ☑ N/A		
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

December 03, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on November 07, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

SAMPLE SUMMARY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2611270001	**DGWC-2**	Water	11/06/18 15:05	11/07/18 10:30
2611270002	**DGWC-4**	Water	11/06/18 11:20	11/07/18 10:30
2611270003	**DGWC-5**	Water	11/06/18 13:05	11/07/18 10:30
2611270004	**DGWC-8**	Water	11/06/18 15:35	11/07/18 10:30
2611270005	**DGWC-9**	Water	11/06/18 11:00	11/07/18 10:30
2611270006	**DGWC-10**	Water	11/06/18 12:55	11/07/18 10:30
2611270007	**DGWC-11**	Water	11/06/18 14:20	11/07/18 10:30
2611270008	**FD-1**	Water	11/06/18 00:00	11/07/18 10:30
2611270009	**FB-1**	Water	11/06/18 15:45	11/07/18 10:30
2611270010	**EB-1**	Water	11/06/18 15:45	11/07/18 10:30

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(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2611270001	DGWC-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611270002	DGWC-4	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611270003	DGWC-5	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611270004	DGWC-8	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611270005	DGWC-9	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611270006	DGWC-10	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611270007	DGWC-11	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611270008	FD-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611270009	FB-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611270010	EB-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

Sample: DGWC-2 **Lab ID: 2611270001** Collected: 11/06/18 15:05 Received: 11/07/18 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.273 ± 0.127 (0.171) C:95% T:NA**	pCi/L	11/28/18 21:08	13982-63-3	
Radium-228	EPA 9320	**0.391 ± 0.259 (0.477) C:77% T:97%**	pCi/L	11/27/18 11:48	15262-20-1	
Total Radium	Total Radium Calculation	**0.664 ± 0.386 (0.648)**	pCi/L	11/30/18 13:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

Sample: DGWC-4 **Lab ID: 2611270002** Collected: 11/06/18 11:20 Received: 11/07/18 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.503 ± 0.176 (0.211) C:95% T:NA**	pCi/L	11/28/18 21:08	13982-63-3	
Radium-228	EPA 9320	**0.701 ± 0.354 (0.599) C:77% T:86%**	pCi/L	11/27/18 11:49	15262-20-1	
Total Radium	Total Radium Calculation	**1.20 ± 0.530 (0.810)**	pCi/L	11/30/18 13:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

Sample: DGWC-5 **Lab ID: 2611270003** Collected: 11/06/18 13:05 Received: 11/07/18 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.584 ± 0.190 (0.208) C:94% T:NA**	pCi/L	11/28/18 21:08	13982-63-3	
Radium-228	EPA 9320	**0.548 ± 0.323 (0.589) C:77% T:97%**	pCi/L	11/27/18 11:49	15262-20-1	
Total Radium	Total Radium Calculation	**1.13 ± 0.513 (0.797)**	pCi/L	11/30/18 13:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

Sample: DGWC-8 **Lab ID: 2611270004** Collected: 11/06/18 15:35 Received: 11/07/18 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.371 ± 0.146 (0.178) C:96% T:NA**	pCi/L	11/28/18 21:08	13982-63-3	
Radium-228	EPA 9320	**0.206 ± 0.315 (0.681) C:75% T:91%**	pCi/L	11/27/18 11:49	15262-20-1	
Total Radium	Total Radium Calculation	**0.577 ± 0.461 (0.859)**	pCi/L	11/30/18 13:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

Sample: DGWC-9 **Lab ID: 2611270005** Collected: 11/06/18 11:00 Received: 11/07/18 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.490 ± 0.171 (0.196) C:92% T:NA**	pCi/L	11/28/18 21:08	13982-63-3	
Radium-228	EPA 9320	**0.637 ± 0.334 (0.577) C:77% T:91%**	pCi/L	11/27/18 11:49	15262-20-1	
Total Radium	Total Radium Calculation	**1.13 ± 0.505 (0.773)**	pCi/L	11/30/18 13:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

Sample: DGWC-10 **Lab ID: 2611270006** Collected: 11/06/18 12:55 Received: 11/07/18 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.822 ± 0.238 (0.258) C:93% T:NA**	pCi/L	11/28/18 21:08	13982-63-3	
Radium-228	EPA 9320	**0.641 ± 0.334 (0.569) C:80% T:82%**	pCi/L	11/27/18 11:49	15262-20-1	
Total Radium	Total Radium Calculation	**1.46 ± 0.572 (0.827)**	pCi/L	11/30/18 13:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

Sample: DGWC-11 **Lab ID: 2611270007** Collected: 11/06/18 14:20 Received: 11/07/18 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.425 ± 0.160 (0.201) C:99% T:NA**	pCi/L	11/28/18 21:08	13982-63-3	
Radium-228	EPA 9320	**0.980 ± 0.402 (0.627) C:79% T:90%**	pCi/L	11/27/18 11:49	15262-20-1	
Total Radium	Total Radium Calculation	**1.41 ± 0.562 (0.828)**	pCi/L	11/30/18 13:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

Sample: FD-1 **Lab ID: 2611270008** Collected: 11/06/18 00:00 Received: 11/07/18 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.562 ± 0.184 (0.194) C:93% T:NA**	pCi/L	11/28/18 21:08	13982-63-3	
Radium-228	EPA 9320	**0.456 ± 0.306 (0.576) C:75% T:94%**	pCi/L	11/27/18 11:49	15262-20-1	
Total Radium	Total Radium Calculation	**1.02 ± 0.490 (0.770)**	pCi/L	11/30/18 13:24	7440-14-4	

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

Sample: FB-1 **Lab ID: 2611270009** Collected: 11/06/18 15:45 Received: 11/07/18 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.234 ± 0.130 (0.205) C:99% T:NA**	pCi/L	11/28/18 21:08	13982-63-3	
Radium-228	EPA 9320	**0.638 ± 0.364 (0.638) C:72% T:82%**	pCi/L	11/27/18 11:59	15262-20-1	
Total Radium	Total Radium Calculation	**0.872 ± 0.494 (0.843)**	pCi/L	11/30/18 13:24	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

Sample: EB-1 **Lab ID: 2611270010** Collected: 11/06/18 15:45 Received: 11/07/18 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.390 ± 0.239 (0.335) C:95% T:NA**	pCi/L	11/29/18 08:41	13982-63-3	
Radium-228	EPA 9320	**0.477 ± 0.291 (0.522) C:82% T:82%**	pCi/L	11/27/18 15:07	15262-20-1	
Total Radium	Total Radium Calculation	**0.867 ± 0.530 (0.857)**	pCi/L	11/30/18 13:24	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

QC Batch: 320566 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2611270001, 2611270002, 2611270003, 2611270004, 2611270005, 2611270006, 2611270007, 2611270008, 2611270009, 2611270010

METHOD BLANK: 1563548 Matrix: Water
Associated Lab Samples: 2611270001, 2611270002, 2611270003, 2611270004, 2611270005, 2611270006, 2611270007, 2611270008, 2611270009, 2611270010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.196 ± 0.119 (0.189) C:97% T:NA	pCi/L	11/28/18 21:08	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

QC Batch: 320542 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2611270001, 2611270002, 2611270003, 2611270004, 2611270005, 2611270006, 2611270007, 2611270008, 2611270009, 2611270010

METHOD BLANK: 1563498 Matrix: Water
Associated Lab Samples: 2611270001, 2611270002, 2611270003, 2611270004, 2611270005, 2611270006, 2611270007, 2611270008, 2611270009, 2611270010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.727 ± 0.361 (0.610) C:86% T:77%	pCi/L	11/27/18 11:48	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611270

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2611270001	**DGWC-2**	EPA 9315	320566		
2611270002	**DGWC-4**	EPA 9315	320566		
2611270003	**DGWC-5**	EPA 9315	320566		
2611270004	**DGWC-8**	EPA 9315	320566		
2611270005	**DGWC-9**	EPA 9315	320566		
2611270006	**DGWC-10**	EPA 9315	320566		
2611270007	**DGWC-11**	EPA 9315	320566		
2611270008	**FD-1**	EPA 9315	320566		
2611270009	**FB-1**	EPA 9315	320566		
2611270010	**EB-1**	EPA 9315	320566		
2611270001	**DGWC-2**	EPA 9320	320542		
2611270002	**DGWC-4**	EPA 9320	320542		
2611270003	**DGWC-5**	EPA 9320	320542		
2611270004	**DGWC-8**	EPA 9320	320542		
2611270005	**DGWC-9**	EPA 9320	320542		
2611270006	**DGWC-10**	EPA 9320	320542		
2611270007	**DGWC-11**	EPA 9320	320542		
2611270008	**FD-1**	EPA 9320	320542		
2611270009	**FB-1**	EPA 9320	320542		
2611270010	**EB-1**	EPA 9320	320542		
2611270001	**DGWC-2**	Total Radium Calculation	322352		
2611270002	**DGWC-4**	Total Radium Calculation	322352		
2611270003	**DGWC-5**	Total Radium Calculation	322352		
2611270004	**DGWC-8**	Total Radium Calculation	322352		
2611270005	**DGWC-9**	Total Radium Calculation	322352		
2611270006	**DGWC-10**	Total Radium Calculation	322352		
2611270007	**DGWC-11**	Total Radium Calculation	322352		
2611270008	**FD-1**	Total Radium Calculation	322354		
2611270009	**FB-1**	Total Radium Calculation	322354		
2611270010	**EB-1**	Total Radium Calculation	322354		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — Required Client Information:

Company:	Georgia Power - Coal Combustion Residuals
Address:	2480 Maner Road
	Atlanta, GA 30339
Email:	jabraham@southernco.com
Phone:	(404)506-7239 Fax:
Requested Due Date:	Standard TAT

Section B — Required Project Information:

Report To:	Joju Abraham
Copy To:	Golder
Purchase Order #:	SCS10348606
Project Name:	Plant McDonough AP-2, 3/4
Project #:	166849618

Section C — Invoice Information:

Attention:	scsinvoices@southernco.com
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	betsy.mcdaniel@pacelabs.com
Pace Profile #:	332.1.2

Regulatory Agency:

State / Location: GA

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved - Ice	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals App. III & App. IV	TDS, Cl, F, SO4	Radium 226/228	Residual Chlorine (Y/N)
1	DGWC-2	WT	G	11/6/2018	1505		4	X		X							X	X	X	
2	DGWC-4	WT	G	11/6/2018	1120		4	X		X							X	X	X	
3	DGWC-5	WT	G	11/6/2018	1305		4	X		X							X	X	X	
4	DGWC-8	WT	G	11/6/2018	1535		4	X		X							X	X	X	
5	DGWC-9	WT	G	11/6/2018	1100		4	X		X							X	X	X	
6	DGWC-10	WT	G	11/6/2018	1255		4	X		X							X	X	X	
7	DGWC-11	WT	G	11/6/2018	1420		4	X		X							X	X	X	
8	FD-1	WT	G	11/6/2018	--		4	X		X							X	X	X	
9	FB-1	WT	G	11/6/2018	1545		4	X		X							X	X	X	
10	EB-1	WT	G	11/6/2018	1545		4	X		X							X	X	X	
11																				
12																				

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

WO#: 2611270

2611270

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	[signature]	11-7-18	0956	Mike Nguyen / Pace	11/7/18	0956				
	Mike Nguyen/Pace	11/7/18	1030	[signature]	11/07/18	1030				
							0.8	Y	Y	Y

DATE Signed:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2611270

PM: BM **Due Date: 12/07/18**

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 ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.8 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 11/07/18 MP

Comments:

Chain of Custody Present:	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out:	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished:	☑ Yes	☐ No	☐ N/A	3.
Sampler Name & Signature on COC:	☐ Yes	☑ No	☐ N/A	4.
Samples Arrived within Hold Time:	☑ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72hr):	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested:	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume:	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used:	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used:	☑ Yes	☐ No	☐ N/A	
Containers Intact:	☑ Yes	☐ No	☐ N/A	10.
Filtered volume received for Dissolved tests	☐ Yes	☐ No	☑ N/A	11.
Sample Labels match COC:	☑ Yes	☐ No	☐ N/A	12.
-Includes date/time/ID/Analysis Matrix: W				
All containers needing preservation have been checked.	☑ Yes	☐ No	☐ N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑ Yes	☐ No	☐ N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐ Yes	☑ No		Initial when completed: Lot # of added preservative:
Samples checked for dechlorination:	☐ Yes	☐ No	☑ N/A	14.
Headspace in VOA Vials (>6mm):	☐ Yes	☐ No	☑ N/A	15.
Trip Blank Present:	☐ Yes	☐ No	☑ N/A	16.
Trip Blank Custody Seals Present	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

November 15, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 2611272

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on November 07, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611272

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611272

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2611272001	**DGWA-70A**	Water	11/06/18 12:30	11/07/18 10:30
2611272002	**DGWA-71**	Water	11/06/18 13:45	11/07/18 10:30

Pace Analytical Services, LLC
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(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611272

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2611272001	**DGWA-70A**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611272002	**DGWA-71**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611272

Sample: DGWA-70A **Lab ID: 2611272001** Collected: 11/06/18 12:30 Received: 11/07/18 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/12/18 14:18	11/13/18 17:16	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/12/18 14:18	11/13/18 17:16	7440-38-2	
Barium	**0.037**	mg/L	0.010	0.00078	1	11/12/18 14:18	11/13/18 17:16	7440-39-3	
Beryllium	**0.00012J**	mg/L	0.0030	0.000050	1	11/12/18 14:18	11/13/18 17:16	7440-41-7	
Boron	**0.0065J**	mg/L	0.040	0.0039	1	11/12/18 14:18	11/13/18 17:16	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/12/18 14:18	11/13/18 17:16	7440-43-9	
Calcium	**5.5**	mg/L	2.5	0.069	5	11/12/18 14:18	11/14/18 18:27	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/12/18 14:18	11/13/18 17:16	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	11/12/18 14:18	11/13/18 17:16	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/12/18 14:18	11/13/18 17:16	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	11/12/18 14:18	11/13/18 17:16	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/12/18 14:18	11/13/18 17:16	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/12/18 14:18	11/13/18 17:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/12/18 14:18	11/13/18 17:16	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/12/18 10:45	11/12/18 16:28	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**65.0**	mg/L	25.0	10.0	1		11/12/18 09:58		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.3**	mg/L	0.25	0.024	1		11/13/18 16:59	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		11/13/18 16:59	16984-48-8	
Sulfate	**0.12J**	mg/L	1.0	0.017	1		11/13/18 16:59	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611272

Sample: DGWA-71 **Lab ID: 2611272002** Collected: 11/06/18 13:45 Received: 11/07/18 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/12/18 14:18	11/13/18 17:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/12/18 14:18	11/13/18 17:28	7440-38-2	
Barium	**0.026**	mg/L	0.010	0.00078	1	11/12/18 14:18	11/13/18 17:28	7440-39-3	
Beryllium	**0.00013J**	mg/L	0.0030	0.000050	1	11/12/18 14:18	11/13/18 17:28	7440-41-7	
Boron	**0.0067J**	mg/L	0.040	0.0039	1	11/12/18 14:18	11/13/18 17:28	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/12/18 14:18	11/13/18 17:28	7440-43-9	
Calcium	**5.7**	mg/L	2.5	0.069	5	11/12/18 14:18	11/14/18 18:33	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/12/18 14:18	11/13/18 17:28	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	11/12/18 14:18	11/13/18 17:28	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/12/18 14:18	11/13/18 17:28	7439-92-1	
Lithium	**0.0014J**	mg/L	0.050	0.00097	1	11/12/18 14:18	11/13/18 17:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/12/18 14:18	11/13/18 17:28	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/12/18 14:18	11/13/18 17:28	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/12/18 14:18	11/13/18 17:28	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000041J**	mg/L	0.00050	0.000036	1	11/12/18 10:45	11/12/18 16:45	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**85.0**	mg/L	25.0	10.0	1		11/12/18 09:58		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.6**	mg/L	0.25	0.024	1		11/13/18 18:01	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		11/13/18 18:01	16984-48-8	
Sulfate	**7.3**	mg/L	1.0	0.017	1		11/13/18 18:01	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611272

QC Batch: 16833 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2611272001, 2611272002

METHOD BLANK: 75562 Matrix: Water
Associated Lab Samples: 2611272001, 2611272002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	11/12/18 16:19	

LABORATORY CONTROL SAMPLE: 75563

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: 75564 75565

Parameter	Units	2611272001 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	0.0022	0.0025	90	101	75-125	11	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611272

QC Batch: 16990
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Associated Lab Samples: 2611272001, 2611272002

METHOD BLANK: 76661 Matrix: Water
Associated Lab Samples: 2611272001, 2611272002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	11/13/18 17:05	
Arsenic	mg/L	ND	0.0050	0.00057	11/13/18 17:05	
Barium	mg/L	ND	0.010	0.00078	11/13/18 17:05	
Beryllium	mg/L	ND	0.0030	0.000050	11/13/18 17:05	
Boron	mg/L	ND	0.040	0.0039	11/13/18 17:05	
Cadmium	mg/L	ND	0.0010	0.000093	11/13/18 17:05	
Calcium	mg/L	ND	0.50	0.014	11/13/18 17:05	
Chromium	mg/L	ND	0.010	0.0016	11/13/18 17:05	
Cobalt	mg/L	ND	0.010	0.00052	11/13/18 17:05	
Lead	mg/L	ND	0.0050	0.00027	11/13/18 17:05	
Lithium	mg/L	ND	0.050	0.00097	11/13/18 17:05	
Molybdenum	mg/L	ND	0.010	0.0019	11/13/18 17:05	
Selenium	mg/L	ND	0.010	0.0014	11/13/18 17:05	
Thallium	mg/L	ND	0.0010	0.00014	11/13/18 17:05	

LABORATORY CONTROL SAMPLE: 76662

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.099	99	80-120	
Arsenic	mg/L	.1	0.10	102	80-120	
Barium	mg/L	.1	0.098	98	80-120	
Beryllium	mg/L	.1	0.10	101	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	.1	0.098	98	80-120	
Calcium	mg/L	1	0.99	99	80-120	
Chromium	mg/L	.1	0.10	100	80-120	
Cobalt	mg/L	.1	0.10	100	80-120	
Lead	mg/L	.1	0.099	99	80-120	
Lithium	mg/L	.1	0.10	102	80-120	
Molybdenum	mg/L	.1	0.10	101	80-120	
Selenium	mg/L	.1	0.10	104	80-120	
Thallium	mg/L	.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 76663 76664

Parameter	Units	2611389006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.099	0.10	99	100	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611272

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 76663 76664

Parameter	Units	2611389006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.0012J	.1	.1	0.10	0.11	100	104	75-125	4	20	
Barium	mg/L	0.024	.1	.1	0.12	0.12	95	96	75-125	1	20	
Beryllium	mg/L	0.0020J	.1	.1	0.10	0.10	100	100	75-125	1	20	
Boron	mg/L	2.6	1	1	3.2	3.1	56	51	75-125	2	20	M1
Cadmium	mg/L	0.00031J	.1	.1	0.096	0.097	95	97	75-125	1	20	
Calcium	mg/L	81.7	1	1	83.3	79.1	159	-263	75-125	5	20	M6
Chromium	mg/L	0.0028J	.1	.1	0.10	0.10	97	97	75-125	0	20	
Cobalt	mg/L	0.048	.1	.1	0.14	0.14	96	95	75-125	0	20	
Lead	mg/L	ND	.1	.1	0.094	0.093	94	93	75-125	0	20	
Lithium	mg/L	0.0034J	.1	.1	0.10	0.10	99	100	75-125	1	20	
Molybdenum	mg/L	ND	.1	.1	0.098	0.099	98	99	75-125	2	20	
Selenium	mg/L	0.0068J	.1	.1	0.11	0.12	103	109	75-125	5	20	
Thallium	mg/L	0.00052J	.1	.1	0.093	0.095	92	94	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611272

QC Batch: 16943
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2611272001, 2611272002

LABORATORY CONTROL SAMPLE: 76546

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	405	101	84-108	

SAMPLE DUPLICATE: 76547

Parameter	Units	2611269010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	23.0J	18.0J	24	10	D6

SAMPLE DUPLICATE: 76548

Parameter	Units	2611389001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	504	495	2	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611272

QC Batch: 17032 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2611272001, 2611272002

METHOD BLANK: 76760 Matrix: Water
Associated Lab Samples: 2611272001, 2611272002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.12J	0.25	0.024	11/13/18 16:17	
Fluoride	mg/L	ND	0.30	0.029	11/13/18 16:17	
Sulfate	mg/L	ND	1.0	0.017	11/13/18 16:17	

LABORATORY CONTROL SAMPLE: 76761

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.2	102	90-110	
Fluoride	mg/L	10	9.9	99	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 76762 76763

Parameter	Units	2611272001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.3	10	10	12.4	12.5	101	102	90-110	0	15	
Fluoride	mg/L	ND	10	10	10.3	10.3	103	103	90-110	0	15	
Sulfate	mg/L	0.12J	10	10	10.4	10.8	103	107	90-110	4	15	

MATRIX SPIKE SAMPLE: 76764

Parameter	Units	2611272002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.6	10	13.0	105	90-110	
Fluoride	mg/L	ND	10	10.2	102	90-110	
Sulfate	mg/L	7.3	10	17.7	104	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611272

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

D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611272

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2611272001	**DGWA-70A**	EPA 3005A	16990	EPA 6020B	17017
2611272002	**DGWA-71**	EPA 3005A	16990	EPA 6020B	17017
2611272001	**DGWA-70A**	EPA 7470A	16833	EPA 7470A	17021
2611272002	**DGWA-71**	EPA 7470A	16833	EPA 7470A	17021
2611272001	**DGWA-70A**	SM 2540C	16943		
2611272002	**DGWA-71**	SM 2540C	16943		
2611272001	**DGWA-70A**	EPA 300.0	17032		
2611272002	**DGWA-71**	EPA 300.0	17032		

Pace Analytical
www.pacelabs.com

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

2176019

Section A Required Client Information:

Company: GA Power - CCR
Address: 2480 Maner Road
Atlanta, GA 30339
Email To: JABRAHAM@southernco.com
Phone: 404-506-7214 Fax:
Requested Due Date/TAT: standard

Section B Required Project Information:

Report To: Joju Abraham
Copy To: Golder
Purchase Order No.: SCS 10348606
Project Name: Plant McDonough Backyard
Project Number: 166849618

Section C Invoice Information:

Attention: SCSinvoices@Southernco.com
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: betsy.mcdaniel@pacelabs.com
Pace Profile #: 332-12

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: GA

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: Metals App III + IV	TDS, Cl, F, SO4	Radium 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	DGWA-70A	WT	G			11/6/18	1230		6	X		X						X	X	X		Extra Radium
2	DGWA-71	WT	G			11/6/18	1345		4	X		X						X	X	X		
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

Requested Analysis Filtered (Y/N)

WO#: 2611272

2611272

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Karim 11-7-18	11-7-18	0956	Mike Nguyen / Pace	11/7/18	0956	
	Mike Nguyen / Pace	11/7/18	1030	M Zalman	11/07/18	1030	
							0.8 / Y / Y / Y

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Karim Minkara
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11/7/18

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2611272

PM: BM Due Date: 11/14/18

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 85

Type of Ice: (Wet) Blue None

☐ Samples on ice, cooling process has begun

Cooler Temperature 0.8

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 11/07/18 MP

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed: Lot # of added preservative:
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

December 03, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 2611273

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on November 07, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611273

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611273

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2611273001	**DGWA-70A**	Water	11/06/18 12:30	11/07/18 10:30
2611273002	**DGWA-71**	Water	11/06/18 13:45	11/07/18 10:30

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Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611273

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2611273001	**DGWA-70A**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611273002	**DGWA-71**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611273

Sample: DGWA-70A **Lab ID: 2611273001** Collected: 11/06/18 12:30 Received: 11/07/18 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.328 ± 0.213 (0.300) C:97% T:NA**	pCi/L	11/29/18 08:41	13982-63-3	
Radium-228	EPA 9320	**0.531 ± 0.312 (0.561) C:79% T:87%**	pCi/L	11/27/18 15:07	15262-20-1	
Total Radium	Total Radium Calculation	**0.859 ± 0.525 (0.861)**	pCi/L	11/30/18 13:24	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611273

Sample: DGWA-71 **Lab ID: 2611273002** Collected: 11/06/18 13:45 Received: 11/07/18 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.130 ± 0.174 (0.366) C:95% T:NA**	pCi/L	11/29/18 08:41	13982-63-3	
Radium-228	EPA 9320	**0.325 ± 0.271 (0.539) C:78% T:100%**	pCi/L	11/27/18 15:07	15262-20-1	
Total Radium	Total Radium Calculation	**0.455 ± 0.445 (0.905)**	pCi/L	11/30/18 13:24	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611273

QC Batch: 320566 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2611273001, 2611273002

METHOD BLANK: 1563548 Matrix: Water
Associated Lab Samples: 2611273001, 2611273002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.196 ± 0.119 (0.189) C:97% T:NA	pCi/L	11/28/18 21:08	

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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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611273

QC Batch: 320542 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2611273001, 2611273002

METHOD BLANK: 1563498 Matrix: Water
Associated Lab Samples: 2611273001, 2611273002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.727 ± 0.361 (0.610) C:86% T:77%	pCi/L	11/27/18 11:48	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611273

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611273

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2611273001	**DGWA-70A**	EPA 9315	320566		
2611273002	**DGWA-71**	EPA 9315	320566		
2611273001	**DGWA-70A**	EPA 9320	320542		
2611273002	**DGWA-71**	EPA 9320	320542		
2611273001	**DGWA-70A**	Total Radium Calculation	322354		
2611273002	**DGWA-71**	Total Radium Calculation	322354		

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

2176019

Section A Required Client Information:

Company: GA Power - CCR
Address: 2480 Maner Road
Atlanta, GA 30339
Email To: JABRAHAM@southernco.com
Phone: 404-506-7214 Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Jojo Abraham
Copy To: Golder
Purchase Order No.: SCS 10348606
Project Name: Plant McDonough Background
Project Number: 166844618

Section C Invoice Information:

Attention: SCSinvoices@southernco.com
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: betsy.mcdaniel@pacelabs.com
Pace Profile #: 332.12

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: GA

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analysis Test ↓: Metals App III & IV	TDS, Cl, F, SO4	Radium 226/228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	DGWA-70A	WT	G			11/6/18	1230		6	X		X							X	X	X		Extra Radium
2	DGWA-71	WT	G			11/6/18	1345		4	X		X							X	X	X		
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

WO#: 2611273

2611273

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	[signature]	11-7-18	0956	Mike Nguyen / Pace	11/7/18	0956	
	Mike Nguyen / Pace	11/7/18	1030	[signature]	11/07/18	1030	
							0.8

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
0.8	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Karim Minkara

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11/7/18

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2611273

PM: BM **Due Date: 12/07/18**

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 25 **Type of Ice:** (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.8 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 11/07/18 MP

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed: Lot # of added preservative:
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

November 15, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant McDonough
Pace Project No.: 2611388

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant McDonough
Pace Project No.: 2611388

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant McDonough
Pace Project No.: 2611388

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2611388001	**DGWA-53 Filtered**	Water	11/07/18 08:50	11/08/18 15:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant McDonough
Pace Project No.: 2611388

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2611388001	**DGWA-53 Filtered**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough
Pace Project No.: 2611388

Sample: DGWA-53 Filtered **Lab ID: 2611388001** Collected: 11/07/18 08:50 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS, Dissolved	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony, Dissolved	ND	mg/L	0.0030	0.00078	1	11/13/18 11:13	11/14/18 15:50	7440-36-0	
Arsenic, Dissolved	ND	mg/L	0.0050	0.00057	1	11/13/18 11:13	11/14/18 15:50	7440-38-2	
Barium, Dissolved	**0.15**	mg/L	0.010	0.00078	1	11/13/18 11:13	11/14/18 15:50	7440-39-3	M1
Beryllium, Dissolved	ND	mg/L	0.0030	0.000050	1	11/13/18 11:13	11/14/18 15:50	7440-41-7	
Boron, Dissolved	**0.085**	mg/L	0.040	0.0039	1	11/13/18 11:13	11/14/18 15:50	7440-42-8	
Cadmium, Dissolved	ND	mg/L	0.0010	0.000093	1	11/13/18 11:13	11/14/18 15:50	7440-43-9	
Calcium, Dissolved	**30.7**	mg/L	25.0	0.69	50	11/13/18 11:13	11/14/18 15:56	7440-70-2	M6
Chromium, Dissolved	ND	mg/L	0.010	0.0016	1	11/13/18 11:13	11/14/18 15:50	7440-47-3	
Cobalt, Dissolved	**0.019**	mg/L	0.010	0.00052	1	11/13/18 11:13	11/14/18 15:50	7440-48-4	
Lead, Dissolved	ND	mg/L	0.0050	0.00027	1	11/13/18 11:13	11/14/18 15:50	7439-92-1	
Lithium, Dissolved	**0.0095J**	mg/L	0.050	0.00097	1	11/13/18 11:13	11/14/18 15:50	7439-93-2	
Molybdenum, Dissolved	**0.030**	mg/L	0.010	0.0019	1	11/13/18 11:13	11/14/18 15:50	7439-98-7	
Selenium, Dissolved	ND	mg/L	0.010	0.0014	1	11/13/18 11:13	11/14/18 15:50	7782-49-2	
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	11/13/18 11:13	11/14/18 15:50	7440-28-0	
7470 Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	ND	mg/L	0.00020	0.000036	1	11/14/18 09:40	11/14/18 13:56	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough
Pace Project No.: 2611388

QC Batch: 17130 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury Dissolved
Associated Lab Samples: 2611388001

METHOD BLANK: 77113 Matrix: Water
Associated Lab Samples: 2611388001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	mg/L	ND	0.00020	0.000036	11/14/18 13:51	

LABORATORY CONTROL SAMPLE: 77114

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	mg/L	.0025	0.0025	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 77115 77116

Parameter	Units	2611388001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	mg/L	ND	.0025	.0025	0.0025	0.0026	100	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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough
Pace Project No.: 2611388

QC Batch: 17057
QC Batch Method: EPA 3005A
Associated Lab Samples: 2611388001

Analysis Method: EPA 6020B
Analysis Description: 6020B MET Dissolved

METHOD BLANK: 76816
Matrix: Water
Associated Lab Samples: 2611388001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	mg/L	ND	0.0030	0.00078	11/14/18 15:38	
Arsenic, Dissolved	mg/L	ND	0.0050	0.00057	11/14/18 15:38	
Barium, Dissolved	mg/L	ND	0.010	0.00078	11/14/18 15:38	
Beryllium, Dissolved	mg/L	ND	0.0030	0.000050	11/14/18 15:38	
Boron, Dissolved	mg/L	ND	0.040	0.0039	11/14/18 15:38	
Cadmium, Dissolved	mg/L	ND	0.0010	0.000093	11/14/18 15:38	
Calcium, Dissolved	mg/L	ND	0.50	0.014	11/14/18 15:38	
Chromium, Dissolved	mg/L	ND	0.010	0.0016	11/14/18 15:38	
Cobalt, Dissolved	mg/L	ND	0.010	0.00052	11/14/18 15:38	
Lead, Dissolved	mg/L	ND	0.0050	0.00027	11/14/18 15:38	
Lithium, Dissolved	mg/L	ND	0.050	0.00097	11/14/18 15:38	
Molybdenum, Dissolved	mg/L	ND	0.010	0.0019	11/14/18 15:38	
Selenium, Dissolved	mg/L	ND	0.010	0.0014	11/14/18 15:38	
Thallium, Dissolved	mg/L	ND	0.0010	0.00014	11/14/18 15:38	

LABORATORY CONTROL SAMPLE: 76817

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	.1	0.11	110	80-120	
Arsenic, Dissolved	mg/L	.1	0.10	103	80-120	
Barium, Dissolved	mg/L	.1	0.11	107	80-120	
Beryllium, Dissolved	mg/L	.1	0.11	108	80-120	
Boron, Dissolved	mg/L	1	1.1	106	80-120	
Cadmium, Dissolved	mg/L	.1	0.10	103	80-120	
Calcium, Dissolved	mg/L	1	1.1	106	80-120	
Chromium, Dissolved	mg/L	.1	0.10	104	80-120	
Cobalt, Dissolved	mg/L	.1	0.11	105	80-120	
Lead, Dissolved	mg/L	.1	0.10	104	80-120	
Lithium, Dissolved	mg/L	.1	0.11	106	80-120	
Molybdenum, Dissolved	mg/L	.1	0.10	103	80-120	
Selenium, Dissolved	mg/L	.1	0.10	104	80-120	
Thallium, Dissolved	mg/L	.1	0.10	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 76818 76819

Parameter	Units	2611388001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	mg/L	ND	.1	.1	0.11	0.11	114	111	75-125	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough
Pace Project No.: 2611388

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 76818 76819

Parameter	Units	2611388001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic, Dissolved	mg/L	ND	.1	.1	0.10	0.10	103	104	75-125	1	20	
Barium, Dissolved	mg/L	0.15	.1	.1	0.29	0.28	143	133	75-125	4	20	M1
Beryllium, Dissolved	mg/L	ND	.1	.1	0.11	0.10	106	103	75-125	3	20	
Boron, Dissolved	mg/L	0.085	1	1	1.1	1.1	103	106	75-125	2	20	
Cadmium, Dissolved	mg/L	ND	.1	.1	0.11	0.10	107	104	75-125	2	20	
Calcium, Dissolved	mg/L	30.7	1	1	32.7	31.4	203	72	75-125	4	20	M6
Chromium, Dissolved	mg/L	ND	.1	.1	0.10	0.11	102	106	75-125	3	20	
Cobalt, Dissolved	mg/L	0.019	.1	.1	0.12	0.12	100	104	75-125	3	20	
Lead, Dissolved	mg/L	ND	.1	.1	0.10	0.10	105	101	75-125	4	20	
Lithium, Dissolved	mg/L	0.0095J	.1	.1	0.11	0.11	103	102	75-125	1	20	
Molybdenum, Dissolved	mg/L	0.030	.1	.1	0.14	0.13	109	103	75-125	5	20	
Selenium, Dissolved	mg/L	ND	.1	.1	0.10	0.11	105	105	75-125	0	20	
Thallium, Dissolved	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant McDonough
Pace Project No.: 2611388

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough
Pace Project No.: 2611388

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2611388001	**DGWA-53 Filtered**	EPA 3005A	17057	EPA 6020B	17122
2611388001	**DGWA-53 Filtered**	EPA 7470A	17130	EPA 7470A	17194

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	scsinvoices@southernco.com
Address:	2480 Maner Road	Copy To:	Golder	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant McDonough Background	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:	Standard TAT	Project #:	166849618	Pace Profile #:	332.1.2

Regulatory Agency

State / Location: GA

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analysis Filtered (Y/N) Analyses Test Y/N	Dissolved Metals App. III & IV	Residual Chlorine (Y/N)	
1	DGWA-53 FILTERED	WT	G	11/7/2018	850		1			X						X		Field filtered
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

WO#: 2611388

2611388

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Sampled by: Chris Trovall 11-7-18		11/8/2018	15:00	M Dahlman	11/08/18	1500	
							1.3 Y Y Y

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

DATE Signed:

Sample Condition Upon Receipt

Face Analytical

Client Name: GA Power

Project #

WO#: 2611388

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

PM: BM **Due Date: 11/15/18**

CLIENT: GAPower-CCR

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 **Type of Ice:** (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.3 **Biological Tissue is Frozen:** Yes No

Date and Initials of person examining contents: 11/08/18 BR

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☑Yes ☐No ☐N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed: Lot # of added preservative:
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

November 16, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

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CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

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 McDonough Ash Ponds
Pace Project No.: 2611389

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2611389001	**DGWC-12**	Water	11/07/18 09:25	11/08/18 15:00
2611389002	**DGWC-13**	Water	11/07/18 10:40	11/08/18 15:00
2611389003	**DGWC-14**	Water	11/07/18 08:40	11/08/18 15:00
2611389004	**DGWC-15**	Water	11/07/18 11:40	11/08/18 15:00
2611389005	**DGWC-17**	Water	11/07/18 11:25	11/08/18 15:00
2611389006	**DGWC-19**	Water	11/07/18 09:55	11/08/18 15:00
2611389007	**DGWC-20**	Water	11/07/18 11:05	11/08/18 15:00
2611389008	**DGWC-21**	Water	11/07/18 12:30	11/08/18 15:00
2611389009	**DGWC-22**	Water	11/07/18 13:50	11/08/18 15:00
2611389010	**DGWC-42**	Water	11/07/18 12:45	11/08/18 15:00
2611389011	**DGWC-47**	Water	11/07/18 14:35	11/08/18 15:00
2611389012	**DGWC-48**	Water	11/07/18 14:40	11/08/18 15:00
2611389013	**FB-2**	Water	11/07/18 11:10	11/08/18 15:00
2611389014	**FD-2**	Water	11/07/18 00:00	11/08/18 15:00
2611389015	**EB-2**	Water	11/07/18 13:30	11/08/18 15:00
2611389016	**DGWC-23**	Water	11/08/18 08:10	11/08/18 15:00

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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2611389001	**DGWC-12**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611389002	**DGWC-13**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611389003	**DGWC-14**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611389004	**DGWC-15**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611389005	**DGWC-17**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611389006	**DGWC-19**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611389007	**DGWC-20**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611389008	**DGWC-21**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611389009	**DGWC-22**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611389010	**DGWC-42**	EPA 6020B	CSW	14

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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611389011	**DGWC-47**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611389012	**DGWC-48**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611389013	**FB-2**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611389014	**FD-2**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611389015	**EB-2**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
2611389016	**DGWC-23**	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 McDonough Ash Ponds
Pace Project No.: 2611389

Sample: DGWC-12 **Lab ID: 2611389001** Collected: 11/07/18 09:25 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/12/18 14:18	11/13/18 19:33	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/12/18 14:18	11/13/18 19:33	7440-38-2	
Barium	**0.028**	mg/L	0.010	0.00078	1	11/12/18 14:18	11/13/18 19:33	7440-39-3	
Beryllium	**0.00019J**	mg/L	0.0030	0.000050	1	11/12/18 14:18	11/13/18 19:33	7440-41-7	
Boron	**7.7**	mg/L	2.0	0.20	50	11/12/18 14:18	11/13/18 19:39	7440-42-8	
Cadmium	**0.00031J**	mg/L	0.0010	0.000093	1	11/12/18 14:18	11/13/18 19:33	7440-43-9	
Calcium	**73.3**	mg/L	25.0	0.69	50	11/12/18 14:18	11/13/18 19:39	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/12/18 14:18	11/13/18 19:33	7440-47-3	
Cobalt	**0.0057J**	mg/L	0.010	0.00052	1	11/12/18 14:18	11/13/18 19:33	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/12/18 14:18	11/13/18 19:33	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	11/12/18 14:18	11/13/18 19:33	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/12/18 14:18	11/13/18 19:33	7439-98-7	
Selenium	**0.0016J**	mg/L	0.010	0.0014	1	11/12/18 14:18	11/13/18 19:33	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/12/18 14:18	11/13/18 19:33	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000045J**	mg/L	0.00050	0.000036	1	11/12/18 12:26	11/12/18 17:39	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**504**	mg/L	25.0	10.0	1		11/12/18 10:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**11.8**	mg/L	0.25	0.024	1		11/13/18 22:50	16887-00-6	
Fluoride	**0.070J**	mg/L	0.30	0.029	1		11/13/18 22:50	16984-48-8	
Sulfate	**298**	mg/L	20.0	0.34	20		11/14/18 06:25	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Sample: DGWC-13 **Lab ID: 2611389002** Collected: 11/07/18 10:40 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/12/18 14:18	11/13/18 19:45	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/12/18 14:18	11/13/18 19:45	7440-38-2	
Barium	**0.034**	mg/L	0.010	0.00078	1	11/12/18 14:18	11/13/18 19:45	7440-39-3	
Beryllium	**0.000059J**	mg/L	0.0030	0.000050	1	11/12/18 14:18	11/13/18 19:45	7440-41-7	
Boron	**0.76**	mg/L	0.040	0.0039	1	11/12/18 14:18	11/13/18 19:45	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/12/18 14:18	11/13/18 19:45	7440-43-9	
Calcium	**44.8**	mg/L	25.0	0.69	50	11/12/18 14:18	11/13/18 19:51	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/12/18 14:18	11/13/18 19:45	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	11/12/18 14:18	11/13/18 19:45	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/12/18 14:18	11/13/18 19:45	7439-92-1	
Lithium	**0.0033J**	mg/L	0.050	0.00097	1	11/12/18 14:18	11/13/18 19:45	7439-93-2	
Molybdenum	**0.018**	mg/L	0.010	0.0019	1	11/12/18 14:18	11/13/18 19:45	7439-98-7	
Selenium	**0.0029J**	mg/L	0.010	0.0014	1	11/12/18 14:18	11/13/18 19:45	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/12/18 14:18	11/13/18 19:45	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/12/18 12:26	11/12/18 17:49	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**314**	mg/L	25.0	10.0	1		11/12/18 10:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**16.7**	mg/L	0.25	0.024	1		11/13/18 23:11	16887-00-6	
Fluoride	**0.088J**	mg/L	0.30	0.029	1		11/13/18 23:11	16984-48-8	
Sulfate	**162**	mg/L	10.0	0.17	10		11/14/18 06:45	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Sample: DGWC-14 **Lab ID: 2611389003** Collected: 11/07/18 08:40 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/12/18 14:18	11/13/18 19:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/12/18 14:18	11/13/18 19:56	7440-38-2	
Barium	**0.055**	mg/L	0.010	0.00078	1	11/12/18 14:18	11/13/18 19:56	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	11/12/18 14:18	11/13/18 19:56	7440-41-7	
Boron	**0.055**	mg/L	0.040	0.0039	1	11/12/18 14:18	11/13/18 19:56	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/12/18 14:18	11/13/18 19:56	7440-43-9	
Calcium	**9.7**	mg/L	2.5	0.069	5	11/12/18 14:18	11/15/18 14:31	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/12/18 14:18	11/13/18 19:56	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	11/12/18 14:18	11/13/18 19:56	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/12/18 14:18	11/13/18 19:56	7439-92-1	
Lithium	**0.0037J**	mg/L	0.050	0.00097	1	11/12/18 14:18	11/13/18 19:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/12/18 14:18	11/13/18 19:56	7439-98-7	
Selenium	**0.0016J**	mg/L	0.010	0.0014	1	11/12/18 14:18	11/13/18 19:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/12/18 14:18	11/13/18 19:56	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/12/18 12:26	11/12/18 17:51	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**113**	mg/L	25.0	10.0	1		11/12/18 10:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.1**	mg/L	0.25	0.024	1		11/13/18 23:31	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		11/13/18 23:31	16984-48-8	
Sulfate	**41.3**	mg/L	1.0	0.017	1		11/13/18 23:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Sample: DGWC-15 **Lab ID: 2611389004** Collected: 11/07/18 11:40 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/12/18 14:18	11/13/18 20:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/12/18 14:18	11/13/18 20:08	7440-38-2	
Barium	**0.042**	mg/L	0.010	0.00078	1	11/12/18 14:18	11/13/18 20:08	7440-39-3	
Beryllium	**0.00057J**	mg/L	0.0030	0.000050	1	11/12/18 14:18	11/13/18 20:08	7440-41-7	
Boron	**0.80**	mg/L	0.040	0.0039	1	11/12/18 14:18	11/13/18 20:08	7440-42-8	
Cadmium	**0.00031J**	mg/L	0.0010	0.000093	1	11/12/18 14:18	11/13/18 20:08	7440-43-9	
Calcium	**11.4**	mg/L	2.5	0.069	5	11/12/18 14:18	11/14/18 19:36	7440-70-2	
Chromium	**0.0024J**	mg/L	0.010	0.0016	1	11/12/18 14:18	11/13/18 20:08	7440-47-3	
Cobalt	**0.025**	mg/L	0.010	0.00052	1	11/12/18 14:18	11/13/18 20:08	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/12/18 14:18	11/13/18 20:08	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	11/12/18 14:18	11/13/18 20:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/12/18 14:18	11/13/18 20:08	7439-98-7	
Selenium	**0.0079J**	mg/L	0.010	0.0014	1	11/12/18 14:18	11/13/18 20:08	7782-49-2	
Thallium	**0.00016J**	mg/L	0.0010	0.00014	1	11/12/18 14:18	11/13/18 20:08	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/12/18 12:26	11/12/18 17:54	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**325**	mg/L	25.0	10.0	1		11/12/18 10:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**22.4**	mg/L	0.25	0.024	1		11/13/18 23:52	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		11/13/18 23:52	16984-48-8	
Sulfate	**168**	mg/L	10.0	0.17	10		11/14/18 07:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Sample: DGWC-17 **Lab ID: 2611389005** Collected: 11/07/18 11:25 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/12/18 14:18	11/13/18 20:31	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/12/18 14:18	11/13/18 20:31	7440-38-2	
Barium	**0.044**	mg/L	0.010	0.00078	1	11/12/18 14:18	11/13/18 20:31	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	11/12/18 14:18	11/13/18 20:31	7440-41-7	
Boron	**1.6**	mg/L	0.040	0.0039	1	11/12/18 14:18	11/13/18 20:31	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/12/18 14:18	11/13/18 20:31	7440-43-9	
Calcium	**37.0**	mg/L	25.0	0.69	50	11/12/18 14:18	11/13/18 20:36	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/12/18 14:18	11/13/18 20:31	7440-47-3	
Cobalt	**0.0016J**	mg/L	0.010	0.00052	1	11/12/18 14:18	11/13/18 20:31	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/12/18 14:18	11/13/18 20:31	7439-92-1	
Lithium	**0.0058J**	mg/L	0.050	0.00097	1	11/12/18 14:18	11/13/18 20:31	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/12/18 14:18	11/13/18 20:31	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/12/18 14:18	11/13/18 20:31	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/12/18 14:18	11/13/18 20:31	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000059J**	mg/L	0.00050	0.000036	1	11/12/18 12:26	11/12/18 18:01	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**408**	mg/L	25.0	10.0	1		11/12/18 10:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**21.4**	mg/L	0.25	0.024	1		11/14/18 00:13	16887-00-6	
Fluoride	**0.095J**	mg/L	0.30	0.029	1		11/14/18 00:13	16984-48-8	
Sulfate	**248**	mg/L	20.0	0.34	20		11/14/18 07:27	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Sample: DGWC-19 **Lab ID: 2611389006** Collected: 11/07/18 09:55 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/12/18 14:18	11/13/18 20:42	7440-36-0	
Arsenic	**0.0012J**	mg/L	0.0050	0.00057	1	11/12/18 14:18	11/13/18 20:42	7440-38-2	
Barium	**0.024**	mg/L	0.010	0.00078	1	11/12/18 14:18	11/13/18 20:42	7440-39-3	
Beryllium	**0.0020J**	mg/L	0.0030	0.000050	1	11/12/18 14:18	11/13/18 20:42	7440-41-7	
Boron	**2.6**	mg/L	0.040	0.0039	1	11/12/18 14:18	11/13/18 20:42	7440-42-8	M1
Cadmium	**0.00031J**	mg/L	0.0010	0.000093	1	11/12/18 14:18	11/13/18 20:42	7440-43-9	
Calcium	**81.7**	mg/L	25.0	0.69	50	11/12/18 14:18	11/13/18 20:48	7440-70-2	M6
Chromium	**0.0028J**	mg/L	0.010	0.0016	1	11/12/18 14:18	11/13/18 20:42	7440-47-3	
Cobalt	**0.048**	mg/L	0.010	0.00052	1	11/12/18 14:18	11/13/18 20:42	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/12/18 14:18	11/13/18 20:42	7439-92-1	
Lithium	**0.0034J**	mg/L	0.050	0.00097	1	11/12/18 14:18	11/13/18 20:42	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/12/18 14:18	11/13/18 20:42	7439-98-7	
Selenium	**0.0068J**	mg/L	0.010	0.0014	1	11/12/18 14:18	11/13/18 20:42	7782-49-2	
Thallium	**0.00052J**	mg/L	0.0010	0.00014	1	11/12/18 14:18	11/13/18 20:42	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/12/18 12:26	11/12/18 18:03	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**461**	mg/L	25.0	10.0	1		11/12/18 10:10		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**38.8**	mg/L	0.25	0.024	1		11/14/18 00:33	16887-00-6	
Fluoride	**0.20J**	mg/L	0.30	0.029	1		11/14/18 00:33	16984-48-8	
Sulfate	**266**	mg/L	20.0	0.34	20		11/14/18 07:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Sample: DGWC-20 **Lab ID: 2611389007** Collected: 11/07/18 11:05 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/12/18 14:18	11/13/18 21:34	7440-36-0	
Arsenic	**0.0054**	mg/L	0.0050	0.00057	1	11/12/18 14:18	11/13/18 21:34	7440-38-2	
Barium	**0.011**	mg/L	0.010	0.00078	1	11/12/18 14:18	11/13/18 21:34	7440-39-3	
Beryllium	**0.0024J**	mg/L	0.0030	0.000050	1	11/12/18 14:18	11/13/18 21:34	7440-41-7	
Boron	**5.0**	mg/L	0.040	0.0039	1	11/12/18 14:18	11/13/18 21:34	7440-42-8	
Cadmium	**0.0018**	mg/L	0.0010	0.000093	1	11/12/18 14:18	11/13/18 21:34	7440-43-9	
Calcium	**85.9**	mg/L	25.0	0.69	50	11/12/18 14:18	11/13/18 21:39	7440-70-2	
Chromium	**0.0032J**	mg/L	0.010	0.0016	1	11/12/18 14:18	11/13/18 21:34	7440-47-3	
Cobalt	**0.42**	mg/L	0.010	0.00052	1	11/12/18 14:18	11/13/18 21:34	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/12/18 14:18	11/13/18 21:34	7439-92-1	
Lithium	**0.0019J**	mg/L	0.050	0.00097	1	11/12/18 14:18	11/13/18 21:34	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/12/18 14:18	11/13/18 21:34	7439-98-7	
Selenium	**0.044**	mg/L	0.010	0.0014	1	11/12/18 14:18	11/13/18 21:34	7782-49-2	
Thallium	**0.00053J**	mg/L	0.0010	0.00014	1	11/12/18 14:18	11/13/18 21:34	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000038J**	mg/L	0.00050	0.000036	1	11/12/18 12:26	11/12/18 18:06	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**834**	mg/L	25.0	10.0	1		11/13/18 15:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**21.5**	mg/L	0.25	0.024	1		11/14/18 00:54	16887-00-6	
Fluoride	**0.099J**	mg/L	0.30	0.029	1		11/14/18 00:54	16984-48-8	
Sulfate	**554**	mg/L	50.0	0.85	50		11/14/18 08:08	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Sample: DGWC-21 **Lab ID: 2611389008** Collected: 11/07/18 12:30 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/12/18 14:18	11/13/18 21:45	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/12/18 14:18	11/13/18 21:45	7440-38-2	
Barium	**0.024**	mg/L	0.010	0.00078	1	11/12/18 14:18	11/13/18 21:45	7440-39-3	
Beryllium	**0.00018J**	mg/L	0.0030	0.000050	1	11/12/18 14:18	11/13/18 21:45	7440-41-7	
Boron	**4.9**	mg/L	0.040	0.0039	1	11/12/18 14:18	11/13/18 21:45	7440-42-8	
Cadmium	**0.00048J**	mg/L	0.0010	0.000093	1	11/12/18 14:18	11/13/18 21:45	7440-43-9	
Calcium	**78.5**	mg/L	25.0	0.69	50	11/12/18 14:18	11/13/18 21:51	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/12/18 14:18	11/13/18 21:45	7440-47-3	
Cobalt	**0.0096J**	mg/L	0.010	0.00052	1	11/12/18 14:18	11/13/18 21:45	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/12/18 14:18	11/13/18 21:45	7439-92-1	
Lithium	**0.0059J**	mg/L	0.050	0.00097	1	11/12/18 14:18	11/13/18 21:45	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/12/18 14:18	11/13/18 21:45	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/12/18 14:18	11/13/18 21:45	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/12/18 14:18	11/13/18 21:45	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000051J**	mg/L	0.00050	0.000036	1	11/12/18 12:26	11/12/18 18:08	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**516**	mg/L	25.0	10.0	1		11/13/18 15:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**20.5**	mg/L	0.25	0.024	1		11/14/18 02:37	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		11/14/18 02:37	16984-48-8	
Sulfate	**286**	mg/L	20.0	0.34	20		11/14/18 09:54	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Sample: DGWC-22 **Lab ID: 2611389009** Collected: 11/07/18 13:50 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/12/18 14:18	11/13/18 21:57	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/12/18 14:18	11/13/18 21:57	7440-38-2	
Barium	**0.031**	mg/L	0.010	0.00078	1	11/12/18 14:18	11/13/18 21:57	7440-39-3	
Beryllium	**0.00017J**	mg/L	0.0030	0.000050	1	11/12/18 14:18	11/13/18 21:57	7440-41-7	
Boron	**3.3**	mg/L	0.040	0.0039	1	11/12/18 14:18	11/13/18 21:57	7440-42-8	
Cadmium	**0.00064J**	mg/L	0.0010	0.000093	1	11/12/18 14:18	11/13/18 21:57	7440-43-9	
Calcium	**60.9**	mg/L	25.0	0.69	50	11/12/18 14:18	11/13/18 22:02	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/12/18 14:18	11/13/18 21:57	7440-47-3	
Cobalt	**0.0088J**	mg/L	0.010	0.00052	1	11/12/18 14:18	11/13/18 21:57	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/12/18 14:18	11/13/18 21:57	7439-92-1	
Lithium	**0.0040J**	mg/L	0.050	0.00097	1	11/12/18 14:18	11/13/18 21:57	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/12/18 14:18	11/13/18 21:57	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/12/18 14:18	11/13/18 21:57	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/12/18 14:18	11/13/18 21:57	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/12/18 12:26	11/12/18 18:10	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**511**	mg/L	25.0	10.0	1		11/13/18 15:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**25.8**	mg/L	0.25	0.024	1		11/15/18 03:59	16887-00-6	M1
Fluoride	ND	mg/L	0.30	0.029	1		11/15/18 03:59	16984-48-8	
Sulfate	**320**	mg/L	50.0	0.85	50		11/15/18 09:01	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Sample: DGWC-42 **Lab ID: 2611389010** Collected: 11/07/18 12:45 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/12/18 14:18	11/13/18 22:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/12/18 14:18	11/13/18 22:08	7440-38-2	
Barium	**0.017**	mg/L	0.010	0.00078	1	11/12/18 14:18	11/13/18 22:08	7440-39-3	
Beryllium	**0.0031**	mg/L	0.0030	0.000050	1	11/12/18 14:18	11/13/18 22:08	7440-41-7	
Boron	**0.89**	mg/L	0.040	0.0039	1	11/12/18 14:18	11/13/18 22:08	7440-42-8	
Cadmium	**0.00091J**	mg/L	0.0010	0.000093	1	11/12/18 14:18	11/13/18 22:08	7440-43-9	
Calcium	**45.5**	mg/L	25.0	0.69	50	11/12/18 14:18	11/13/18 22:14	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/12/18 14:18	11/13/18 22:08	7440-47-3	
Cobalt	**0.020**	mg/L	0.010	0.00052	1	11/12/18 14:18	11/13/18 22:08	7440-48-4	
Lead	**0.00047J**	mg/L	0.0050	0.00027	1	11/12/18 14:18	11/13/18 22:08	7439-92-1	
Lithium	**0.012J**	mg/L	0.050	0.00097	1	11/12/18 14:18	11/13/18 22:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/12/18 14:18	11/13/18 22:08	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/12/18 14:18	11/13/18 22:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/12/18 14:18	11/13/18 22:08	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/12/18 12:26	11/12/18 18:13	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**626**	mg/L	25.0	10.0	1		11/13/18 15:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**28.6**	mg/L	0.25	0.024	1		11/15/18 05:01	16887-00-6	M1
Fluoride	ND	mg/L	0.30	0.029	1		11/15/18 05:01	16984-48-8	
Sulfate	**439**	mg/L	20.0	0.34	20		11/15/18 09:25	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Sample: DGWC-47 **Lab ID: 2611389011** Collected: 11/07/18 14:35 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/13/18 13:10	11/15/18 16:24	7440-36-0	
Arsenic	**0.0022J**	mg/L	0.0050	0.00057	1	11/13/18 13:10	11/15/18 16:24	7440-38-2	
Barium	**0.020**	mg/L	0.010	0.00078	1	11/13/18 13:10	11/15/18 16:24	7440-39-3	
Beryllium	**0.014**	mg/L	0.0030	0.000050	1	11/13/18 13:10	11/15/18 16:24	7440-41-7	
Boron	**0.30**	mg/L	0.040	0.0039	1	11/13/18 13:10	11/15/18 16:24	7440-42-8	
Cadmium	**0.0016**	mg/L	0.0010	0.000093	1	11/13/18 13:10	11/15/18 16:24	7440-43-9	
Calcium	**38.6**	mg/L	25.0	0.69	50	11/13/18 13:10	11/15/18 16:29	7440-70-2	M6
Chromium	ND	mg/L	0.010	0.0016	1	11/13/18 13:10	11/15/18 16:24	7440-47-3	
Cobalt	**0.35**	mg/L	0.010	0.00052	1	11/13/18 13:10	11/15/18 16:24	7440-48-4	M1
Lead	**0.00091J**	mg/L	0.0050	0.00027	1	11/13/18 13:10	11/15/18 16:24	7439-92-1	
Lithium	**0.082**	mg/L	0.050	0.00097	1	11/13/18 13:10	11/15/18 16:24	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/13/18 13:10	11/15/18 16:24	7439-98-7	
Selenium	**0.0045J**	mg/L	0.010	0.0014	1	11/13/18 13:10	11/15/18 16:24	7782-49-2	
Thallium	**0.00032J**	mg/L	0.0010	0.00014	1	11/13/18 13:10	11/15/18 16:24	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/12/18 12:26	11/12/18 18:15	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**348**	mg/L	25.0	10.0	1		11/13/18 15:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**8.6**	mg/L	0.25	0.024	1		11/15/18 05:22	16887-00-6	
Fluoride	**0.74**	mg/L	0.30	0.029	1		11/15/18 05:22	16984-48-8	
Sulfate	**143**	mg/L	25.0	0.42	25		11/15/18 09:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Sample: DGWC-48 **Lab ID: 2611389012** Collected: 11/07/18 14:40 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/13/18 13:10	11/15/18 17:20	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/13/18 13:10	11/15/18 17:20	7440-38-2	
Barium	**0.014**	mg/L	0.010	0.00078	1	11/13/18 13:10	11/15/18 17:20	7440-39-3	
Beryllium	**0.0078**	mg/L	0.0030	0.000050	1	11/13/18 13:10	11/15/18 17:20	7440-41-7	
Boron	**0.74**	mg/L	0.040	0.0039	1	11/13/18 13:10	11/15/18 17:20	7440-42-8	
Cadmium	**0.0031**	mg/L	0.0010	0.000093	1	11/13/18 13:10	11/15/18 17:20	7440-43-9	
Calcium	**88.0**	mg/L	25.0	0.69	50	11/13/18 13:10	11/15/18 17:26	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/13/18 13:10	11/15/18 17:20	7440-47-3	
Cobalt	**0.48**	mg/L	0.010	0.00052	1	11/13/18 13:10	11/15/18 17:20	7440-48-4	
Lead	**0.0023J**	mg/L	0.0050	0.00027	1	11/13/18 13:10	11/15/18 17:20	7439-92-1	
Lithium	**0.12**	mg/L	0.050	0.00097	1	11/13/18 13:10	11/15/18 17:20	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/13/18 13:10	11/15/18 17:20	7439-98-7	
Selenium	**0.0038J**	mg/L	0.010	0.0014	1	11/13/18 13:10	11/15/18 17:20	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/13/18 13:10	11/15/18 17:20	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/12/18 12:26	11/12/18 18:18	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**678**	mg/L	25.0	10.0	1		11/13/18 15:40		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**11.4**	mg/L	0.25	0.024	1		11/15/18 05:43	16887-00-6	
Fluoride	**0.63**	mg/L	0.30	0.029	1		11/15/18 05:43	16984-48-8	
Sulfate	**432**	mg/L	50.0	0.85	50		11/15/18 17:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Sample: FB-2 **Lab ID: 2611389013** Collected: 11/07/18 11:10 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/13/18 13:10	11/15/18 17:32	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/13/18 13:10	11/15/18 17:32	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	11/13/18 13:10	11/15/18 17:32	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	11/13/18 13:10	11/15/18 17:32	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	11/13/18 13:10	11/15/18 17:32	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/13/18 13:10	11/15/18 17:32	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	11/13/18 13:10	11/15/18 17:32	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/13/18 13:10	11/15/18 17:32	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	11/13/18 13:10	11/15/18 17:32	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/13/18 13:10	11/15/18 17:32	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	11/13/18 13:10	11/15/18 17:32	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/13/18 13:10	11/15/18 17:32	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/13/18 13:10	11/15/18 17:32	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/13/18 13:10	11/15/18 17:32	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/12/18 12:26	11/12/18 18:20	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**21.0J**	mg/L	25.0	10.0	1		11/13/18 15:40		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.10J**	mg/L	0.25	0.024	1		11/15/18 06:03	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		11/15/18 06:03	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		11/15/18 06:03	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Sample: FD-2 **Lab ID: 2611389014** Collected: 11/07/18 00:00 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/13/18 13:10	11/15/18 17:38	7440-36-0	
Arsenic	**0.0011J**	mg/L	0.0050	0.00057	1	11/13/18 13:10	11/15/18 17:38	7440-38-2	
Barium	**0.049**	mg/L	0.010	0.00078	1	11/13/18 13:10	11/15/18 17:38	7440-39-3	
Beryllium	**0.00055J**	mg/L	0.0030	0.000050	1	11/13/18 13:10	11/15/18 17:38	7440-41-7	
Boron	**0.81**	mg/L	0.040	0.0039	1	11/13/18 13:10	11/15/18 17:38	7440-42-8	
Cadmium	**0.00033J**	mg/L	0.0010	0.000093	1	11/13/18 13:10	11/15/18 17:38	7440-43-9	
Calcium	**11.7J**	mg/L	25.0	0.69	50	11/13/18 13:10	11/15/18 17:43	7440-70-2	D3
Chromium	**0.0025J**	mg/L	0.010	0.0016	1	11/13/18 13:10	11/15/18 17:38	7440-47-3	
Cobalt	**0.029**	mg/L	0.010	0.00052	1	11/13/18 13:10	11/15/18 17:38	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/13/18 13:10	11/15/18 17:38	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	11/13/18 13:10	11/15/18 17:38	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/13/18 13:10	11/15/18 17:38	7439-98-7	
Selenium	**0.0084J**	mg/L	0.010	0.0014	1	11/13/18 13:10	11/15/18 17:38	7782-49-2	
Thallium	**0.00017J**	mg/L	0.0010	0.00014	1	11/13/18 13:10	11/15/18 17:38	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000057J**	mg/L	0.00050	0.000036	1	11/12/18 12:26	11/12/18 18:22	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**420**	mg/L	25.0	10.0	1		11/13/18 15:40		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**21.5**	mg/L	0.25	0.024	1		11/15/18 06:24	16887-00-6	
Fluoride	**0.055J**	mg/L	0.30	0.029	1		11/15/18 06:24	16984-48-8	
Sulfate	**302**	mg/L	20.0	0.34	20		11/15/18 10:12	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Sample: EB-2 **Lab ID: 2611389015** Collected: 11/07/18 13:30 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/13/18 13:10	11/15/18 17:49	7440-36-0	
Arsenic	**0.00082J**	mg/L	0.0050	0.00057	1	11/13/18 13:10	11/15/18 17:49	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	11/13/18 13:10	11/15/18 17:49	7440-39-3	
Beryllium	**0.00028J**	mg/L	0.0030	0.000050	1	11/13/18 13:10	11/15/18 17:49	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	11/13/18 13:10	11/15/18 17:49	7440-42-8	
Cadmium	**0.00032J**	mg/L	0.0010	0.000093	1	11/13/18 13:10	11/15/18 17:49	7440-43-9	
Calcium	**0.087J**	mg/L	0.50	0.014	1	11/13/18 13:10	11/15/18 17:49	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/13/18 13:10	11/15/18 17:49	7440-47-3	
Cobalt	**0.0011J**	mg/L	0.010	0.00052	1	11/13/18 13:10	11/15/18 17:49	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/13/18 13:10	11/15/18 17:49	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	11/13/18 13:10	11/15/18 17:49	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	11/13/18 13:10	11/15/18 17:49	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/13/18 13:10	11/15/18 17:49	7782-49-2	
Thallium	**0.00024J**	mg/L	0.0010	0.00014	1	11/13/18 13:10	11/15/18 17:49	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/12/18 12:26	11/12/18 18:29	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**18.0J**	mg/L	25.0	10.0	1		11/13/18 15:40		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.090J**	mg/L	0.25	0.024	1		11/15/18 06:45	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		11/15/18 06:45	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		11/15/18 06:45	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Sample: DGWC-23 **Lab ID: 2611389016** Collected: 11/08/18 08:10 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/13/18 13:10	11/15/18 17:55	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/13/18 13:10	11/15/18 17:55	7440-38-2	
Barium	**0.022**	mg/L	0.010	0.00078	1	11/13/18 13:10	11/15/18 17:55	7440-39-3	
Beryllium	**0.00047J**	mg/L	0.0030	0.000050	1	11/13/18 13:10	11/15/18 17:55	7440-41-7	
Boron	**4.7**	mg/L	2.0	0.20	50	11/13/18 13:10	11/15/18 18:00	7440-42-8	
Cadmium	**0.00032J**	mg/L	0.0010	0.000093	1	11/13/18 13:10	11/15/18 17:55	7440-43-9	
Calcium	**73.5**	mg/L	25.0	0.69	50	11/13/18 13:10	11/15/18 18:00	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/13/18 13:10	11/15/18 17:55	7440-47-3	
Cobalt	**0.00091J**	mg/L	0.010	0.00052	1	11/13/18 13:10	11/15/18 17:55	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/13/18 13:10	11/15/18 17:55	7439-92-1	
Lithium	**0.0053J**	mg/L	0.050	0.00097	1	11/13/18 13:10	11/15/18 17:55	7439-93-2	
Molybdenum	**0.012**	mg/L	0.010	0.0019	1	11/13/18 13:10	11/15/18 17:55	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/13/18 13:10	11/15/18 17:55	7782-49-2	
Thallium	**0.00020J**	mg/L	0.0010	0.00014	1	11/13/18 13:10	11/15/18 17:55	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.00014J**	mg/L	0.00050	0.000036	1	11/12/18 12:26	11/12/18 18:32	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**450**	mg/L	25.0	10.0	1		11/13/18 15:40		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**14.6**	mg/L	0.25	0.024	1		11/15/18 07:05	16887-00-6	
Fluoride	**0.052J**	mg/L	0.30	0.029	1		11/15/18 07:05	16984-48-8	
Sulfate	**292**	mg/L	20.0	0.34	20		11/15/18 10:36	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

QC Batch: 16934 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2611389001, 2611389002, 2611389003, 2611389004, 2611389005, 2611389006, 2611389007, 2611389008, 2611389009, 2611389010, 2611389011, 2611389012, 2611389013, 2611389014, 2611389015, 2611389016

METHOD BLANK: 76505 Matrix: Water
Associated Lab Samples: 2611389001, 2611389002, 2611389003, 2611389004, 2611389005, 2611389006, 2611389007, 2611389008, 2611389009, 2611389010, 2611389011, 2611389012, 2611389013, 2611389014, 2611389015, 2611389016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	11/12/18 17:35	

LABORATORY CONTROL SAMPLE: 76506

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0024	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 76507 76508

Parameter	Units	2611389001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	0.000045J	.0025	.0025	0.0025	0.0025	97	100	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

QC Batch: 16990 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2611389001, 2611389002, 2611389003, 2611389004, 2611389005, 2611389006, 2611389007, 2611389008, 2611389009, 2611389010

METHOD BLANK: 76661 Matrix: Water
Associated Lab Samples: 2611389001, 2611389002, 2611389003, 2611389004, 2611389005, 2611389006, 2611389007, 2611389008, 2611389009, 2611389010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	11/13/18 17:05	
Arsenic	mg/L	ND	0.0050	0.00057	11/13/18 17:05	
Barium	mg/L	ND	0.010	0.00078	11/13/18 17:05	
Beryllium	mg/L	ND	0.0030	0.000050	11/13/18 17:05	
Boron	mg/L	ND	0.040	0.0039	11/13/18 17:05	
Cadmium	mg/L	ND	0.0010	0.000093	11/13/18 17:05	
Calcium	mg/L	ND	0.50	0.014	11/13/18 17:05	
Chromium	mg/L	ND	0.010	0.0016	11/13/18 17:05	
Cobalt	mg/L	ND	0.010	0.00052	11/13/18 17:05	
Lead	mg/L	ND	0.0050	0.00027	11/13/18 17:05	
Lithium	mg/L	ND	0.050	0.00097	11/13/18 17:05	
Molybdenum	mg/L	ND	0.010	0.0019	11/13/18 17:05	
Selenium	mg/L	ND	0.010	0.0014	11/13/18 17:05	
Thallium	mg/L	ND	0.0010	0.00014	11/13/18 17:05	

LABORATORY CONTROL SAMPLE: 76662

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.099	99	80-120	
Arsenic	mg/L	.1	0.10	102	80-120	
Barium	mg/L	.1	0.098	98	80-120	
Beryllium	mg/L	.1	0.10	101	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	.1	0.098	98	80-120	
Calcium	mg/L	1	0.99	99	80-120	
Chromium	mg/L	.1	0.10	100	80-120	
Cobalt	mg/L	.1	0.10	100	80-120	
Lead	mg/L	.1	0.099	99	80-120	
Lithium	mg/L	.1	0.10	102	80-120	
Molybdenum	mg/L	.1	0.10	101	80-120	
Selenium	mg/L	.1	0.10	104	80-120	
Thallium	mg/L	.1	0.099	99	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 76663 76664

Parameter	Units	2611389006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.099	0.10	99	100	75-125	1	20	
Arsenic	mg/L	0.0012J	.1	.1	0.10	0.11	100	104	75-125	4	20	
Barium	mg/L	0.024	.1	.1	0.12	0.12	95	96	75-125	1	20	
Beryllium	mg/L	0.0020J	.1	.1	0.10	0.10	100	100	75-125	1	20	
Boron	mg/L	2.6	1	1	3.2	3.1	56	51	75-125	2	20	M1
Cadmium	mg/L	0.00031J	.1	.1	0.096	0.097	95	97	75-125	1	20	
Calcium	mg/L	81.7	1	1	83.3	79.1	159	-263	75-125	5	20	M6
Chromium	mg/L	0.0028J	.1	.1	0.10	0.10	97	97	75-125	0	20	
Cobalt	mg/L	0.048	.1	.1	0.14	0.14	96	95	75-125	0	20	
Lead	mg/L	ND	.1	.1	0.094	0.093	94	93	75-125	0	20	
Lithium	mg/L	0.0034J	.1	.1	0.10	0.10	99	100	75-125	1	20	
Molybdenum	mg/L	ND	.1	.1	0.098	0.099	98	99	75-125	2	20	
Selenium	mg/L	0.0068J	.1	.1	0.11	0.12	103	109	75-125	5	20	
Thallium	mg/L	0.00052J	.1	.1	0.093	0.095	92	94	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

QC Batch: 17097 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2611389011, 2611389012, 2611389013, 2611389014, 2611389015, 2611389016

METHOD BLANK: 76972 Matrix: Water
Associated Lab Samples: 2611389011, 2611389012, 2611389013, 2611389014, 2611389015, 2611389016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	11/15/18 16:12	
Arsenic	mg/L	ND	0.0050	0.00057	11/15/18 16:12	
Barium	mg/L	ND	0.010	0.00078	11/15/18 16:12	
Beryllium	mg/L	ND	0.0030	0.000050	11/15/18 16:12	
Boron	mg/L	ND	0.040	0.0039	11/15/18 16:12	
Cadmium	mg/L	ND	0.0010	0.000093	11/15/18 16:12	
Calcium	mg/L	ND	0.50	0.014	11/15/18 16:12	
Chromium	mg/L	ND	0.010	0.0016	11/15/18 16:12	
Cobalt	mg/L	ND	0.010	0.00052	11/15/18 16:12	
Lead	mg/L	ND	0.0050	0.00027	11/15/18 16:12	
Lithium	mg/L	ND	0.050	0.00097	11/15/18 16:12	
Molybdenum	mg/L	ND	0.010	0.0019	11/15/18 16:12	
Selenium	mg/L	ND	0.010	0.0014	11/15/18 16:12	
Thallium	mg/L	ND	0.0010	0.00014	11/15/18 16:12	

LABORATORY CONTROL SAMPLE: 76973

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.11	112	80-120	
Arsenic	mg/L	.1	0.10	104	80-120	
Barium	mg/L	.1	0.11	107	80-120	
Beryllium	mg/L	.1	0.099	99	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	.1	0.10	102	80-120	
Calcium	mg/L	1	0.99	99	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.10	102	80-120	
Lead	mg/L	.1	0.10	100	80-120	
Lithium	mg/L	.1	0.10	100	80-120	
Molybdenum	mg/L	.1	0.10	104	80-120	
Selenium	mg/L	.1	0.11	108	80-120	
Thallium	mg/L	.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 76974 76975

Parameter	Units	2611389011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.11	0.10	113	104	75-125	8	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 76974 76975

Parameter	Units	2611389011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.0022J	.1	.1	0.11	0.10	107	100	75-125	6	20	
Barium	mg/L	0.020	.1	.1	0.12	0.12	104	95	75-125	7	20	
Beryllium	mg/L	0.014	.1	.1	0.12	0.11	103	96	75-125	6	20	
Boron	mg/L	0.30	1	1	1.3	1.2	98	90	75-125	7	20	
Cadmium	mg/L	0.0016	.1	.1	0.11	0.097	104	95	75-125	9	20	
Calcium	mg/L	38.6	1	1	38.1	35.8	-53	-276	75-125	6	20	M6
Chromium	mg/L	ND	.1	.1	0.10	0.093	102	92	75-125	10	20	
Cobalt	mg/L	0.35	.1	.1	0.43	0.40	75	51	75-125	6	20	M1
Lead	mg/L	0.00091J	.1	.1	0.10	0.093	99	92	75-125	8	20	
Lithium	mg/L	0.082	.1	.1	0.18	0.17	97	88	75-125	5	20	
Molybdenum	mg/L	ND	.1	.1	0.10	0.096	103	96	75-125	7	20	
Selenium	mg/L	0.0045J	.1	.1	0.11	0.10	109	98	75-125	10	20	
Thallium	mg/L	0.00032J	.1	.1	0.10	0.093	100	92	75-125	8	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

QC Batch: 16943 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2611389001, 2611389002, 2611389003, 2611389004, 2611389005, 2611389006

LABORATORY CONTROL SAMPLE: 76546

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	405	101	84-108	

SAMPLE DUPLICATE: 76547

Parameter	Units	2611269010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	23.0J	18.0J	24	10	D6

SAMPLE DUPLICATE: 76548

Parameter	Units	2611389001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	504	495	2	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

QC Batch: 17079 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2611389007, 2611389008, 2611389009, 2611389010, 2611389011, 2611389012, 2611389013, 2611389014, 2611389015, 2611389016

LABORATORY CONTROL SAMPLE: 76893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	412	103	84-108	

SAMPLE DUPLICATE: 76894

Parameter	Units	2611389007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	834	860	3	10	

SAMPLE DUPLICATE: 76895

Parameter	Units	2611393007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	112	112	0	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

QC Batch: 17032 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2611389001, 2611389002, 2611389003, 2611389004, 2611389005, 2611389006, 2611389007, 2611389008

METHOD BLANK: 76760 Matrix: Water
Associated Lab Samples: 2611389001, 2611389002, 2611389003, 2611389004, 2611389005, 2611389006, 2611389007, 2611389008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.12J	0.25	0.024	11/13/18 16:17	
Fluoride	mg/L	ND	0.30	0.029	11/13/18 16:17	
Sulfate	mg/L	ND	1.0	0.017	11/13/18 16:17	

LABORATORY CONTROL SAMPLE: 76761

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.2	102	90-110	
Fluoride	mg/L	10	9.9	99	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 76762 76763

Parameter	Units	2611272001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.3	10	10	12.4	12.5	101	102	90-110	0	15	
Fluoride	mg/L	ND	10	10	10.3	10.3	103	103	90-110	0	15	
Sulfate	mg/L	0.12J	10	10	10.4	10.8	103	107	90-110	4	15	

MATRIX SPIKE SAMPLE: 76764

Parameter	Units	2611272002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.6	10	13.0	105	90-110	
Fluoride	mg/L	ND	10	10.2	102	90-110	
Sulfate	mg/L	7.3	10	17.7	104	90-110	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

QC Batch: 17167 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2611389009, 2611389010, 2611389011, 2611389012, 2611389013, 2611389014, 2611389015, 2611389016

METHOD BLANK: 77239 Matrix: Water
Associated Lab Samples: 2611389009, 2611389010, 2611389011, 2611389012, 2611389013, 2611389014, 2611389015, 2611389016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.081J	0.25	0.024	11/15/18 03:18	
Fluoride	mg/L	ND	0.30	0.029	11/15/18 03:18	
Sulfate	mg/L	ND	1.0	0.017	11/15/18 03:18	

LABORATORY CONTROL SAMPLE: 77240

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.2	102	90-110	
Fluoride	mg/L	10	10.0	100	90-110	
Sulfate	mg/L	10	10.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 77241 77242

Parameter	Units	2611389009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	25.8	10	10	33.0	32.8	72	70	90-110	0	15	M1
Fluoride	mg/L	ND	10	10	9.7	9.5	97	95	90-110	2	15	
Sulfate	mg/L	320	10	10	190	190	-1300	-1290	90-110	0	15	E,M1

MATRIX SPIKE SAMPLE: 77243

Parameter	Units	2611389010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	28.6	10	35.7	72	90-110	M1
Fluoride	mg/L	ND	10	10.1	101	90-110	
Sulfate	mg/L	439	10	226	-2140	90-110	E,M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

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.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2611389001	DGWC-12	EPA 3005A	16990	EPA 6020B	17017
2611389002	DGWC-13	EPA 3005A	16990	EPA 6020B	17017
2611389003	DGWC-14	EPA 3005A	16990	EPA 6020B	17017
2611389004	DGWC-15	EPA 3005A	16990	EPA 6020B	17017
2611389005	DGWC-17	EPA 3005A	16990	EPA 6020B	17017
2611389006	DGWC-19	EPA 3005A	16990	EPA 6020B	17017
2611389007	DGWC-20	EPA 3005A	16990	EPA 6020B	17017
2611389008	DGWC-21	EPA 3005A	16990	EPA 6020B	17017
2611389009	DGWC-22	EPA 3005A	16990	EPA 6020B	17017
2611389010	DGWC-42	EPA 3005A	16990	EPA 6020B	17017
2611389011	DGWC-47	EPA 3005A	17097	EPA 6020B	17226
2611389012	DGWC-48	EPA 3005A	17097	EPA 6020B	17226
2611389013	FB-2	EPA 3005A	17097	EPA 6020B	17226
2611389014	FD-2	EPA 3005A	17097	EPA 6020B	17226
2611389015	EB-2	EPA 3005A	17097	EPA 6020B	17226
2611389016	DGWC-23	EPA 3005A	17097	EPA 6020B	17226
2611389001	DGWC-12	EPA 7470A	16934	EPA 7470A	17026
2611389002	DGWC-13	EPA 7470A	16934	EPA 7470A	17026
2611389003	DGWC-14	EPA 7470A	16934	EPA 7470A	17026
2611389004	DGWC-15	EPA 7470A	16934	EPA 7470A	17026
2611389005	DGWC-17	EPA 7470A	16934	EPA 7470A	17026
2611389006	DGWC-19	EPA 7470A	16934	EPA 7470A	17026
2611389007	DGWC-20	EPA 7470A	16934	EPA 7470A	17026
2611389008	DGWC-21	EPA 7470A	16934	EPA 7470A	17026
2611389009	DGWC-22	EPA 7470A	16934	EPA 7470A	17026
2611389010	DGWC-42	EPA 7470A	16934	EPA 7470A	17026
2611389011	DGWC-47	EPA 7470A	16934	EPA 7470A	17026
2611389012	DGWC-48	EPA 7470A	16934	EPA 7470A	17026
2611389013	FB-2	EPA 7470A	16934	EPA 7470A	17026
2611389014	FD-2	EPA 7470A	16934	EPA 7470A	17026
2611389015	EB-2	EPA 7470A	16934	EPA 7470A	17026
2611389016	DGWC-23	EPA 7470A	16934	EPA 7470A	17026
2611389001	DGWC-12	SM 2540C	16943		
2611389002	DGWC-13	SM 2540C	16943		
2611389003	DGWC-14	SM 2540C	16943		
2611389004	DGWC-15	SM 2540C	16943		
2611389005	DGWC-17	SM 2540C	16943		
2611389006	DGWC-19	SM 2540C	16943		
2611389007	DGWC-20	SM 2540C	17079		
2611389008	DGWC-21	SM 2540C	17079		
2611389009	DGWC-22	SM 2540C	17079		
2611389010	DGWC-42	SM 2540C	17079		
2611389011	DGWC-47	SM 2540C	17079		
2611389012	DGWC-48	SM 2540C	17079		
2611389013	FB-2	SM 2540C	17079		
2611389014	FD-2	SM 2540C	17079		
2611389015	EB-2	SM 2540C	17079		

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611389

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2611389016	**DGWC-23**	SM 2540C	17079		
2611389001	**DGWC-12**	EPA 300.0	17032		
2611389002	**DGWC-13**	EPA 300.0	17032		
2611389003	**DGWC-14**	EPA 300.0	17032		
2611389004	**DGWC-15**	EPA 300.0	17032		
2611389005	**DGWC-17**	EPA 300.0	17032		
2611389006	**DGWC-19**	EPA 300.0	17032		
2611389007	**DGWC-20**	EPA 300.0	17032		
2611389008	**DGWC-21**	EPA 300.0	17032		
2611389009	**DGWC-22**	EPA 300.0	17167		
2611389010	**DGWC-42**	EPA 300.0	17167		
2611389011	**DGWC-47**	EPA 300.0	17167		
2611389012	**DGWC-48**	EPA 300.0	17167		
2611389013	**FB-2**	EPA 300.0	17167		
2611389014	**FD-2**	EPA 300.0	17167		
2611389015	**EB-2**	EPA 300.0	17167		
2611389016	**DGWC-23**	EPA 300.0	17167		

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 2

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	scsinvoices@southernco.com
Address:	2480 Maner Road	Copy To:	Golder	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant McDonough AP-2, 3/4	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:	Standard TAT	Project #:	166849618	Pace Profile #:	332.1.2

Regulatory Agency

State / Location: GA

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved - Ice	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Requested Analysis Filtered (Y/N): Metals App. III & App. IV	TDS, Cl, F, SO4	Radium 226/228	Residual Chlorine (Y/N)
1	DGWC-12	WT	G	11/7/2018	925		4	X		X							X	X	X	
2	DGWC-13	WT	G	11/7/2018	1040		4	X		X							X	X	X	
3	DGWC-14	WT	G	11/7/2018	840		4	X		X							X	X	X	
4	DGWC-15	WT	G	11/7/2018	1140		4	X		X							X	X	X	
5	DGWC-17	WT	G	11/7/2018	1125		4	X		X							X	X	X	
6	DGWC-19	WT	G	11/7/2018	955		4	X		X							X	X	X	
7	DGWC-20	WT	G	11/7/2018	1105		4	X		X							X	X	X	
8	DGWC-21	WT	G	11/7/2018	1230		4	X		X							X	X	X	
9	DGWC-22	WT	G	11/7/2018	1350		4	X		X							X	X	X	
10	DGWC-42	WT	G	11/7/2018	1245		6	X		X							X	X	X	
11	DGWC-47	WT	G	11/7/2018	1435		4	X		X							X	X	X	
12	DGWC-48	WT	G	11/7/2018	1440		4	X		X							X	X	X	

WO# : 2611389

2611389

Extra Radium ✓

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
sampled by: Chris Thomas		11-8-18	1500	M Rahman	11/08/18	1500	

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1.3	Y	Y	Y

DATE Signed:

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:	Joju Abraham	Attention:	scsinvoices@southernco.com
Address:	2480 Maner Road	Copy To:	Golder	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant McDonough AP-2, 3/4	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:	Standard TAT	Project #:	166849618	Pace Profile #:	332.1.2

Regulatory Agency

State / Location: GA

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved - Ice	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals App. III & App. IV	TDS Cl, F, SO4	Radium 226/228	Residual Chlorine (Y/N)
1	FB-2	WT	G	11/7/2018	1110		4	X		X							X	X	X	
2	FD-2	WT	G	11/7/2018	--		4	X		X							X	X	X	
3	EB-2	WT	G	11/7/2018	1330		4	X		X							X	X	X	
4	DGWC-23	WT	G	11/8/2018	810		4	X		X							X	X	X	
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

WO#: 2611389

PM: BM Due Date: 11/15/18

CLIENT: GAPower-CCR

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Sampled by: Chris Tidwell 11-8-18		11/8/18	15:00	MDaluman	11/08/18	1500	

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1.3	Y	Y	Y

DATE Signed:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2611389

PM: BM **Due Date: 11/15/18**

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes

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: 11/08/18 MK

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☑ Yes ☐ No ☐ N/A	2.
Chain of Custody Relinquished:	☑ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☑ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time:	☑ Yes ☐ No ☐ N/A	5.
Short Hold Time Analysis (<72hr):	☐ Yes ☑ No ☐ N/A	6.
Rush Turn Around Time Requested:	☐ Yes ☑ No ☐ N/A	7.
Sufficient Volume:	☑ Yes ☐ No ☐ N/A	8.
Correct Containers Used:	☑ Yes ☐ No ☐ N/A	9.
-Pace Containers Used:	☑ Yes ☐ No ☐ N/A	
Containers Intact:	☑ Yes ☐ No ☐ N/A	10.
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☑ N/A	11.
Sample Labels match COC:	☑ Yes ☐ No ☐ N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☑ Yes ☐ No ☐ N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑ Yes ☐ No ☐ N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐ Yes ☑ No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐ Yes ☐ No ☑ N/A	14.
Headspace in VOA Vials (>6mm):	☐ Yes ☐ No ☑ N/A	15.
Trip Blank Present:	☐ Yes ☐ No ☑ N/A	16.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☑ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

December 10, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

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CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

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 McDonough Ash Ponds
Pace Project No.: 2611390

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2611390001	**DGWC-12**	Water	11/07/18 09:25	11/08/18 15:00
2611390002	**DGWC-13**	Water	11/07/18 10:40	11/08/18 15:00
2611390003	**DGWC-14**	Water	11/07/18 08:40	11/08/18 15:00
2611390004	**DGWC-15**	Water	11/07/18 11:40	11/08/18 15:00
2611390005	**DGWC-17**	Water	11/07/18 11:25	11/08/18 15:00
2611390006	**DGWC-19**	Water	11/07/18 09:55	11/08/18 15:00
2611390007	**DGWC-20**	Water	11/07/18 11:05	11/08/18 15:00
2611390008	**DGWC-21**	Water	11/07/18 12:30	11/08/18 15:00
2611390009	**DGWC-22**	Water	11/07/18 13:50	11/08/18 15:00
2611390010	**DGWC-42**	Water	11/07/18 12:45	11/08/18 15:00
2611390011	**DGWC-47**	Water	11/07/18 14:35	11/08/18 15:00
2611390012	**DGWC-48**	Water	11/07/18 14:40	11/08/18 15:00
2611390013	**FB-2**	Water	11/07/18 11:10	11/08/18 15:00
2611390014	**FD-2**	Water	11/07/18 00:00	11/08/18 15:00
2611390015	**EB-2**	Water	11/07/18 13:30	11/08/18 15:00
2611390016	**DGWC-23**	Water	11/08/18 08:10	11/08/18 15:00

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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2611390001	DGWC-12	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611390002	DGWC-13	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611390003	DGWC-14	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611390004	DGWC-15	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611390005	DGWC-17	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611390006	DGWC-19	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611390007	DGWC-20	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611390008	DGWC-21	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611390009	DGWC-22	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611390010	DGWC-42	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611390011	DGWC-47	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611390012	DGWC-48	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611390013	FB-2	EPA 9315	LAL	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611390014	**FD-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611390015	**EB-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2611390016	**DGWC-23**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Sample: DGWC-12 **Lab ID: 2611390001** Collected: 11/07/18 09:25 Received: 11/08/18 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.378 ± 0.187 (0.242) C:90% T:NA**	pCi/L	12/03/18 09:00	13982-63-3	
Radium-228	EPA 9320	**0.0358 ± 0.399 (0.915) C:77% T:81%**	pCi/L	12/04/18 16:03	15262-20-1	
Total Radium	Total Radium Calculation	**0.414 ± 0.586 (1.16)**	pCi/L	12/06/18 14:20	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Sample: DGWC-13 **Lab ID: 2611390002** Collected: 11/07/18 10:40 Received: 11/08/18 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.432 ± 0.226 (0.334) C:85% T:NA**	pCi/L	12/03/18 09:00	13982-63-3	
Radium-228	EPA 9320	**0.787 ± 0.496 (0.940) C:74% T:79%**	pCi/L	12/04/18 16:24	15262-20-1	
Total Radium	Total Radium Calculation	**1.22 ± 0.722 (1.27)**	pCi/L	12/06/18 14:20	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Sample: DGWC-14 **Lab ID: 2611390003** Collected: 11/07/18 08:40 Received: 11/08/18 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.293 ± 0.218 (0.398) C:77% T:NA**	pCi/L	12/03/18 09:00	13982-63-3	
Radium-228	EPA 9320	**0.300 ± 0.360 (0.760) C:80% T:81%**	pCi/L	12/04/18 16:03	15262-20-1	
Total Radium	Total Radium Calculation	**0.593 ± 0.578 (1.16)**	pCi/L	12/06/18 14:20	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Sample: DGWC-15 **Lab ID: 2611390004** Collected: 11/07/18 11:40 Received: 11/08/18 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.244 ± 0.155 (0.224) C:87% T:NA**	pCi/L	12/03/18 09:20	13982-63-3	
Radium-228	EPA 9320	**0.542 ± 0.448 (0.896) C:78% T:71%**	pCi/L	12/04/18 16:03	15262-20-1	
Total Radium	Total Radium Calculation	**0.786 ± 0.603 (1.12)**	pCi/L	12/06/18 14:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Sample: DGWC-17 **Lab ID: 2611390005** Collected: 11/07/18 11:25 Received: 11/08/18 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.413 ± 0.207 (0.237) C:73% T:NA**	pCi/L	12/03/18 09:20	13982-63-3	
Radium-228	EPA 9320	**0.382 ± 0.379 (0.783) C:86% T:80%**	pCi/L	12/04/18 16:03	15262-20-1	
Total Radium	Total Radium Calculation	**0.795 ± 0.586 (1.02)**	pCi/L	12/06/18 14:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Sample: DGWC-19 **Lab ID: 2611390006** Collected: 11/07/18 09:55 Received: 11/08/18 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.294 ± 0.161 (0.218) C:98% T:NA**	pCi/L	12/03/18 09:20	13982-63-3	
Radium-228	EPA 9320	**0.726 ± 0.407 (0.748) C:82% T:86%**	pCi/L	12/04/18 16:04	15262-20-1	
Total Radium	Total Radium Calculation	**1.02 ± 0.568 (0.966)**	pCi/L	12/06/18 14:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Sample: DGWC-20 **Lab ID: 2611390007** Collected: 11/07/18 11:05 Received: 11/08/18 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.451 ± 0.197 (0.223) C:98% T:NA**	pCi/L	12/03/18 09:20	13982-63-3	
Radium-228	EPA 9320	**0.295 ± 0.377 (0.800) C:78% T:74%**	pCi/L	12/04/18 16:04	15262-20-1	
Total Radium	Total Radium Calculation	**0.746 ± 0.574 (1.02)**	pCi/L	12/06/18 14:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Sample: DGWC-21 **Lab ID: 2611390008** Collected: 11/07/18 12:30 Received: 11/08/18 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.290 ± 0.159 (0.205) C:96% T:NA**	pCi/L	12/03/18 09:20	13982-63-3	
Radium-228	EPA 9320	**0.865 ± 0.449 (0.791) C:80% T:76%**	pCi/L	12/04/18 16:04	15262-20-1	
Total Radium	Total Radium Calculation	**1.16 ± 0.608 (0.996)**	pCi/L	12/06/18 14:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Sample: DGWC-22 **Lab ID: 2611390009** Collected: 11/07/18 13:50 Received: 11/08/18 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.395 ± 0.194 (0.250) C:92% T:NA**	pCi/L	12/03/18 09:20	13982-63-3	
Radium-228	EPA 9320	**0.437 ± 0.384 (0.780) C:81% T:81%**	pCi/L	12/05/18 12:56	15262-20-1	
Total Radium	Total Radium Calculation	**0.832 ± 0.578 (1.03)**	pCi/L	12/06/18 14:28	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Sample: DGWC-42 **Lab ID: 2611390010** Collected: 11/07/18 12:45 Received: 11/08/18 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.385 ± 0.180 (0.204) C:99% T:NA**	pCi/L	12/03/18 11:33	13982-63-3	
Radium-228	EPA 9320	**0.269 ± 0.301 (0.631) C:85% T:88%**	pCi/L	12/05/18 12:56	15262-20-1	
Total Radium	Total Radium Calculation	**0.654 ± 0.481 (0.835)**	pCi/L	12/06/18 14:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Sample: DGWC-47 **Lab ID: 2611390011** Collected: 11/07/18 14:35 Received: 11/08/18 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.982 ± 0.301 (0.197) C:88% T:NA**	pCi/L	12/03/18 11:33	13982-63-3	
Radium-228	EPA 9320	**0.736 ± 0.414 (0.769) C:84% T:84%**	pCi/L	12/05/18 12:56	15262-20-1	
Total Radium	Total Radium Calculation	**1.72 ± 0.715 (0.966)**	pCi/L	12/06/18 14:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Sample: DGWC-48 **Lab ID: 2611390012** Collected: 11/07/18 14:40 Received: 11/08/18 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.593 ± 0.226 (0.221) C:94% T:NA**	pCi/L	12/03/18 11:33	13982-63-3	
Radium-228	EPA 9320	**1.35 ± 0.487 (0.724) C:84% T:82%**	pCi/L	12/05/18 12:56	15262-20-1	
Total Radium	Total Radium Calculation	**1.94 ± 0.713 (0.945)**	pCi/L	12/06/18 14:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Sample: FB-2 **Lab ID: 2611390013** Collected: 11/07/18 11:10 Received: 11/08/18 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.145 ± 0.126 (0.225) C:94% T:NA**	pCi/L	12/03/18 11:33	13982-63-3	
Radium-228	EPA 9320	**0.228 ± 0.338 (0.729) C:84% T:84%**	pCi/L	12/05/18 12:56	15262-20-1	
Total Radium	Total Radium Calculation	**0.373 ± 0.464 (0.954)**	pCi/L	12/06/18 14:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Sample: FD-2 **Lab ID: 2611390014** Collected: 11/07/18 00:00 Received: 11/08/18 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.270 ± 0.158 (0.213) C:89% T:NA**	pCi/L	12/03/18 11:33	13982-63-3	
Radium-228	EPA 9320	**0.487 ± 0.523 (1.10) C:77% T:85%**	pCi/L	12/05/18 16:12	15262-20-1	
Total Radium	Total Radium Calculation	**0.757 ± 0.681 (1.31)**	pCi/L	12/06/18 14:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Sample: EB-2 **Lab ID: 2611390015** Collected: 11/07/18 13:30 Received: 11/08/18 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.215 ± 0.138 (0.204) C:99% T:NA**	pCi/L	12/03/18 11:33	13982-63-3	
Radium-228	EPA 9320	**0.604 ± 0.467 (0.935) C:80% T:82%**	pCi/L	12/05/18 16:12	15262-20-1	
Total Radium	Total Radium Calculation	**0.819 ± 0.605 (1.14)**	pCi/L	12/06/18 14:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Sample: DGWC-23 **Lab ID: 2611390016** Collected: 11/08/18 08:10 Received: 11/08/18 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.526 ± 0.229 (0.291) C:89% T:NA**	pCi/L	12/03/18 11:33	13982-63-3	
Radium-228	EPA 9320	**0.941 ± 0.501 (0.914) C:79% T:81%**	pCi/L	12/05/18 16:12	15262-20-1	
Total Radium	Total Radium Calculation	**1.47 ± 0.730 (1.21)**	pCi/L	12/06/18 14:28	7440-14-4	

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

QC Batch: 321126 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2611390009, 2611390010, 2611390011, 2611390012, 2611390013, 2611390014, 2611390015, 2611390016

METHOD BLANK: 1566262 Matrix: Water
Associated Lab Samples: 2611390009, 2611390010, 2611390011, 2611390012, 2611390013, 2611390014, 2611390015, 2611390016

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.177 ± 0.121 (0.173) C:101% T:NA	pCi/L	12/03/18 09:20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

QC Batch: 320739 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2611390001, 2611390002, 2611390003, 2611390004, 2611390005, 2611390006, 2611390007, 2611390008

METHOD BLANK: 1564308 Matrix: Water
Associated Lab Samples: 2611390001, 2611390002, 2611390003, 2611390004, 2611390005, 2611390006, 2611390007, 2611390008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.402 ± 0.356 (0.722) C:83% T:79%	pCi/L	12/04/18 13:19	

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

QC Batch: 320740 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2611390009, 2611390010, 2611390011, 2611390012, 2611390013, 2611390014, 2611390015, 2611390016

METHOD BLANK: 1564310 Matrix: Water
Associated Lab Samples: 2611390009, 2611390010, 2611390011, 2611390012, 2611390013, 2611390014, 2611390015, 2611390016

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.621 ± 0.363 (0.669) C:84% T:82%	pCi/L	12/05/18 12:56	

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

QC Batch: 321124 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2611390001, 2611390002, 2611390003, 2611390004, 2611390005, 2611390006, 2611390007, 2611390008

METHOD BLANK: 1566261 Matrix: Water
Associated Lab Samples: 2611390001, 2611390002, 2611390003, 2611390004, 2611390005, 2611390006, 2611390007, 2611390008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.323 ± 0.164 (0.201) C:101% T:NA	pCi/L	12/03/18 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.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2611390001	DGWC-12	EPA 9315	321124		
2611390002	DGWC-13	EPA 9315	321124		
2611390003	DGWC-14	EPA 9315	321124		
2611390004	DGWC-15	EPA 9315	321124		
2611390005	DGWC-17	EPA 9315	321124		
2611390006	DGWC-19	EPA 9315	321124		
2611390007	DGWC-20	EPA 9315	321124		
2611390008	DGWC-21	EPA 9315	321124		
2611390009	DGWC-22	EPA 9315	321126		
2611390010	DGWC-42	EPA 9315	321126		
2611390011	DGWC-47	EPA 9315	321126		
2611390012	DGWC-48	EPA 9315	321126		
2611390013	FB-2	EPA 9315	321126		
2611390014	FD-2	EPA 9315	321126		
2611390015	EB-2	EPA 9315	321126		
2611390016	DGWC-23	EPA 9315	321126		
2611390001	DGWC-12	EPA 9320	320739		
2611390002	DGWC-13	EPA 9320	320739		
2611390003	DGWC-14	EPA 9320	320739		
2611390004	DGWC-15	EPA 9320	320739		
2611390005	DGWC-17	EPA 9320	320739		
2611390006	DGWC-19	EPA 9320	320739		
2611390007	DGWC-20	EPA 9320	320739		
2611390008	DGWC-21	EPA 9320	320739		
2611390009	DGWC-22	EPA 9320	320740		
2611390010	DGWC-42	EPA 9320	320740		
2611390011	DGWC-47	EPA 9320	320740		
2611390012	DGWC-48	EPA 9320	320740		
2611390013	FB-2	EPA 9320	320740		
2611390014	FD-2	EPA 9320	320740		
2611390015	EB-2	EPA 9320	320740		
2611390016	DGWC-23	EPA 9320	320740		
2611390001	DGWC-12	Total Radium Calculation	323089		
2611390002	DGWC-13	Total Radium Calculation	323089		
2611390003	DGWC-14	Total Radium Calculation	323089		
2611390004	DGWC-15	Total Radium Calculation	323090		
2611390005	DGWC-17	Total Radium Calculation	323090		
2611390006	DGWC-19	Total Radium Calculation	323090		
2611390007	DGWC-20	Total Radium Calculation	323090		
2611390008	DGWC-21	Total Radium Calculation	323090		
2611390009	DGWC-22	Total Radium Calculation	323090		
2611390010	DGWC-42	Total Radium Calculation	323090		
2611390011	DGWC-47	Total Radium Calculation	323090		
2611390012	DGWC-48	Total Radium Calculation	323090		
2611390013	FB-2	Total Radium Calculation	323090		
2611390014	FD-2	Total Radium Calculation	323090		

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611390

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2611390015	**EB-2**	Total Radium Calculation	323090		
2611390016	**DGWC-23**	Total Radium Calculation	323090		

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Pace Analytical

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	scsinvoices@southernco.com
Address:	2480 Maner Road	Copy To:	Golder	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant McDonough AP-2, 3/4	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:	Standard TAT	Project #:	166849618	Pace Profile #:	332.1.2

Regulatory Agency	
State / Location	GA

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals App. III & App. IV	TDS	Cl, F, SO4	Radium 226/228	Residual Chlorine (Y/N)
1	DGWC-12	WT	G	11/7/2018	925		4	X		X						Y	X	X	X		
2	DGWC-13	WT	G	11/7/2018	1040		4	X		X						Y	X	X	X		
3	DGWC-14	WT	G	11/7/2018	840		4	X		X						Y	X	X	X		
4	DGWC-15	WT	G	11/7/2018	1140		4	X		X						Y	X	X	X		
5	DGWC-17	WT	G	11/7/2018	1125		4	X		X						Y	X	X	X		
6	DGWC-19	WT	G	11/7/2018	955		4	X		X						Y	X	X	X		
7	DGWC-20	WT	G	11/7/2018	1105		4	X		X						Y	X	X	X		
8	DGWC-21	WT	G	11/7/2018	1230		4	X		X						Y	X	X	X		
9	DGWC-22	WT	G	11/7/2018	1350		4	X		X						Y	X	X	X		
10	DGWC-42	WT	G	11/7/2018	1245		6	X		X						Y	X	X	X	Extra Radium	
11	DGWC-47	WT	G	11/7/2018	1435		4	X		X						Y	X	X	X		
12	DGWC-48	WT	G	11/7/2018	1440		4	X		X						Y	X	X	X		

WO# : 2611390

2611390

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Sampled by: Chris Tinnell		11-8-18	15:00	M Rahman	11/08/18	1500	
							1.3 / Y / Y / Y

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

DATE Signed:

Pace Analytical

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:	Joju Abraham	Attention:	scsinvoices@southernco.com
Address:	2480 Maner Road	Copy To:	Golder	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant McDonough AP-2, 3/4	Pace Project Manager:	betsy.mcdaniel@pacelabs.com
Requested Due Date:	Standard TAT	Project #:	166849618	Pace Profile #:	332.1.2

Regulatory Agency
State / Location
GA

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analyses Test: Metals App. III & App. IV	TDS	Cl, F, SO4	Radium 226/228	Residual Chlorine (Y/N)
1	FB-2	WT	G	11/7/2018	1110		4	X		X							X	X	X		
2	FD-2	WT	G	11/7/2018	--		4	X		X							X	X	X		
3	EB-2	WT	G	11/7/2018	1330		4	X		X							X	X	X		
4	DGWC-23	WT	G	11/8/2018	810		4	X		X							X	X	X		
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

WO#: 2611390

PM: BM Due Date: 12/10/18

CLIENT: GAPower-CCR

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
		11/8/18	15:00	MDaluman	11/08/18	1500	
Sampled by: Chris Tidwell 11-8-18							
							1.3

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1.3	Y	Y	Y

DATE Signed:

Sample Condition Upon Receipt

Face Analytical

Client Name: GA Power

Project #

WO#: 2611390

PM: BM **Due Date: 12/10/18**

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

☐ Samples on ice, cooling process has begun

Cooler Temperature 1.3 **Biological Tissue is Frozen:** Yes No

Date and Initials of person examining contents: 11/08/18 MK

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☑ Yes ☐ No ☐ N/A	2.
Chain of Custody Relinquished:	☑ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☑ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time:	☑ Yes ☐ No ☐ N/A	5.
Short Hold Time Analysis (<72hr):	☐ Yes ☑ No ☐ N/A	6.
Rush Turn Around Time Requested:	☐ Yes ☑ No ☐ N/A	7.
Sufficient Volume:	☑ Yes ☐ No ☐ N/A	8.
Correct Containers Used:	☑ Yes ☐ No ☐ N/A	9.
-Pace Containers Used:	☑ Yes ☐ No ☐ N/A	
Containers Intact:	☑ Yes ☐ No ☐ N/A	10.
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☑ N/A	11.
Sample Labels match COC:	☑ Yes ☐ No ☐ N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☑ Yes ☐ No ☐ N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑ Yes ☐ No ☐ N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐ Yes ☑ No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐ Yes ☐ No ☑ N/A	14.
Headspace in VOA Vials (>6mm):	☐ Yes ☐ No ☑ N/A	15.
Trip Blank Present:	☐ Yes ☐ No ☑ N/A	16.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☑ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

November 16, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 2611391

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611391

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611391

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2611391001	**DGWA-53**	Water	11/07/18 08:50	11/08/18 15:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611391

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2611391001	**DGWA-53**	EPA 6020B	CSW	14
		EPA 7470A	DRB	1
		SM 2540C	JPT	1
		EPA 300.0	RLC	3

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611391

Sample: DGWA-53 **Lab ID: 2611391001** Collected: 11/07/18 08:50 Received: 11/08/18 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	11/13/18 13:10	11/15/18 18:06	7440-36-0	
Arsenic	**0.00090J**	mg/L	0.0050	0.00057	1	11/13/18 13:10	11/15/18 18:06	7440-38-2	
Barium	**0.15**	mg/L	0.010	0.00078	1	11/13/18 13:10	11/15/18 18:06	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	11/13/18 13:10	11/15/18 18:06	7440-41-7	
Boron	**0.073**	mg/L	0.040	0.0039	1	11/13/18 13:10	11/15/18 18:06	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	11/13/18 13:10	11/15/18 18:06	7440-43-9	
Calcium	**28.6**	mg/L	25.0	0.69	50	11/13/18 13:10	11/15/18 18:12	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	11/13/18 13:10	11/15/18 18:06	7440-47-3	
Cobalt	**0.018**	mg/L	0.010	0.00052	1	11/13/18 13:10	11/15/18 18:06	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	11/13/18 13:10	11/15/18 18:06	7439-92-1	
Lithium	**0.0077J**	mg/L	0.050	0.00097	1	11/13/18 13:10	11/15/18 18:06	7439-93-2	
Molybdenum	**0.029**	mg/L	0.010	0.0019	1	11/13/18 13:10	11/15/18 18:06	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	11/13/18 13:10	11/15/18 18:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/13/18 13:10	11/15/18 18:06	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	11/12/18 10:45	11/12/18 17:16	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**200**	mg/L	25.0	10.0	1		11/13/18 15:40		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.3**	mg/L	0.25	0.024	1		11/15/18 08:49	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		11/15/18 08:49	16984-48-8	
Sulfate	**12.8**	mg/L	1.0	0.017	1		11/15/18 08:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611391

QC Batch: 16833
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Associated Lab Samples: 2611391001

METHOD BLANK: 75562 Matrix: Water
Associated Lab Samples: 2611391001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	11/12/18 16:19	

LABORATORY CONTROL SAMPLE: 75563

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: 75564 75565

Parameter	Units	2611272001 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	0.0022	0.0025	90	101	75-125	11	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611391

QC Batch: 17097
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Associated Lab Samples: 2611391001

METHOD BLANK: 76972 Matrix: Water
Associated Lab Samples: 2611391001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	11/15/18 16:12	
Arsenic	mg/L	ND	0.0050	0.00057	11/15/18 16:12	
Barium	mg/L	ND	0.010	0.00078	11/15/18 16:12	
Beryllium	mg/L	ND	0.0030	0.000050	11/15/18 16:12	
Boron	mg/L	ND	0.040	0.0039	11/15/18 16:12	
Cadmium	mg/L	ND	0.0010	0.000093	11/15/18 16:12	
Calcium	mg/L	ND	0.50	0.014	11/15/18 16:12	
Chromium	mg/L	ND	0.010	0.0016	11/15/18 16:12	
Cobalt	mg/L	ND	0.010	0.00052	11/15/18 16:12	
Lead	mg/L	ND	0.0050	0.00027	11/15/18 16:12	
Lithium	mg/L	ND	0.050	0.00097	11/15/18 16:12	
Molybdenum	mg/L	ND	0.010	0.0019	11/15/18 16:12	
Selenium	mg/L	ND	0.010	0.0014	11/15/18 16:12	
Thallium	mg/L	ND	0.0010	0.00014	11/15/18 16:12	

LABORATORY CONTROL SAMPLE: 76973

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.11	112	80-120	
Arsenic	mg/L	.1	0.10	104	80-120	
Barium	mg/L	.1	0.11	107	80-120	
Beryllium	mg/L	.1	0.099	99	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	.1	0.10	102	80-120	
Calcium	mg/L	1	0.99	99	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.10	102	80-120	
Lead	mg/L	.1	0.10	100	80-120	
Lithium	mg/L	.1	0.10	100	80-120	
Molybdenum	mg/L	.1	0.10	104	80-120	
Selenium	mg/L	.1	0.11	108	80-120	
Thallium	mg/L	.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 76974 76975

Parameter	Units	2611389011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.11	0.10	113	104	75-125	8	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611391

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 76974 76975

Parameter	Units	2611389011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.0022J	.1	.1	0.11	0.10	107	100	75-125	6	20	
Barium	mg/L	0.020	.1	.1	0.12	0.12	104	95	75-125	7	20	
Beryllium	mg/L	0.014	.1	.1	0.12	0.11	103	96	75-125	6	20	
Boron	mg/L	0.30	1	1	1.3	1.2	98	90	75-125	7	20	
Cadmium	mg/L	0.0016	.1	.1	0.11	0.097	104	95	75-125	9	20	
Calcium	mg/L	38.6	1	1	38.1	35.8	-53	-276	75-125	6	20	M6
Chromium	mg/L	ND	.1	.1	0.10	0.093	102	92	75-125	10	20	
Cobalt	mg/L	0.35	.1	.1	0.43	0.40	75	51	75-125	6	20	M1
Lead	mg/L	0.00091J	.1	.1	0.10	0.093	99	92	75-125	8	20	
Lithium	mg/L	0.082	.1	.1	0.18	0.17	97	88	75-125	5	20	
Molybdenum	mg/L	ND	.1	.1	0.10	0.096	103	96	75-125	7	20	
Selenium	mg/L	0.0045J	.1	.1	0.11	0.10	109	98	75-125	10	20	
Thallium	mg/L	0.00032J	.1	.1	0.10	0.093	100	92	75-125	8	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611391

QC Batch: 17079
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2611391001

LABORATORY CONTROL SAMPLE: 76893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	412	103	84-108	

SAMPLE DUPLICATE: 76894

Parameter	Units	2611389007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	834	860	3	10	

SAMPLE DUPLICATE: 76895

Parameter	Units	2611393007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	112	112	0	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611391

QC Batch: 17167 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2611391001

METHOD BLANK: 77239 Matrix: Water
Associated Lab Samples: 2611391001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.081J	0.25	0.024	11/15/18 03:18	
Fluoride	mg/L	ND	0.30	0.029	11/15/18 03:18	
Sulfate	mg/L	ND	1.0	0.017	11/15/18 03:18	

LABORATORY CONTROL SAMPLE: 77240

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.2	102	90-110	
Fluoride	mg/L	10	10.0	100	90-110	
Sulfate	mg/L	10	10.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 77241 77242

Parameter	Units	2611389009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	25.8	10	10	33.0	32.8	72	70	90-110	0	15	M1
Fluoride	mg/L	ND	10	10	9.7	9.5	97	95	90-110	2	15	
Sulfate	mg/L	320	10	10	190	190	-1300	-1290	90-110	0	15	E,M1

MATRIX SPIKE SAMPLE: 77243

Parameter	Units	2611389010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	28.6	10	35.7	72	90-110	M1
Fluoride	mg/L	ND	10	10.1	101	90-110	
Sulfate	mg/L	439	10	226	-2140	90-110	E,M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611391

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.

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611391

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2611391001	**DGWA-53**	EPA 3005A	17097	EPA 6020B	17226
2611391001	**DGWA-53**	EPA 7470A	16833	EPA 7470A	17021
2611391001	**DGWA-53**	SM 2540C	17079		
2611391001	**DGWA-53**	EPA 300.0	17167		

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	scsinvoices@southernco.com
Address:	2480 Maner Road	Copy To:	Golder	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant McDonough Background	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:	Standard TAT	Project #:	166849618	Pace Profile #:	332.1.2

Regulatory Agency

State / Location: GA

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals App. III & App. IV	TDS, Cl, F, SO4	Radium 226/228	Residual Chlorine (Y/N)
1	DGWA-53	WT	G	11/7/2018	850		4	X		X							X	X	X	
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

MATRIX CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS

WO# : 2611391

2611391

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Sampled by: Chris Tigan 11/7/18		11/8/2018	15:00	Malman	11/08/18	1500	

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1.3	Y	Y	Y

DATE Signed:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2611391

PM: BM **Due Date: 11/15/18**

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐

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: 11/08/18 MK

Temp should be above freezing to 6°C

			Comments:
Chain of Custody Present:	☑ Yes ☐ No ☐ N/A	1.	
Chain of Custody Filled Out:	☑ Yes ☐ No ☐ N/A	2.	
Chain of Custody Relinquished:	☑ Yes ☐ No ☐ N/A	3.	
Sampler Name & Signature on COC:	☑ Yes ☐ No ☐ N/A	4.	
Samples Arrived within Hold Time:	☑ Yes ☐ No ☐ N/A	5.	
Short Hold Time Analysis (<72hr):	☐ Yes ☑ No ☐ N/A	6.	
Rush Turn Around Time Requested:	☐ Yes ☑ No ☐ N/A	7.	
Sufficient Volume:	☑ Yes ☐ No ☐ N/A	8.	
Correct Containers Used:	☑ Yes ☐ No ☐ N/A	9.	
-Pace Containers Used:	☑ Yes ☐ No ☐ N/A		
Containers Intact:	☑ Yes ☐ No ☐ N/A	10.	
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☑ N/A	11.	
Sample Labels match COC:	☑ Yes ☐ No ☐ N/A	12.	
-Includes date/time/ID/Analysis Matrix: W			
All containers needing preservation have been checked.	☑ Yes ☐ No ☐ N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑ Yes ☐ No ☐ N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐ Yes ☑ No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	☐ Yes ☐ No ☑ N/A	14.	
Headspace in VOA Vials (>6mm):	☐ Yes ☐ No ☑ N/A	15.	
Trip Blank Present:	☐ Yes ☐ No ☑ N/A	16.	
Trip Blank Custody Seals Present	☐ Yes ☐ No ☑ N/A		
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

December 10, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 2611392

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Maria Padilla, Georgia Power
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611392

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611392

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2611392001	**DGWA-53**	Water	11/07/18 08:50	11/08/18 15:00

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611392

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2611392001	**DGWA-53**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611392

Sample: DGWA-53 **Lab ID: 2611392001** Collected: 11/07/18 08:50 Received: 11/08/18 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**2.23 ± 0.504 (0.218) C:99% T:NA**	pCi/L	12/03/18 10:33	13982-63-3	
Radium-228	EPA 9320	**0.819 ± 0.553 (1.05) C:79% T:88%**	pCi/L	12/05/18 19:50	15262-20-1	
Total Radium	Total Radium Calculation	**3.05 ± 1.06 (1.27)**	pCi/L	12/06/18 14:35	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611392

QC Batch: 321126 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2611392001

METHOD BLANK: 1566262 Matrix: Water
Associated Lab Samples: 2611392001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.177 ± 0.121 (0.173) C:101% T:NA	pCi/L	12/03/18 09:20	

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Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611392

QC Batch: 320740 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2611392001

METHOD BLANK: 1564310 Matrix: Water
Associated Lab Samples: 2611392001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.621 ± 0.363 (0.669) C:84% T:82%	pCi/L	12/05/18 12:56	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611392

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 2611392

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2611392001	**DGWA-53**	EPA 9315	321126		
2611392001	**DGWA-53**	EPA 9320	320740		
2611392001	**DGWA-53**	Total Radium Calculation	323093		

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:	jabraham@southernco.com
Phone:	(404)506-7239 Fax:
Requested Due Date:	Standard TAT

Section B — Required Project Information:

Report To:	Joju Abraham
Copy To:	Golder
Purchase Order #:	SCS10348606
Project Name:	Plant McDonough Background
Project #:	166849618

Section C — Invoice Information:

Attention:	scsinvoices@southernco.com
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Pace Profile #:	332.1.2

Regulatory Agency:

State / Location: GA

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved - Ice	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals App. III & App. IV	TDS, Cl, F, SO4	Radium 226/228	Residual Chlorine (Y/N)
1	DGWA-53 Filtered	WT	G	11/7/2018	850		4	X		X							X	X	X	
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

Requested Analysis Filtered (Y/N)

WO# : 2611392

2611392

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
		11/8/2018	15:00	MZaluman	11/08/18	1500	
Sampled by Chris Tigall 11/7/18							

SAMPLE CONDITIONS			
TEMP in C	1.3		
Received on Ice (Y/N)	Y		
Custody Sealed Cooler (Y/N)	Y		
Samples Intact (Y/N)	Y		

DATE Signed:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2611392

PM: BM Due Date: 12/10/18

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 ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.3 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 11/08/18 MK

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

LABORATORY ANALYTICAL DATA

March 2019

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

March 20, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on March 13, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2616034001	**DGWC-2**	Water	03/12/19 15:55	03/13/19 14:00
2616034002	**DGWC-4**	Water	03/12/19 11:00	03/13/19 14:00
2616034003	**DGWC-5**	Water	03/12/19 11:55	03/13/19 14:00
2616034004	**DGWC-8**	Water	03/12/19 14:30	03/13/19 14:00
2616034005	**DGWC-9**	Water	03/12/19 15:30	03/13/19 14:00
2616034006	**DGWC-10**	Water	03/12/19 12:50	03/13/19 14:00
2616034007	**DGWC-11**	Water	03/12/19 14:25	03/13/19 14:00
2616034008	**DGWC-12**	Water	03/12/19 16:05	03/13/19 14:00
2616034009	**FB-1**	Water	03/12/19 16:25	03/13/19 14:00
2616034010	**EB-2**	Water	03/12/19 15:35	03/13/19 14:00
2616034011	**FD-2**	Water	03/12/19 00:00	03/13/19 14:00

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2616034001	**DGWC-2**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616034002	**DGWC-4**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616034003	**DGWC-5**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616034004	**DGWC-8**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616034005	**DGWC-9**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616034006	**DGWC-10**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616034007	**DGWC-11**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616034008	**DGWC-12**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616034009	**FB-1**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616034010	**EB-2**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616034011	**FD-2**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

Sample: DGWC-2 **Lab ID: 2616034001** Collected: 03/12/19 15:55 Received: 03/13/19 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.72**	mg/L	0.040	0.0039	1	03/14/19 14:26	03/15/19 19:46	7440-42-8	
Calcium	**52.2**	mg/L	25.0	0.69	50	03/14/19 14:26	03/15/19 19:52	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**297**	mg/L	25.0	10.0	1		03/18/19 16:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.1**	mg/L	0.25	0.024	1		03/15/19 20:56	16887-00-6	B
Fluoride	**0.052J**	mg/L	0.30	0.029	1		03/15/19 20:56	16984-48-8	
Sulfate	**159**	mg/L	10.0	0.17	10		03/16/19 10:16	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

Sample: DGWC-4 **Lab ID: 2616034002** Collected: 03/12/19 11:00 Received: 03/13/19 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**4.6**	mg/L	0.040	0.0039	1	03/14/19 14:26	03/15/19 19:58	7440-42-8	
Calcium	**295**	mg/L	25.0	0.69	50	03/14/19 14:26	03/15/19 20:04	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1490**	mg/L	25.0	10.0	1		03/18/19 16:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**24.2**	mg/L	0.25	0.024	1		03/15/19 22:05	16887-00-6	M1
Fluoride	**0.082J**	mg/L	0.30	0.029	1		03/15/19 22:05	16984-48-8	
Sulfate	**987**	mg/L	50.0	0.85	50		03/16/19 10:39	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

Sample: DGWC-5 **Lab ID: 2616034003** Collected: 03/12/19 11:55 Received: 03/13/19 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**4.3**	mg/L	0.040	0.0039	1	03/14/19 14:26	03/15/19 20:09	7440-42-8	
Calcium	**110**	mg/L	25.0	0.69	50	03/14/19 14:26	03/15/19 20:15	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**711**	mg/L	25.0	10.0	1		03/18/19 17:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**10.6**	mg/L	0.25	0.024	1		03/15/19 22:28	16887-00-6	
Fluoride	**0.31**	mg/L	0.30	0.029	1		03/15/19 22:28	16984-48-8	
Sulfate	**484**	mg/L	25.0	0.42	25		03/16/19 11:02	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

Sample: DGWC-8 **Lab ID: 2616034004** Collected: 03/12/19 14:30 Received: 03/13/19 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**1.5**	mg/L	0.040	0.0039	1	03/14/19 14:26	03/15/19 20:21	7440-42-8	
Calcium	**54.3**	mg/L	25.0	0.69	50	03/14/19 14:26	03/15/19 20:27	7440-70-2	M6
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**438**	mg/L	25.0	10.0	1		03/18/19 17:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**10.7**	mg/L	0.25	0.024	1		03/15/19 22:50	16887-00-6	
Fluoride	**0.35**	mg/L	0.30	0.029	1		03/15/19 22:50	16984-48-8	
Sulfate	**295**	mg/L	20.0	0.34	20		03/16/19 11:25	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

Sample: DGWC-9 **Lab ID: 2616034005** Collected: 03/12/19 15:30 Received: 03/13/19 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**1.2**	mg/L	0.040	0.0039	1	03/14/19 14:26	03/15/19 21:12	7440-42-8	
Calcium	**78.1**	mg/L	25.0	0.69	50	03/14/19 14:26	03/15/19 21:18	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**493**	mg/L	25.0	10.0	1		03/18/19 17:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**8.5**	mg/L	0.25	0.024	1		03/15/19 23:13	16887-00-6	
Fluoride	**0.97**	mg/L	0.30	0.029	1		03/15/19 23:13	16984-48-8	
Sulfate	**362**	mg/L	25.0	0.42	25		03/16/19 11:48	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

Sample: DGWC-10 **Lab ID: 2616034006** Collected: 03/12/19 12:50 Received: 03/13/19 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.98**	mg/L	0.040	0.0039	1	03/14/19 14:26	03/15/19 21:24	7440-42-8	
Calcium	**83.5**	mg/L	25.0	0.69	50	03/14/19 14:26	03/15/19 21:29	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**436**	mg/L	25.0	10.0	1		03/18/19 17:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**12.1**	mg/L	0.25	0.024	1		03/15/19 23:36	16887-00-6	
Fluoride	**1.7**	mg/L	0.30	0.029	1		03/15/19 23:36	16984-48-8	
Sulfate	**297**	mg/L	25.0	0.42	25		03/16/19 12:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

Sample: DGWC-11 **Lab ID: 2616034007** Collected: 03/12/19 14:25 Received: 03/13/19 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**1.2**	mg/L	0.040	0.0039	1	03/14/19 14:26	03/15/19 21:35	7440-42-8	
Calcium	**61.4**	mg/L	25.0	0.69	50	03/14/19 14:26	03/15/19 21:41	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**433**	mg/L	25.0	10.0	1		03/18/19 17:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**14.5**	mg/L	0.25	0.024	1		03/15/19 23:59	16887-00-6	
Fluoride	**0.052J**	mg/L	0.30	0.029	1		03/15/19 23:59	16984-48-8	
Sulfate	**275**	mg/L	20.0	0.34	20		03/16/19 12:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

Sample: DGWC-12 **Lab ID: 2616034008** Collected: 03/12/19 16:05 Received: 03/13/19 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**4.8**	mg/L	0.040	0.0039	1	03/14/19 14:26	03/15/19 21:58	7440-42-8	
Calcium	**62.1**	mg/L	25.0	0.69	50	03/14/19 14:26	03/15/19 22:04	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**465**	mg/L	25.0	10.0	1		03/18/19 17:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**12.1**	mg/L	0.25	0.024	1		03/16/19 00:22	16887-00-6	
Fluoride	**0.065J**	mg/L	0.30	0.029	1		03/16/19 00:22	16984-48-8	
Sulfate	**284**	mg/L	20.0	0.34	20		03/16/19 12:56	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

Sample: FB-1 **Lab ID: 2616034009** Collected: 03/12/19 16:25 Received: 03/13/19 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.0040J**	mg/L	0.040	0.0039	1	03/14/19 14:26	03/15/19 22:10	7440-42-8	
Calcium	ND	mg/L	0.50	0.014	1	03/14/19 14:26	03/15/19 22:10	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**22.0J**	mg/L	25.0	10.0	1		03/18/19 17:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.36**	mg/L	0.25	0.024	1		03/16/19 02:16	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		03/16/19 02:16	16984-48-8	
Sulfate	**0.11J**	mg/L	1.0	0.017	1		03/16/19 02:16	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

Sample: EB-2 **Lab ID: 2616034010** Collected: 03/12/19 15:35 Received: 03/13/19 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	ND	mg/L	0.040	0.0039	1	03/14/19 14:26	03/15/19 22:15	7440-42-8	
Calcium	**0.035J**	mg/L	0.50	0.014	1	03/14/19 14:26	03/15/19 22:15	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**26.0**	mg/L	25.0	10.0	1		03/18/19 17:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.49**	mg/L	0.25	0.024	1		03/16/19 02:39	16887-00-6	B
Fluoride	**0.049J**	mg/L	0.30	0.029	1		03/16/19 02:39	16984-48-8	
Sulfate	**3.0**	mg/L	1.0	0.017	1		03/16/19 02:39	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

Sample: FD-2 **Lab ID: 2616034011** Collected: 03/12/19 00:00 Received: 03/13/19 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**4.8**	mg/L	0.040	0.0039	1	03/14/19 14:26	03/15/19 22:21	7440-42-8	
Calcium	**308**	mg/L	25.0	0.69	50	03/14/19 14:26	03/15/19 22:27	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1460**	mg/L	25.0	10.0	1		03/18/19 17:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**24.2**	mg/L	0.25	0.024	1		03/16/19 03:25	16887-00-6	
Fluoride	**0.083J**	mg/L	0.30	0.029	1		03/16/19 03:25	16984-48-8	
Sulfate	**951**	mg/L	20.0	0.34	20		03/16/19 13:19	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

QC Batch: 24312 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2616034001, 2616034002, 2616034003, 2616034004, 2616034005, 2616034006, 2616034007, 2616034008, 2616034009, 2616034010, 2616034011

METHOD BLANK: 108896 Matrix: Water
Associated Lab Samples: 2616034001, 2616034002, 2616034003, 2616034004, 2616034005, 2616034006, 2616034007, 2616034008, 2616034009, 2616034010, 2616034011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	0.0039	03/15/19 18:30	
Calcium	mg/L	ND	0.50	0.014	03/15/19 18:30	

LABORATORY CONTROL SAMPLE: 108897

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.99	99	80-120	
Calcium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 108898 108899

Parameter	Units	2616034004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	1.5	1	1	2.5	2.5	100	103	75-125	1	20	
Calcium	mg/L	54.3	1	1	54.7	56.0	38	170	75-125	2	20	M6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

QC Batch: 24469 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2616034001, 2616034002, 2616034003, 2616034004, 2616034005, 2616034006, 2616034007, 2616034008, 2616034009, 2616034010, 2616034011

LABORATORY CONTROL SAMPLE: 109884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	423	106	84-108	

SAMPLE DUPLICATE: 109885

Parameter	Units	2615967001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	344	337	2	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

QC Batch: 24402 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2616034001, 2616034002, 2616034003, 2616034004, 2616034005, 2616034006, 2616034007, 2616034008, 2616034009, 2616034010, 2616034011

METHOD BLANK: 109496 Matrix: Water
Associated Lab Samples: 2616034001, 2616034002, 2616034003, 2616034004, 2616034005, 2616034006, 2616034007, 2616034008, 2616034009, 2616034010, 2616034011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.31	0.25	0.024	03/15/19 20:10	
Fluoride	mg/L	ND	0.30	0.029	03/15/19 20:10	
Sulfate	mg/L	ND	1.0	0.017	03/15/19 20:10	

LABORATORY CONTROL SAMPLE: 109497

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.2	102	90-110	
Fluoride	mg/L	10	10.4	104	90-110	
Sulfate	mg/L	10	10.9	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 109498 109499

Parameter	Units	2616034001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.1	10	10	13.2	13.2	101	101	90-110	0	15	
Fluoride	mg/L	0.052J	10	10	10.4	10.4	103	103	90-110	0	15	
Sulfate	mg/L	159	10	10	126	125	-335	-335	90-110	0	15	M1

MATRIX SPIKE SAMPLE: 109500

Parameter	Units	2616034002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	24.2	10	32.3	81	90-110	M1
Fluoride	mg/L	0.082J	10	10.1	100	90-110	
Sulfate	mg/L	987	10	403	-5840	90-110	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616034

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2616034001	**DGWC-2**	EPA 3005A	24312	EPA 6020B	24340
2616034002	**DGWC-4**	EPA 3005A	24312	EPA 6020B	24340
2616034003	**DGWC-5**	EPA 3005A	24312	EPA 6020B	24340
2616034004	**DGWC-8**	EPA 3005A	24312	EPA 6020B	24340
2616034005	**DGWC-9**	EPA 3005A	24312	EPA 6020B	24340
2616034006	**DGWC-10**	EPA 3005A	24312	EPA 6020B	24340
2616034007	**DGWC-11**	EPA 3005A	24312	EPA 6020B	24340
2616034008	**DGWC-12**	EPA 3005A	24312	EPA 6020B	24340
2616034009	**FB-1**	EPA 3005A	24312	EPA 6020B	24340
2616034010	**EB-2**	EPA 3005A	24312	EPA 6020B	24340
2616034011	**FD-2**	EPA 3005A	24312	EPA 6020B	24340
2616034001	**DGWC-2**	SM 2540C	24469		
2616034002	**DGWC-4**	SM 2540C	24469		
2616034003	**DGWC-5**	SM 2540C	24469		
2616034004	**DGWC-8**	SM 2540C	24469		
2616034005	**DGWC-9**	SM 2540C	24469		
2616034006	**DGWC-10**	SM 2540C	24469		
2616034007	**DGWC-11**	SM 2540C	24469		
2616034008	**DGWC-12**	SM 2540C	24469		
2616034009	**FB-1**	SM 2540C	24469		
2616034010	**EB-2**	SM 2540C	24469		
2616034011	**FD-2**	SM 2540C	24469		
2616034001	**DGWC-2**	EPA 300.0	24402		
2616034002	**DGWC-4**	EPA 300.0	24402		
2616034003	**DGWC-5**	EPA 300.0	24402		
2616034004	**DGWC-8**	EPA 300.0	24402		
2616034005	**DGWC-9**	EPA 300.0	24402		
2616034006	**DGWC-10**	EPA 300.0	24402		
2616034007	**DGWC-11**	EPA 300.0	24402		
2616034008	**DGWC-12**	EPA 300.0	24402		
2616034009	**FB-1**	EPA 300.0	24402		
2616034010	**EB-2**	EPA 300.0	24402		
2616034011	**FD-2**	EPA 300.0	24402		

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	scsinvoices@southernco.com
Address:	2480 Maner Road	Copy To:	Golder	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant McDonough AP-2, 3/4	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:	Standard TAT	Project #:	166849618	Pace Profile #:	332.1.2

Regulatory Agency: —

State / Location: GA

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique MATRIX: CODE: Drinking Water: DW; Water: WT; Waste Water: WW; Product: P; Soil/Solid: SL; Oil: OL; Wipe: WP; Air: AR; Other: OT; Tissue: TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved - Ice	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals App. III	TDS, Cl, F, SO4	Residual Chlorine (Y/N)
1	DGWC-2	WT	G	3/12/2019	1555		2	X		X						X	X	X	
2	DGWC-4	WT	G	3/12/2019	1100		2	X		X						X	X	X	
3	DGWC-5	WT	G	3/12/2019	1155		2	X		X						X	X	X	
4	DGWC-8	WT	G	3/12/2019	1430		2	X		X						X	X	X	
5	DGWC-9	WT	G	3/12/2019	1530		2	X		X						X	X	X	
6	DGWC-10	WT	G	3/12/2019	1250		2	X		X						X	X	X	
7	DGWC-11	WT	G	3/12/2019	1425		2	X		X						X	X	X	
8	DGWC-12	WT	G	3/12/2019	1605		2	X		X						X	X	X	
9	FB-1	WT	G	3/12/2019	1625		2	X		X						X	X	X	
10	EB-2	WT	G	3/12/2019	1535		2	X		X						X	X	X	
11	FD-2	WT	G	3/12/2019	--		2	X		X						X	X	X	
12																			

WO# : 2616034

2616034

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	[signature]	3-13-19	1058	[signature] Pace	3.13.19	1058
				M Zalman	3/13/19	1400

SAMPLE CONDITIONS

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
0.5	Y	Y	Y

DATE Signed:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO# : 2616034

PM: BM Due Date: 03/20/19

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace Other

Tracking #:

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: Wet Blue None

Cooler Temperature 0.5 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

☐ Samples on ice, cooling process has begun

Date and Initials of person examining contents: 3/13/19 AR

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☐Yes ☑No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

March 20, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant McDonough Ash Ponds
Pace Project No.: 2616035

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on March 13, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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CERTIFICATIONS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616035

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616035

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2616035001	**DGWA-70A**	Water	03/12/19 11:25	03/13/19 14:00
2616035002	**DGWA-71**	Water	03/12/19 12:55	03/13/19 14:00
2616035003	**FD-1**	Water	03/12/19 00:00	03/13/19 14:00
2616035004	**EB-1**	Water	03/12/19 11:50	03/13/19 14:00

Pace Analytical Services, LLC
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(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616035

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2616035001	**DGWA-70A**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616035002	**DGWA-71**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616035003	**FD-1**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616035004	**EB-1**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616035

Sample: DGWA-70A **Lab ID: 2616035001** Collected: 03/12/19 11:25 Received: 03/13/19 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.0073J**	mg/L	0.040	0.0039	1	03/14/19 14:26	03/15/19 22:32	7440-42-8	
Calcium	**5.1**	mg/L	0.50	0.014	1	03/14/19 14:26	03/15/19 22:32	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**43.0**	mg/L	25.0	10.0	1		03/18/19 17:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.5**	mg/L	0.25	0.024	1		03/16/19 03:48	16887-00-6	B
Fluoride	**0.039J**	mg/L	0.30	0.029	1		03/16/19 03:48	16984-48-8	
Sulfate	**0.35J**	mg/L	1.0	0.017	1		03/16/19 03:48	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616035

Sample: DGWA-71 **Lab ID: 2616035002** Collected: 03/12/19 12:55 Received: 03/13/19 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.0068J**	mg/L	0.040	0.0039	1	03/14/19 14:26	03/15/19 22:44	7440-42-8	
Calcium	**5.5**	mg/L	0.50	0.014	1	03/14/19 14:26	03/15/19 22:44	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**74.0**	mg/L	25.0	10.0	1		03/18/19 17:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.3**	mg/L	0.25	0.024	1		03/16/19 04:11	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/16/19 04:11	16984-48-8	
Sulfate	**7.0**	mg/L	1.0	0.017	1		03/16/19 04:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616035

Sample: FD-1 **Lab ID: 2616035003** Collected: 03/12/19 00:00 Received: 03/13/19 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	ND	mg/L	0.040	0.0039	1	03/14/19 14:26	03/15/19 23:07	7440-42-8	
Calcium	**5.2**	mg/L	0.50	0.014	1	03/14/19 14:26	03/15/19 23:07	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**50.0**	mg/L	25.0	10.0	1		03/18/19 17:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.9**	mg/L	0.25	0.024	1		03/16/19 04:34	16887-00-6	B
Fluoride	**0.045J**	mg/L	0.30	0.029	1		03/16/19 04:34	16984-48-8	
Sulfate	**0.37J**	mg/L	1.0	0.017	1		03/16/19 04:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616035

Sample: EB-1 **Lab ID: 2616035004** Collected: 03/12/19 11:50 Received: 03/13/19 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	ND	mg/L	0.040	0.0039	1	03/14/19 14:26	03/15/19 23:18	7440-42-8	
Calcium	**0.029J**	mg/L	0.50	0.014	1	03/14/19 14:26	03/15/19 23:18	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**17.0J**	mg/L	25.0	10.0	1		03/18/19 17:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.37**	mg/L	0.25	0.024	1		03/16/19 04:56	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		03/16/19 04:56	16984-48-8	
Sulfate	**1.1**	mg/L	1.0	0.017	1		03/16/19 04:56	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616035

QC Batch: 24312 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2616035001, 2616035002, 2616035003, 2616035004

METHOD BLANK: 108896 Matrix: Water
Associated Lab Samples: 2616035001, 2616035002, 2616035003, 2616035004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	0.0039	03/15/19 18:30	
Calcium	mg/L	ND	0.50	0.014	03/15/19 18:30	

LABORATORY CONTROL SAMPLE: 108897

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.99	99	80-120	
Calcium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 108898 108899

Parameter	Units	2616034004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	1.5	1	1	2.5	2.5	100	103	75-125	1	20	
Calcium	mg/L	54.3	1	1	54.7	56.0	38	170	75-125	2	20	M6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616035

QC Batch: 24469 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2616035001, 2616035002, 2616035003, 2616035004

LABORATORY CONTROL SAMPLE: 109884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	423	106	84-108	

SAMPLE DUPLICATE: 109885

Parameter	Units	2615967001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	344	337	2	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616035

QC Batch: 24402 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2616035001, 2616035002, 2616035003, 2616035004

METHOD BLANK: 109496 Matrix: Water
Associated Lab Samples: 2616035001, 2616035002, 2616035003, 2616035004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.31	0.25	0.024	03/15/19 20:10	
Fluoride	mg/L	ND	0.30	0.029	03/15/19 20:10	
Sulfate	mg/L	ND	1.0	0.017	03/15/19 20:10	

LABORATORY CONTROL SAMPLE: 109497

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.2	102	90-110	
Fluoride	mg/L	10	10.4	104	90-110	
Sulfate	mg/L	10	10.9	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 109498 109499

Parameter	Units	2616034001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.1	10	10	13.2	13.2	101	101	90-110	0	15	
Fluoride	mg/L	0.052J	10	10	10.4	10.4	103	103	90-110	0	15	
Sulfate	mg/L	159	10	10	126	125	-335	-335	90-110	0	15	M1

MATRIX SPIKE SAMPLE: 109500

Parameter	Units	2616034002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	24.2	10	32.3	81	90-110	M1
Fluoride	mg/L	0.082J	10	10.1	100	90-110	
Sulfate	mg/L	987	10	403	-5840	90-110	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616035

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Ash Ponds
Pace Project No.: 2616035

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2616035001	**DGWA-70A**	EPA 3005A	24312	EPA 6020B	24340
2616035002	**DGWA-71**	EPA 3005A	24312	EPA 6020B	24340
2616035003	**FD-1**	EPA 3005A	24312	EPA 6020B	24340
2616035004	**EB-1**	EPA 3005A	24312	EPA 6020B	24340
2616035001	**DGWA-70A**	SM 2540C	24469		
2616035002	**DGWA-71**	SM 2540C	24469		
2616035003	**FD-1**	SM 2540C	24469		
2616035004	**EB-1**	SM 2540C	24469		
2616035001	**DGWA-70A**	EPA 300.0	24402		
2616035002	**DGWA-71**	EPA 300.0	24402		
2616035003	**FD-1**	EPA 300.0	24402		
2616035004	**EB-1**	EPA 300.0	24402		

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	scsinvoices@southernco.com
Address:	2480 Maner Road	Copy To:	Golder	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant McDonough Background	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:	Standard TAT	Project #:	166849618	Pace Profile #:	332.1.2

Regulatory Agency

State / Location: GA

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved - Ice	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals App. III	TDS, Cl, F, SO4	Residual Chlorine (Y/N)
1	DGWA-70A	WT	G	3/12/2019	1125		2	X		X							X	X	
2	DGWA-71	WT	G	3/12/2019	1255		2	X		X							X	X	
3	FD-1	WT	G	3/12/2019	--		2	X		X							X	X	
4	EB-1	WT	G	3/12/2019	1150		2	X		X							X	X	
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

WO# : 2616035

2616035

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	[signature]	3/13/19	1058	[signature] Pace	3.13.19	1058	
				[signature]	3/13/19	1400	
							0.5

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Y	Y	Y

DATE Signed:

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Powere

Project #

WO# : 2616035

PM: BM Due Date: 03/20/19

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace Other

Tracking #:

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: ~~Wet~~ Blue None

Cooler Temperature 0-5 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

☐ Samples on ice, cooling process has begun

Date and Initials of person examining contents: 03/13/19 MP

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☐Yes ☑No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

March 27, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant McDonough Background
Pace Project No.: 2616156

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on March 15, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant McDonough Background
Pace Project No.: 2616156

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant McDonough Background
Pace Project No.: 2616156

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2616156001	**DGWA-53**	Water	03/13/19 09:35	03/15/19 09:20
2616156002	**FB-2**	Water	03/13/19 09:45	03/15/19 09:20

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant McDonough Background
Pace Project No.: 2616156

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2616156001	**DGWA-53**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616156002	**FB-2**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Background
Pace Project No.: 2616156

Sample: DGWA-53 **Lab ID: 2616156001** Collected: 03/13/19 09:35 Received: 03/15/19 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.080**	mg/L	0.040	0.0039	1	03/18/19 13:34	03/20/19 16:18	7440-42-8	
Calcium	**26.7**	mg/L	25.0	0.69	50	03/18/19 13:34	03/20/19 16:24	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**201**	mg/L	25.0	10.0	1		03/19/19 17:56		1A,L1
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.6**	mg/L	0.25	0.024	1		03/19/19 21:56	16887-00-6	
Fluoride	**0.13J**	mg/L	0.30	0.029	1		03/19/19 21:56	16984-48-8	
Sulfate	**23.7**	mg/L	1.0	0.017	1		03/19/19 21:56	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough Background
Pace Project No.: 2616156

Sample: FB-2 **Lab ID: 2616156002** Collected: 03/13/19 09:45 Received: 03/15/19 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	ND	mg/L	0.040	0.0039	1	03/18/19 13:34	03/20/19 16:41	7440-42-8	
Calcium	**0.031J**	mg/L	0.50	0.014	1	03/18/19 13:34	03/20/19 16:41	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**87.0**	mg/L	25.0	10.0	1		03/23/19 19:14		2A, H1, H4
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.34**	mg/L	0.25	0.024	1		03/19/19 23:04	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		03/19/19 23:04	16984-48-8	
Sulfate	**0.11J**	mg/L	1.0	0.017	1		03/19/19 23:04	14808-79-8	B

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Background
Pace Project No.: 2616156

QC Batch: 24489 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2616156001, 2616156002

METHOD BLANK: 109939 Matrix: Water
Associated Lab Samples: 2616156001, 2616156002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	0.0042J	0.040	0.0039	03/20/19 14:21	
Calcium	mg/L	ND	0.50	0.014	03/20/19 14:21	

LABORATORY CONTROL SAMPLE: 109940

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.0	101	80-120	
Calcium	mg/L	1	0.97	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 109941 109942

Parameter	Units	2616120008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	1.0	1	1	2.1	2.1	103	111	75-125	4	20	
Calcium	mg/L	77.7	1	1	76.3	78.4	-134	77	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Background
Pace Project No.: 2616156

QC Batch: 24551
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2616156001

LABORATORY CONTROL SAMPLE: 110196

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	439	110	84-108	L1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Background
Pace Project No.: 2616156

QC Batch: 24973
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2616156002

LABORATORY CONTROL SAMPLE: 112717

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	426	106	84-108	

SAMPLE DUPLICATE: 112718

Parameter	Units	2616191001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	306	323	5	10	H5

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough Background
Pace Project No.: 2616156

QC Batch: 24628 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2616156001, 2616156002

METHOD BLANK: 110613 Matrix: Water
Associated Lab Samples: 2616156001, 2616156002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.32	0.25	0.024	03/19/19 21:10	
Fluoride	mg/L	ND	0.30	0.029	03/19/19 21:10	
Sulfate	mg/L	0.10J	1.0	0.017	03/19/19 21:10	

LABORATORY CONTROL SAMPLE: 110614

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.2	102	90-110	
Fluoride	mg/L	10	10.6	106	90-110	
Sulfate	mg/L	10	10.9	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 110615 110616

Parameter	Units	2616156001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.6	10	10	13.4	13.3	99	98	90-110	1	15	
Fluoride	mg/L	0.13J	10	10	10.5	10.5	104	104	90-110	0	15	
Sulfate	mg/L	23.7	10	10	31.9	32.0	82	83	90-110	0	15	M1

MATRIX SPIKE SAMPLE: 110617

Parameter	Units	2616156002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.34	10	9.7	94	90-110	
Fluoride	mg/L	ND	10	10.0	100	90-110	
Sulfate	mg/L	0.11J	10	10.4	102	90-110	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant McDonough Background
Pace Project No.: 2616156

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

1A	Out of hold rerun result confirms original. Original reported.
2A	Sample was originally analyzed in hold.
B	Analyte was detected in the associated method blank.
H1	Analysis conducted outside the EPA method holding time.
H4	Sample re-extracted and analyzed outside of EPA method holding time.
H5	Reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold time.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Background
Pace Project No.: 2616156

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2616156001	**DGWA-53**	EPA 3005A	24489	EPA 6020B	24530
2616156002	**FB-2**	EPA 3005A	24489	EPA 6020B	24530
2616156001	**DGWA-53**	SM 2540C	24551		
2616156002	**FB-2**	SM 2540C	24973		
2616156001	**DGWA-53**	EPA 300.0	24628		
2616156002	**FB-2**	EPA 300.0	24628		

WO# : 2616156

2616156

CHAIN-OF-CUSTODY / Analytical Request Doc

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must b

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	scsinvoices@southernco.com
Address:	2480 Maner Road	Copy To:	Golder	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant McDonough Background	Pace Project Manager:	betsy.mcdaniel@pacelabs.com
Requested Due Date:	Standard TAT	Project #:	166849618	Pace Profile #:	332.1.2

Regulatory Agency

State / Location: GA

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals App. III	TDS, Cl, F, SO4	Residual Chlorine (Y/N)	
1	DGWA-53	WT	G	3/13/2019	935		2	X		X							X	X		1
2	FB-2	WT	G	3/13/2019	945		2	X		X							X	X		2
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

MATRIX: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		3-15-19	920		3/15/19	0920	12.3	Y	N	Y

DATE Signed:

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical

Sample Condition Upon Receipt

Client Name: GA Power - CCR

WO#: 2616156

PM: BM Due Date: 03/22/19

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #: _____

Proj. Due Date:
Proj. Name:

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

Thermometer Used: 082 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 0.3°C Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 3/15/19 JW

Temp should be above freezing to 6°C

			Comments:
Chain of Custody Present:	☑Yes	☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No ☐N/A	3.
Sampler Name & Signature on COC:	☐Yes	☑No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No ☐N/A	7.
Sufficient Volume:	☑Yes	☐No ☐N/A	8.
Correct Containers Used:	☑Yes	☐No ☐N/A	9.
-Pace Containers Used:	☑Yes	☐No ☐N/A	
Containers Intact:	☑Yes	☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No ☑N/A	11.
Sample Labels match COC:	☑Yes	☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT			
All containers needing preservation have been checked.	☑Yes	☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☑No	Initial when completed: _____ Lot # of added preservative: _____
Samples checked for dechlorination:	☐Yes	☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No ☑N/A	15.
Trip Blank Present:	☐Yes	☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No ☑N/A	
Pace Trip Blank Lot # (if purchased): _____			

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

March 24, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on March 15, 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: Kristen Jurinko, Golder Associates Inc.
Julie Lehrman, Golder Associates Inc.
Dawn Prell, Golder Associates Inc.
Tim Richards, Golder Associates - Atlanta
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2616160001	**DGWC-13**	Water	03/13/19 15:55	03/15/19 09:20
2616160002	**DGWC-14**	Water	03/13/19 14:05	03/15/19 09:20
2616160003	**DGWC-17**	Water	03/13/19 15:15	03/15/19 09:20
2616160004	**DGWC-19**	Water	03/13/19 15:15	03/15/19 09:20
2616160005	**DGWC-20**	Water	03/13/19 16:30	03/15/19 09:20
2616160006	**DGWC-21**	Water	03/13/19 16:15	03/15/19 09:20
2616160007	**DGWC-15**	Water	03/14/19 10:50	03/15/19 09:20
2616160008	**DGWC-22**	Water	03/14/19 13:20	03/15/19 09:20
2616160009	**DGWC-23**	Water	03/14/19 10:50	03/15/19 09:20
2616160010	**DGWC-42**	Water	03/14/19 09:40	03/15/19 09:20
2616160011	**DGWC-47**	Water	03/14/19 12:55	03/15/19 09:20
2616160012	**DGWC-48**	Water	03/14/19 13:50	03/15/19 09:20
2616160013	**FB-3**	Water	03/14/19 14:35	03/15/19 09:20

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SAMPLE ANALYTE COUNT

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2616160001	DGWC-13	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616160002	DGWC-14	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616160003	DGWC-17	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616160004	DGWC-19	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616160005	DGWC-20	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616160006	DGWC-21	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616160007	DGWC-15	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616160008	DGWC-22	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616160009	DGWC-23	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB	3
2616160010	DGWC-42	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB, RLC	3
2616160011	DGWC-47	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB, RLC	3
2616160012	DGWC-48	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	MWB, RLC	3
2616160013	FB-3	EPA 6020B	CSW	2

Pace Analytical Services, LLC
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(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		SM 2540C	RLC	1
		EPA 300.0	MWB	3

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Sample: DGWC-13 **Lab ID: 2616160001** Collected: 03/13/19 15:55 Received: 03/15/19 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.62**	mg/L	0.040	0.0039	1	03/19/19 12:15	03/20/19 20:01	7440-42-8	
Calcium	**42.1**	mg/L	25.0	0.69	50	03/19/19 12:15	03/20/19 20:07	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**656**	mg/L	25.0	10.0	1		03/20/19 19:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**12.4**	mg/L	0.25	0.024	1		03/20/19 04:48	16887-00-6	
Fluoride	**0.13J**	mg/L	0.30	0.029	1		03/20/19 04:48	16984-48-8	
Sulfate	**179**	mg/L	10.0	0.17	10		03/20/19 13:56	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Sample: DGWC-14 **Lab ID: 2616160002** Collected: 03/13/19 14:05 Received: 03/15/19 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.047**	mg/L	0.040	0.0039	1	03/19/19 12:15	03/20/19 20:13	7440-42-8	
Calcium	**9.7**	mg/L	0.50	0.014	1	03/19/19 12:15	03/20/19 20:13	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**280**	mg/L	25.0	10.0	1		03/20/19 19:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.4**	mg/L	0.25	0.024	1		03/20/19 05:10	16887-00-6	
Fluoride	**0.042J**	mg/L	0.30	0.029	1		03/20/19 05:10	16984-48-8	
Sulfate	**41.2**	mg/L	1.0	0.017	1		03/20/19 05:10	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Sample: DGWC-17 **Lab ID: 2616160003** Collected: 03/13/19 15:15 Received: 03/15/19 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.76**	mg/L	0.040	0.0039	1	03/19/19 12:15	03/20/19 20:24	7440-42-8	
Calcium	**11.9J**	mg/L	25.0	0.69	50	03/19/19 12:15	03/20/19 20:30	7440-70-2	D3
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**802**	mg/L	25.0	10.0	1		03/20/19 19:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**19.9**	mg/L	0.25	0.024	1		03/20/19 05:33	16887-00-6	
Fluoride	**0.084J**	mg/L	0.30	0.029	1		03/20/19 05:33	16984-48-8	
Sulfate	**268**	mg/L	20.0	0.34	20		03/20/19 14:19	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Sample: DGWC-19 **Lab ID: 2616160004** Collected: 03/13/19 15:15 Received: 03/15/19 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**2.6**	mg/L	0.040	0.0039	1	03/19/19 12:15	03/20/19 20:36	7440-42-8	
Calcium	**76.9**	mg/L	25.0	0.69	50	03/19/19 12:15	03/20/19 20:41	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**113**	mg/L	25.0	10.0	1		03/20/19 19:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**40.1**	mg/L	0.25	0.024	1		03/20/19 05:56	16887-00-6	
Fluoride	**0.22J**	mg/L	0.30	0.029	1		03/20/19 05:56	16984-48-8	
Sulfate	**299**	mg/L	50.0	0.85	50		03/20/19 14:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Sample: DGWC-20 **Lab ID: 2616160005** Collected: 03/13/19 16:30 Received: 03/15/19 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**5.6**	mg/L	0.040	0.0039	1	03/19/19 12:15	03/20/19 20:47	7440-42-8	
Calcium	**86.4**	mg/L	25.0	0.69	50	03/19/19 12:15	03/20/19 20:53	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**639**	mg/L	25.0	10.0	1		03/20/19 19:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**24.8**	mg/L	0.25	0.024	1		03/20/19 06:19	16887-00-6	
Fluoride	**0.45**	mg/L	0.30	0.029	1		03/20/19 06:19	16984-48-8	
Sulfate	**539**	mg/L	20.0	0.34	20		03/20/19 15:57	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Sample: DGWC-21 **Lab ID: 2616160006** Collected: 03/13/19 16:15 Received: 03/15/19 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**6.2**	mg/L	0.040	0.0039	1	03/19/19 12:15	03/20/19 21:10	7440-42-8	M1
Calcium	**79.9**	mg/L	25.0	0.69	50	03/19/19 12:15	03/20/19 21:16	7440-70-2	M6
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**486**	mg/L	25.0	10.0	1		03/20/19 19:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**21.3**	mg/L	0.25	0.024	1		03/20/19 06:42	16887-00-6	
Fluoride	**0.043J**	mg/L	0.30	0.029	1		03/20/19 06:42	16984-48-8	
Sulfate	**312**	mg/L	20.0	0.34	20		03/20/19 16:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Sample: DGWC-15 **Lab ID: 2616160007** Collected: 03/14/19 10:50 Received: 03/15/19 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**1.6**	mg/L	0.040	0.0039	1	03/19/19 12:15	03/20/19 21:50	7440-42-8	
Calcium	**34.7**	mg/L	25.0	0.69	50	03/19/19 12:15	03/20/19 21:56	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**340**	mg/L	25.0	10.0	1		03/21/19 17:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**24.0**	mg/L	0.25	0.024	1		03/20/19 08:36	16887-00-6	
Fluoride	**0.057J**	mg/L	0.30	0.029	1		03/20/19 08:36	16984-48-8	
Sulfate	**195**	mg/L	10.0	0.17	10		03/20/19 16:43	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Sample: DGWC-22 **Lab ID: 2616160008** Collected: 03/14/19 13:20 Received: 03/15/19 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**4.1**	mg/L	0.040	0.0039	1	03/19/19 12:15	03/20/19 22:13	7440-42-8	
Calcium	**64.8**	mg/L	25.0	0.69	50	03/19/19 12:15	03/20/19 22:18	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**491**	mg/L	25.0	10.0	1		03/21/19 17:57		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**26.3**	mg/L	0.25	0.024	1		03/20/19 08:59	16887-00-6	
Fluoride	**0.042J**	mg/L	0.30	0.029	1		03/20/19 08:59	16984-48-8	
Sulfate	**297**	mg/L	50.0	0.85	50		03/20/19 17:05	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Sample: DGWC-23 **Lab ID: 2616160009** Collected: 03/14/19 10:50 Received: 03/15/19 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**4.7**	mg/L	0.040	0.0039	1	03/19/19 12:15	03/20/19 22:24	7440-42-8	
Calcium	**73.2**	mg/L	25.0	0.69	50	03/19/19 12:15	03/20/19 22:30	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**453**	mg/L	25.0	10.0	1		03/21/19 17:57		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**15.2**	mg/L	0.25	0.024	1		03/20/19 09:22	16887-00-6	
Fluoride	**0.092J**	mg/L	0.30	0.029	1		03/20/19 09:22	16984-48-8	
Sulfate	**266**	mg/L	20.0	0.34	20		03/20/19 17:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Sample: DGWC-42 **Lab ID: 2616160010** Collected: 03/14/19 09:40 Received: 03/15/19 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.89**	mg/L	0.040	0.0039	1	03/19/19 12:15	03/20/19 22:36	7440-42-8	
Calcium	**43.5**	mg/L	25.0	0.69	50	03/19/19 12:15	03/20/19 22:41	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**630**	mg/L	25.0	10.0	1		03/21/19 17:57		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**24.8**	mg/L	0.25	0.024	1		03/21/19 22:35	16887-00-6	M1
Fluoride	ND	mg/L	0.30	0.029	1		03/21/19 22:35	16984-48-8	M1
Sulfate	**404**	mg/L	20.0	0.34	20		03/24/19 12:00	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Sample: DGWC-47 **Lab ID: 2616160011** Collected: 03/14/19 12:55 Received: 03/15/19 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.26**	mg/L	0.040	0.0039	1	03/19/19 12:15	03/20/19 22:47	7440-42-8	
Calcium	**36.6**	mg/L	25.0	0.69	50	03/19/19 12:15	03/20/19 22:53	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**378**	mg/L	25.0	10.0	1		03/21/19 17:57		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.6**	mg/L	0.25	0.024	1		03/21/19 23:49	16887-00-6	M1
Fluoride	**1.6**	mg/L	0.30	0.029	1		03/21/19 23:49	16984-48-8	M1
Sulfate	**238**	mg/L	20.0	0.34	20		03/24/19 12:23	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Sample: DGWC-48 **Lab ID: 2616160012** Collected: 03/14/19 13:50 Received: 03/15/19 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.72**	mg/L	0.040	0.0039	1	03/19/19 12:15	03/20/19 22:59	7440-42-8	
Calcium	**74.6**	mg/L	25.0	0.69	50	03/19/19 12:15	03/20/19 23:04	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**625**	mg/L	25.0	10.0	1		03/21/19 17:57		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**10.2**	mg/L	0.25	0.024	1		03/22/19 00:13	16887-00-6	
Fluoride	**1.4**	mg/L	0.30	0.029	1		03/22/19 00:13	16984-48-8	
Sulfate	**450**	mg/L	20.0	0.34	20		03/24/19 12:45	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Sample: FB-3 **Lab ID: 2616160013** Collected: 03/14/19 14:35 Received: 03/15/19 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	ND	mg/L	0.040	0.0039	1	03/19/19 12:15	03/20/19 23:21	7440-42-8	
Calcium	ND	mg/L	0.50	0.014	1	03/19/19 12:15	03/20/19 23:21	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**10.0J**	mg/L	25.0	10.0	1		03/21/19 17:57		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	ND	mg/L	0.25	0.024	1		03/22/19 00:38	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		03/22/19 00:38	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		03/22/19 00:38	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

QC Batch: 24594 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2616160001, 2616160002, 2616160003, 2616160004, 2616160005, 2616160006, 2616160007, 2616160008, 2616160009, 2616160010, 2616160011, 2616160012, 2616160013

METHOD BLANK: 110479 Matrix: Water
Associated Lab Samples: 2616160001, 2616160002, 2616160003, 2616160004, 2616160005, 2616160006, 2616160007, 2616160008, 2616160009, 2616160010, 2616160011, 2616160012, 2616160013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	0.0039	03/20/19 18:52	
Calcium	mg/L	ND	0.50	0.014	03/20/19 18:52	

LABORATORY CONTROL SAMPLE: 110480

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.0	102	80-120	
Calcium	mg/L	1	1.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 110481 110482

Parameter	Units	2616160006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	6.2	1	1	7.0	6.7	85	49	75-125	5	20	M1
Calcium	mg/L	79.9	1	1	78.0	76.7	-192	-327	75-125	2	20	M6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

QC Batch: 24657 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2616160001, 2616160002, 2616160003, 2616160004, 2616160005, 2616160006

LABORATORY CONTROL SAMPLE: 110746

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	411	103	84-108	

SAMPLE DUPLICATE: 110747

Parameter	Units	2616158007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	95.0	90.0	5	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

QC Batch: 24757 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2616160007, 2616160008, 2616160009, 2616160010, 2616160011, 2616160012, 2616160013

LABORATORY CONTROL SAMPLE: 111467

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	414	104	84-108	

SAMPLE DUPLICATE: 111468

Parameter	Units	2616160007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	340	330	3	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

QC Batch: 24628 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2616160001, 2616160002, 2616160003, 2616160004, 2616160005, 2616160006, 2616160007, 2616160008, 2616160009

METHOD BLANK: 110613 Matrix: Water
Associated Lab Samples: 2616160001, 2616160002, 2616160003, 2616160004, 2616160005, 2616160006, 2616160007, 2616160008, 2616160009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.32	0.25	0.024	03/19/19 21:10	
Fluoride	mg/L	ND	0.30	0.029	03/19/19 21:10	
Sulfate	mg/L	0.10J	1.0	0.017	03/19/19 21:10	

LABORATORY CONTROL SAMPLE: 110614

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.2	102	90-110	
Fluoride	mg/L	10	10.6	106	90-110	
Sulfate	mg/L	10	10.9	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 110615 110616

Parameter	Units	2616156001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.6	10	10	13.4	13.3	99	98	90-110	1	15	
Fluoride	mg/L	0.13J	10	10	10.5	10.5	104	104	90-110	0	15	
Sulfate	mg/L	23.7	10	10	31.9	32.0	82	83	90-110	0	15	M1

MATRIX SPIKE SAMPLE: 110617

Parameter	Units	2616156002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.34	10	9.7	94	90-110	
Fluoride	mg/L	ND	10	10.0	100	90-110	
Sulfate	mg/L	0.11J	10	10.4	102	90-110	

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REPORT OF LABORATORY ANALYSIS

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(770)734-4200

QUALITY CONTROL DATA

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

QC Batch: 24743 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2616160010, 2616160011, 2616160012, 2616160013

METHOD BLANK: 111327 Matrix: Water
Associated Lab Samples: 2616160010, 2616160011, 2616160012, 2616160013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	03/21/19 21:46	
Fluoride	mg/L	ND	0.30	0.029	03/21/19 21:46	
Sulfate	mg/L	ND	1.0	0.017	03/21/19 21:46	

LABORATORY CONTROL SAMPLE: 111328

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.2	92	90-110	
Fluoride	mg/L	10	10.4	104	90-110	
Sulfate	mg/L	10	9.7	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 111329 111330

Parameter	Units	2616160010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	24.8	10	10	31.1	31.0	63	62	90-110	0	15	M1
Fluoride	mg/L	ND	10	10	11.5	11.2	115	112	90-110	2	15	M1
Sulfate	mg/L	404	10	10	263	264	-1410	-1400	90-110	0	15	E

MATRIX SPIKE SAMPLE: 111331

Parameter	Units	2616160011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	6.6	10	15.3	87	90-110	M1
Fluoride	mg/L	1.6	10	13.6	120	90-110	M1
Sulfate	mg/L	238	10	179	-587	90-110	E

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
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.

Pace Analytical Services, LLC
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough AP-2, 3/4
Pace Project No.: 2616160

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2616160001	**DGWC-13**	EPA 3005A	24594	EPA 6020B	24646
2616160002	**DGWC-14**	EPA 3005A	24594	EPA 6020B	24646
2616160003	**DGWC-17**	EPA 3005A	24594	EPA 6020B	24646
2616160004	**DGWC-19**	EPA 3005A	24594	EPA 6020B	24646
2616160005	**DGWC-20**	EPA 3005A	24594	EPA 6020B	24646
2616160006	**DGWC-21**	EPA 3005A	24594	EPA 6020B	24646
2616160007	**DGWC-15**	EPA 3005A	24594	EPA 6020B	24646
2616160008	**DGWC-22**	EPA 3005A	24594	EPA 6020B	24646
2616160009	**DGWC-23**	EPA 3005A	24594	EPA 6020B	24646
2616160010	**DGWC-42**	EPA 3005A	24594	EPA 6020B	24646
2616160011	**DGWC-47**	EPA 3005A	24594	EPA 6020B	24646
2616160012	**DGWC-48**	EPA 3005A	24594	EPA 6020B	24646
2616160013	**FB-3**	EPA 3005A	24594	EPA 6020B	24646
2616160001	**DGWC-13**	SM 2540C	24657		
2616160002	**DGWC-14**	SM 2540C	24657		
2616160003	**DGWC-17**	SM 2540C	24657		
2616160004	**DGWC-19**	SM 2540C	24657		
2616160005	**DGWC-20**	SM 2540C	24657		
2616160006	**DGWC-21**	SM 2540C	24657		
2616160007	**DGWC-15**	SM 2540C	24757		
2616160008	**DGWC-22**	SM 2540C	24757		
2616160009	**DGWC-23**	SM 2540C	24757		
2616160010	**DGWC-42**	SM 2540C	24757		
2616160011	**DGWC-47**	SM 2540C	24757		
2616160012	**DGWC-48**	SM 2540C	24757		
2616160013	**FB-3**	SM 2540C	24757		
2616160001	**DGWC-13**	EPA 300.0	24628		
2616160002	**DGWC-14**	EPA 300.0	24628		
2616160003	**DGWC-17**	EPA 300.0	24628		
2616160004	**DGWC-19**	EPA 300.0	24628		
2616160005	**DGWC-20**	EPA 300.0	24628		
2616160006	**DGWC-21**	EPA 300.0	24628		
2616160007	**DGWC-15**	EPA 300.0	24628		
2616160008	**DGWC-22**	EPA 300.0	24628		
2616160009	**DGWC-23**	EPA 300.0	24628		
2616160010	**DGWC-42**	EPA 300.0	24743		
2616160011	**DGWC-47**	EPA 300.0	24743		
2616160012	**DGWC-48**	EPA 300.0	24743		
2616160013	**FB-3**	EPA 300.0	24743		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Req

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant

WO# : 2616160

2616160

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	scsinvoices@southernco.com
Address:	2480 Maner Road	Copy To:	Golder	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10348606	Pace Quote:	
Phone:	(404)506-7239 Fax:	Project Name:	Plant McDonough AP-2, 3/4	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:	Standard TAT	Project #:	166849618	Pace Profile #:	332.1.2

Regulatory Agency: —

State / Location: GA

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved - Ice	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Y/N	Analyses Test: Metals App. III	TDS, Cl, F, SO4	Residual Chlorine (Y/N)	
1	DGWC-13	WT	G	3/13/2019	1555		2	X		X							X	X		1
2	DGWC-14	WT	G	3/13/2019	1405		2	X		X							X	X		2
3	DGWC-17	WT	G	3/13/2019	1515		2	X		X							X	X		3
4	DGWC-19	WT	G	3/13/2019	1515		2	X		X							X	X		4
5	DGWC-20	WT	G	3/13/2019	1630		2	X		X							X	X		5
6	DGWC-21	WT	G	3/13/2019	1615		2	X		X							X	X		6
7	DGWC-15	WT	G	3/14/2019	1050		2	X		X							X	X		7
8	DGWC-22	WT	G	3/14/2019	1320		2	X		X							X	X		8
9	DGWC-23	WT	G	3/14/2019	1050		2	X		X							X	X		9
10	DGWC-42	WT	G	3/14/2019	940		2	X		X							X	X		10
11	DGWC-47	WT	G	3/14/2019	1255		2	X		X							X	X		11
12	DGWC-48	WT	G	3/14/2019	1350		2	X		X							X	X		12
13	FB-3	WT	G	3/14/2019	1435		2	X		X							X	X		13

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature]	3-15-19	920	[signature]	3/15/19	0920	0.3	Y	N	Y

DATE Signed:

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical

Sample Condition Upon Receip

WO#: 2616160

Client Name: GA Power - CCR

PM: BM Due Date: 03/22/19

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Optional
Proj. Due Date:
Proj. Name:

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

Thermometer Used: 082 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 0.3°C Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 3/15/19 gw

Temp should be above freezing to 6°C

			Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.	
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.	
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.	
Sampler Name & Signature on COC:	☐Yes ☑No ☐N/A	4.	
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.	
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.	
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.	
Sufficient Volume:	☑Yes ☐No ☐N/A	8.	
Correct Containers Used:	☑Yes ☐No ☐N/A	9.	
-Pace Containers Used:	☑Yes ☐No ☐N/A		
Containers Intact:	☑Yes ☐No ☐N/A	10.	
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.	
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.	
-Includes date/time/ID/Analysis Matrix: WT			
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.	
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.	
Trip Blank Present:	☐Yes ☐No ☑N/A	16.	
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A		
Pace Trip Blank Lot # (if purchased): _____			

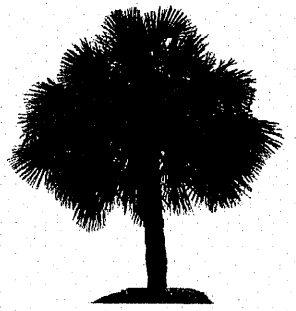
Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)



State of Florida

Department of Health, Bureau of Public Health Laboratories

This is to certify that

E87315

ANALYTICAL SERVICES, INC.
110 TECHNOLOGY PARKWAY
NORCROSS, GA 30092

has complied with Florida Administrative Code 64E-1,
for the examination of environmental samples in the following categories

DRINKING WATER - MICROBIOLOGY, DRINKING WATER - PRIMARY INORGANIC CONTAMINANTS, DRINKING WATER - SECONDARY INORGANIC CONTAMINANTS, NON-POTABLE WATER - EXTRACTABLE ORGANICS, NON-POTABLE WATER - GENERAL CHEMISTRY, NON-POTABLE WATER - METALS, NON-POTABLE WATER - MICROBIOLOGY, NON-POTABLE WATER - PESTICIDES-HERBICIDES-PCB'S, NON-POTABLE WATER - VOLATILE ORGANICS, SOLID AND CHEMICAL MATERIALS - EXTRACTABLE ORGANICS, SOLID AND CHEMICAL MATERIALS - GENERAL CHEMISTRY, SOLID AND CHEMICAL MATERIALS - METALS, SOLID AND CHEMICAL MATERIALS - MICROBIOLOGY, SOLID AND CHEMICAL MATERIALS - PESTICIDES-HERBICIDES-PCB'S, SOLID AND CHEMICAL MATERIALS - VOLATILE ORGANICS

Continued certification is contingent upon successful on-going compliance with the NELAC Standards and FAC Rule 64E-1 regulations. Specific methods and analytes certified are cited on the Laboratory Scope of Accreditation for this laboratory and are on file at the Bureau of Public Health Laboratories, P. O. Box 210, Jacksonville, Florida 32231. Clients and customers are urged to verify with this agency the laboratory's certification status in Florida for particular methods and analytes.

Date Issued: July 01, 2015 Expiration Date: June 30, 2016

Carina Blackmore, DVM, PhD, Dipl. ACVPM, CPM
Chief, Bureau of Public Health Laboratories
DH Form 1697, 7/04
NON-TRANSFERABLE E87315-31-07/01/2015
Supersedes all previously issued certificates

State of Florida
Department of Health, Bureau of Public Health Laboratories
This is to certify that

E87315

PACE ANALYTICAL SERVICES, INC. - ATLANTA
110 TECHNOLOGY PARKWAY
PEACHTREE CORNERS, GA 30092

has complied with Florida Administrative Code 64E-1,
for the examination of environmental samples in the following categories

DRINKING WATER - MICROBIOLOGY, DRINKING WATER - PRIMARY INORGANIC CONTAMINANTS, DRINKING WATER - SECONDARY INORGANIC CONTAMINANTS, NON-POTABLE WATER - EXTRACTABLE ORGANICS, NON-POTABLE WATER - GENERAL CHEMISTRY, NON-POTABLE WATER - METALS, NON-POTABLE WATER - MICROBIOLOGY, NON-POTABLE WATER - PESTICIDES-HERBICIDES-PCB'S, NON-POTABLE WATER - VOLATILE ORGANICS, SOLID AND CHEMICAL MATERIALS - EXTRACTABLE ORGANICS, SOLID AND CHEMICAL MATERIALS - GENERAL CHEMISTRY, SOLID AND CHEMICAL MATERIALS - METALS, SOLID AND CHEMICAL MATERIALS - MICROBIOLOGY, SOLID AND CHEMICAL MATERIALS - PESTICIDES-HERBICIDES-PCB'S, SOLID AND CHEMICAL MATERIALS - VOLATILE ORGANICS

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Date Issued: July 01, 2016 Expiration Date: June 30, 2017

Susanne Crowe, MHA
Acting Chief, Bureau of Public Health Laboratories
DH Form 1697, 7/04
NON-TRANSFERABLE E87315-33-07/01/2016
Supersedes all previously issued certificates

State of Florida
Department of Health, Bureau of Public Health Laboratories
This is to certify that

E87315

PACE ANALYTICAL SERVICES, LLC- ATLANTA GA
110 TECHNOLOGY PARKWAY
PEACHTREE CORNERS, GA 30092

has complied with Florida Administrative Code 64E-1,
for the examination of environmental samples in the following categories

DRINKING WATER - MICROBIOLOGY, DRINKING WATER - PRIMARY INORGANIC CONTAMINANTS, DRINKING WATER - SECONDARY INORGANIC CONTAMINANTS, NON-POTABLE WATER - EXTRACTABLE ORGANICS, NON-POTABLE WATER - GENERAL CHEMISTRY, NON-POTABLE WATER - METALS, NON-POTABLE WATER - MICROBIOLOGY, NON-POTABLE WATER - PESTICIDES-HERBICIDES-PCB'S, NON-POTABLE WATER - VOLATILE ORGANICS, SOLID AND CHEMICAL MATERIALS - EXTRACTABLE ORGANICS, SOLID AND CHEMICAL MATERIALS - GENERAL CHEMISTRY, SOLID AND CHEMICAL MATERIALS - METALS, SOLID AND CHEMICAL MATERIALS - MICROBIOLOGY, SOLID AND CHEMICAL MATERIALS - PESTICIDES-HERBICIDES-PCB'S, SOLID AND CHEMICAL MATERIALS - VOLATILE ORGANICS

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Date Issued: July 01, 2017 Expiration Date: June 30, 2018

Susanne Crowe, MHA
Acting Chief, Bureau of Public Health Laboratories
DH Form 1697, 7/04
NON-TRANSFERABLE E87315-37-07/01/2017
Supersedes all previously issued certificates

State of Florida
Department of Health, Bureau of Public Health Laboratories
This is to certify that

E87315

PACE ANALYTICAL SERVICES, LLC- ATLANTA GA
110 TECHNOLOGY PARKWAY
PEACHTREE CORNERS, GA 30092

has complied with Florida Administrative Code 64E-1,
for the examination of environmental samples in the following categories

DRINKING WATER - MICROBIOLOGY, DRINKING WATER - PRIMARY INORGANIC CONTAMINANTS, DRINKING WATER - SECONDARY INORGANIC CONTAMINANTS, NON-POTABLE WATER - EXTRACTABLE ORGANICS, NON-POTABLE WATER - GENERAL CHEMISTRY, NON-POTABLE WATER - METALS, NON-POTABLE WATER - MICROBIOLOGY, NON-POTABLE WATER - PESTICIDES-HERBICIDES-PCB'S, NON-POTABLE WATER - VOLATILE ORGANICS, SOLID AND CHEMICAL MATERIALS - EXTRACTABLE ORGANICS, SOLID AND CHEMICAL MATERIALS - GENERAL CHEMISTRY, SOLID AND CHEMICAL MATERIALS - METALS, SOLID AND CHEMICAL MATERIALS - MICROBIOLOGY, SOLID AND CHEMICAL MATERIALS - PESTICIDES-HERBICIDES-PCB'S, SOLID AND CHEMICAL MATERIALS - VOLATILE ORGANICS

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Date Issued: July 01, 2018 Expiration Date: June 30, 2019

Patty A. Lewandowski, MBA, MT(ASCP)
Chief Bureau of Public Health Laboratories
DH Form 1697, 7/04
NON-TRANSFERABLE E87315-39-07/01/2018
Supersedes all previously issued certificates

FIELD DATA FORMS

August – September 2016

Low-Flow Test Report:

Test Date / Time: 2016-08-30 11:41:34
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWA-8 **Latitude:** **Longitude:** **Well Diameter: 2 IN** **Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 41.38 FT** **Total Depth: 51.38 FT** **Initial Depth to Water: 14.60 FT**	**Pump Type: Geopump** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC: 46 FT** **Estimated Total Volume Pumped: 5600 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 140 ML_PER_MIN** **Final Draw Down: 0.05 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 416162**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10 %	+/- 5	
2016-08-30 11:41:34	00:00	5.92 pH	28.39 °C	826.40 µS/cm	1.03 mg/L	3.87 NTU	205.2 mV	14.70 ft	140.00 ml/min
2016-08-30 11:42:04	00:30	5.78 pH	27.72 °C	837.27 µS/cm	0.85 mg/L	3.87 NTU	194.6 mV	14.70 ft	140.00 ml/min
2016-08-30 11:47:04	05:30	5.37 pH	24.07 °C	858.20 µS/cm	0.32 mg/L	3.17 NTU	162.3 mV	14.71 ft	140.00 ml/min
2016-08-30 11:49:05	07:31	5.35 pH	23.14 °C	865.02 µS/cm	0.29 mg/L	3.31 NTU	185.6 mV	14.72 ft	140.00 ml/min
2016-08-30 11:54:05	12:31	5.35 pH	22.57 °C	868.68 µS/cm	0.22 mg/L	2.80 NTU	136.4 mV	14.73 ft	140.00 ml/min
2016-08-30 11:59:05	17:31	5.34 pH	22.03 °C	874.32 µS/cm	0.19 mg/L	2.23 NTU	129.3 mV	14.73 ft	140.00 ml/min
2016-08-30 12:04:05	22:31	5.34 pH	21.93 °C	867.77 µS/cm	0.17 mg/L	1.84 NTU	126.9 mV	14.74 ft	140.00 ml/min
2016-08-30 12:09:05	27:31	5.33 pH	21.63 °C	866.37 µS/cm	0.16 mg/L	1.45 NTU	131.5 mV	14.74 ft	140.00 ml/min
2016-08-30 12:14:05	32:31	5.33 pH	21.58 °C	867.86 µS/cm	0.16 mg/L	1.15 NTU	138.3 mV	14.75 ft	140.00 ml/min
2016-08-30 12:19:05	37:31	5.33 pH	21.99 °C	867.93 µS/cm	0.15 mg/L	1.36 NTU	135.9 mV	14.75 ft	140.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 2016-08-30 10:56:14
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWA-9 **Latitude:** **Longitude:** **Well Diameter: 2 IN** **Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 23.75 FT** **Total Depth: 33.75 FT** **Initial Depth to Water: 13.99 FT**	**Pump Type: Geopump** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC:** **Estimated Total Volume Pumped: 3000 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 100 ML_PER_MIN** **Final Draw Down: 0.16 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 448902**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10 %	+/- 5	
2016-08-30 10:56:14	00:00	5.16 pH	28.87 °C	558.17 µS/cm	1.87 mg/L	3.31 NTU	268.8 mV	14.21 ft	100.00 ml/min
2016-08-30 11:01:13	04:59	4.07 pH	22.85 °C	595.67 µS/cm	3.67 mg/L	4.93 NTU	223.7 mV	14.15 ft	100.00 ml/min
2016-08-30 11:06:13	09:58	4.07 pH	23.48 °C	592.97 µS/cm	3.16 mg/L	5.49 NTU	180.0 mV	14.10 ft	100.00 ml/min
2016-08-30 11:11:13	14:58	4.08 pH	23.25 °C	589.16 µS/cm	2.93 mg/L	5.51 NTU	163.9 mV	14.15 ft	100.00 ml/min
2016-08-30 11:16:13	19:59	4.08 pH	22.95 °C	589.77 µS/cm	3.73 mg/L	3.37 NTU	154.4 mV	14.15 ft	100.00 ml/min

Samples

Sample ID:	Description:
DGWA-9	Sampled at 1120 NTU 3.37

Low-Flow Test Report:

Test Date / Time: 2016-08-30 15:24:38
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWA-26 **Latitude:** **Longitude:** **Well Diameter: 2 IN** **Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 42.73 FT** **Total Depth: 52.73 FT** **Initial Depth to Water: 24.56 FT**	**Pump Type: Geopump** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC: 45 FT** **Estimated Total Volume Pumped: 3000 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 100 ML_PER_MIN** **Final Draw Down: 2.59 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 448902**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10 %	+/- 5	
2016-08-30 15:24:38	00:00	5.53 pH	30.24 °C	679.34 µS/cm	3.21 mg/L	2.14 NTU	237.7 mV	25.02 ft	100.00 ml/min
2016-08-30 15:29:38	04:59	5.54 pH	23.10 °C	742.64 µS/cm	3.31 mg/L	12.50 NTU	130.0 mV	25.51 ft	100.00 ml/min
2016-08-30 15:34:38	10:00	5.52 pH	24.25 °C	763.25 µS/cm	3.24 mg/L	6.80 NTU	125.1 mV	25.88 ft	100.00 ml/min
2016-08-30 15:39:38	15:00	5.51 pH	25.69 °C	747.67 µS/cm	3.09 mg/L	3.23 NTU	126.2 mV	26.29 ft	100.00 ml/min
2016-08-30 15:44:38	20:00	5.51 pH	26.28 °C	762.32 µS/cm	3.15 mg/L	9.57 NTU	122.5 mV	26.62 ft	100.00 ml/min
2016-08-30 15:49:38	25:00	5.52 pH	24.70 °C	741.20 µS/cm	3.33 mg/L	4.29 NTU	120.6 mV	27.15 ft	100.00 ml/min
2016-08-30 15:54:38	29:59	5.51 pH	24.97 °C	752.20 µS/cm	3.30 mg/L	4.46 NTU	120.0 mV	27.15 ft	100.00 ml/min

Samples

Sample ID:	Description:

DGWA-26	Sampled at 1555 4.46 NTU Significant drawdown, sampled per Brad 2.59 ft drawdown

Low-Flow Test Report:

Test Date / Time: 2016-08-30 13:55:16
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWA-27 **Latitude:** **Longitude:** **Well Diameter: 2 IN** **Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 27.81 FT** **Total Depth: 37.81 FT** **Initial Depth to Water: 20.17 FT**	**Pump Type:** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC:** **Estimated Total Volume Pumped: 4500 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 150 ML_PER_MIN** **Final Draw Down: 0.07 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 448902**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 5	
2016-08-30 13:55:16	00:00	4.81 pH	33.98 °C	1,154.6 µS/cm	1.46 mg/L		257.5 mV		
2016-08-30 13:56:55	01:38	4.75 pH	26.60 °C	1,302.1 µS/cm	0.69 mg/L	0.65 NTU	256.1 mV	20.23 ft	150.00 ml/min
2016-08-30 14:01:55	06:38	4.74 pH	22.38 °C	1,404.4 µS/cm	0.38 mg/L	0.99 NTU	243.5 mV	20.22 ft	150.00 ml/min
2016-08-30 14:06:55	11:38	4.73 pH	22.13 °C	1,405.1 µS/cm	0.33 mg/L	1.43 NTU	255.3 mV	20.22 ft	150.00 ml/min
2016-08-30 14:11:55	16:38	4.72 pH	21.76 °C	1,404.4 µS/cm	0.29 mg/L	1.49 NTU	252.1 mV	20.23 ft	150.00 ml/min
2016-08-30 14:16:55	21:38	4.72 pH	21.55 °C	1,400.9 µS/cm	0.25 mg/L	0.95 NTU	258.7 mV	20.24 ft	150.00 ml/min

Samples

Sample ID:	Description:
DGWA-27	Sampled at 1420 NTU 0.95

Low-Flow Test Report:

Test Date / Time: 2016-08-31 12:54:46
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWC-5 **Latitude:** **Longitude:** **Well Diameter: 2 IN** **Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 23.24 FT** **Total Depth: 33.24 FT** **Initial Depth to Water: 5.90 FT**	**Pump Type:** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC:** **Estimated Total Volume Pumped: 3500 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 150 ML_PER_MIN** **Final Draw Down: 0.21 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 416162**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10 %	+/- 5	
2016-08-31 12:54:46	00:00	4.46 pH	32.82 °C	508.40 µS/cm	1.49 mg/L	2.77 NTU	390.2 mV	6.04 ft	100.00 ml/min
2016-08-31 12:59:46	04:59	4.37 pH	27.28 °C	568.88 µS/cm	0.47 mg/L	3.27 NTU	318.3 mV	6.10 ft	150.00 ml/min
2016-08-31 13:04:46	09:59	4.33 pH	26.61 °C	599.17 µS/cm	0.29 mg/L	1.53 NTU	282.2 mV	6.11 ft	150.00 ml/min
2016-08-31 13:09:46	14:59	4.31 pH	26.44 °C	604.11 µS/cm	0.26 mg/L	1.55 NTU	294.5 mV	6.11 ft	150.00 ml/min
2016-08-31 13:14:46	20:00	4.32 pH	26.45 °C	600.19 µS/cm	0.23 mg/L	1.34 NTU	327.7 mV	6.11 ft	150.00 ml/min
2016-08-31 13:19:46	25:00	4.31 pH	26.09 °C	597.73 µS/cm	0.19 mg/L	2.02 NTU	332.5 mV	6.11 ft	150.00 ml/min

Samples

Sample ID:	Description:
DGWC-5	Sampled @ 1321 NTU = 2.02

Low-Flow Test Report:

Test Date / Time: 2016-08-31 09:54:37
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWC-10 **Latitude:** **Longitude:** **Well Diameter: 2 IN** **Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 37.85 FT** **Total Depth: 47.85 FT** **Initial Depth to Water: 20.92 FT**	**Pump Type:** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC: 42 FT** **Estimated Total Volume Pumped: 3300 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 100 ML_PER_MIN** **Final Draw Down: 0.21 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 416162**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10 %	+/- 5	
2016-08-31 09:54:37	00:00	6.04 pH	25.72 °C	623.38 µS/cm	3.05 mg/L	7.48 NTU	234.8 mV	21.11 ft	100.00 ml/min
2016-08-31 09:59:37	05:00	4.61 pH	23.16 °C	631.67 µS/cm	0.61 mg/L	10.12 NTU	191.9 mV	21.11 ft	100.00 ml/min
2016-08-31 10:04:37	09:59	4.57 pH	22.93 °C	629.35 µS/cm	0.37 mg/L	6.44 NTU	173.4 mV	21.12 ft	100.00 ml/min
2016-08-31 10:09:37	14:59	4.58 pH	22.70 °C	630.81 µS/cm	0.29 mg/L	10.09 NTU	171.7 mV	21.13 ft	100.00 ml/min
2016-08-31 10:14:37	20:00	4.58 pH	22.64 °C	627.17 µS/cm	0.25 mg/L	4.49 NTU	166.2 mV	21.13 ft	100.00 ml/min
2016-08-31 10:19:37	24:59	4.58 pH	22.81 °C	621.63 µS/cm	0.23 mg/L	4.77 NTU	163.3 mV	21.13 ft	100.00 ml/min
2016-08-31 10:24:37	29:59	4.58 pH	22.79 °C	621.27 µS/cm	0.21 mg/L	3.70 NTU	169.5 mV	21.13 ft	100.00 ml/min

Samples

Sample ID:	Description:
DGWC-10	Sampled @ 1026 NTU 3.70

Low-Flow Test Report:

Test Date / Time: 2016-08-31 12:02:33
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWC-11 **Latitude:** **Longitude:** **Well Diameter: 2 IN** **Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 41.76 FT** **Total Depth: 51.76 FT** **Initial Depth to Water: 9.33 FT**	**Pump Type: Geopump** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC: 47 FT** **Estimated Total Volume Pumped: 4500 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 150 ML_PER_MIN** **Final Draw Down: 0.61 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 339100**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10 %	+/- 5	
2016-07-29 12:02:33	00:00	7.39 pH	36.63 °C	390.40 µS/cm	4.57 mg/L	4.69 NTU	249.2 mV	9.75 ft	150.00 ml/min
2016-07-29 12:07:33	05:00	5.96 pH	23.78 °C	438.73 µS/cm	0.46 mg/L	2.32 NTU	535.0 mV	9.84 ft	150.00 ml/min
2016-07-29 12:12:33	09:59	5.86 pH	24.06 °C	447.42 µS/cm	0.35 mg/L	2.45 NTU	549.0 mV	9.87 ft	150.00 ml/min
2016-07-29 12:17:33	14:59	5.84 pH	23.61 °C	443.93 µS/cm	0.27 mg/L	2.98 NTU	559.2 mV	9.85 ft	150.00 ml/min
2016-07-29 12:22:33	19:59	5.83 pH	23.12 °C	442.39 µS/cm	0.21 mg/L	3.32 NTU	454.6 mV	9.92 ft	150.00 ml/min
2016-07-29 12:27:33	25:00	5.83 pH	23.40 °C	442.97 µS/cm	0.18 mg/L	3.11 NTU	321.6 mV	9.94 ft	150.00 ml/min

Samples

Sample ID:	Description:
DGWC-11	Sampled at 1205 NTU 3.11 2 radium bottles

Low-Flow Test Report:

Test Date / Time: 2016-09-01 12:32:44
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWC-12 **Latitude:** **Longitude:** **Well Diameter: 2 IN Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 18.3 FT** **Total Depth: 28.3 FT** **Initial Depth to Water: 8.29 FT**	**Pump Type: Geopump** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC: 23 FT** **Estimated Total Volume Pumped: 3000 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 100 ML_PER_MIN** **Final Draw Down: 0.21 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 339100**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10 %	+/- 5	
2016-09-01 12:32:44	00:00	6.34 pH	34.07 °C	672.02 µS/cm	2.28 mg/L	0.53 NTU	262.1 mV	8.46 ft	100.00 ml/min
2016-09-01 12:37:44	04:59	5.68 pH	23.81 °C	742.49 µS/cm	0.35 mg/L	2.01 NTU	393.6 mV	8.46 ft	100.00 ml/min
2016-09-01 12:42:44	10:00	5.67 pH	22.84 °C	742.80 µS/cm	0.23 mg/L	0.13 NTU	422.2 mV	8.46 ft	100.00 ml/min
2016-09-01 12:47:44	14:59	5.67 pH	22.56 °C	741.28 µS/cm	0.18 mg/L	0.14 NTU	437.9 mV	8.47 ft	100.00 ml/min
2016-09-01 12:52:44	19:59	5.67 pH	22.21 °C	740.83 µS/cm	0.17 mg/L	0.18 NTU	436.6 mV	8.48 ft	100.00 ml/min
2016-09-01 12:57:44	25:00	5.66 pH	22.10 °C	740.46 µS/cm	0.16 mg/L	0.10 NTU	445.4 mV	8.49 ft	100.00 ml/min
2016-09-01 13:02:44	30:00	5.67 pH	22.17 °C	738.83 µS/cm	0.14 mg/L	0.16 NTU	464.8 mV	8.49 ft	100.00 ml/min

Samples

Sample ID:	Description:

DGWC-12	Sampled at 1305 NTU 0.16 FB-2

Low-Flow Test Report:

Test Date / Time: 2016-09-06 02:22:02
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWC - 13 **Latitude:** **Longitude:** **Well Diameter: 2 IN** **Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 36.7 FT** **Total Depth: 46.7 FT** **Initial Depth to Water: 33.7 FT**	**Pump Type: MP-15** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC: 40 FT** **Estimated Total Volume Pumped: 4000 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 100 ML_PER_MIN** **Final Draw Down: 0.14 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 416162**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

3.19 NTU
Sampled at 1030

Weather Conditions:
80 clear

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10 %	+/- 5	
2016-09-06 02:22:02	00:00	5.85 pH	32.73 °C	449.75 µS/cm	2.74 mg/L	28.30 NTU	152.9 mV	33.82 ft	100.00 ml/min
2016-09-06 02:27:02	04:59	5.83 pH	24.07 °C	471.27 µS/cm	1.63 mg/L	14.60 NTU	101.2 mV	33.83 ft	100.00 ml/min
2016-09-06 02:32:02	09:59	5.82 pH	23.62 °C	478.50 µS/cm	1.54 mg/L	7.67 NTU	93.1 mV	33.83 ft	100.00 ml/min
2016-09-06 02:37:02	15:00	5.77 pH	23.78 °C	476.94 µS/cm	1.49 mg/L	6.89 NTU	95.5 mV	33.84 ft	100.00 ml/min
2016-09-06 02:42:02	20:00	5.75 pH	23.77 °C	476.31 µS/cm	1.45 mg/L	3.55 NTU	95.9 mV	33.84 ft	100.00 ml/min
2016-09-06 02:47:02	24:59	5.72 pH	23.73 °C	476.46 µS/cm	1.43 mg/L	3.16 NTU	95.4 mV	33.84 ft	100.00 ml/min
2016-09-06 02:52:02	30:00	5.69 pH	23.73 °C	477.09 µS/cm	1.41 mg/L	3.19 NTU	98.9 mV	33.84 ft	100.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 2016-08-31 14:32:47
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWC-14 **Latitude:** **Longitude:** **Well Diameter: 2 IN** **Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 27.96 FT** **Total Depth: 37.96 FT** **Initial Depth to Water: 21.96 FT**	**Pump Type: Geopump** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC: 33 FT** **Estimated Total Volume Pumped: 3000 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 100 ML_PER_MIN** **Final Draw Down: 0.04 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 339100**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

Weather Conditions:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10 %	+/- 5	
2016-07-29 14:32:47	00:00	6.00 pH	43.95 °C	135.95 µS/cm	4.43 mg/L	1.22 NTU	342.8 mV	21.98 ft	100.00 ml/min
2016-07-29 14:37:47	05:00	5.67 pH	28.24 °C	135.80 µS/cm	4.04 mg/L	0.42 NTU	491.7 mV	22.00 ft	100.00 ml/min
2016-07-29 14:42:47	09:59	5.68 pH	26.93 °C	136.16 µS/cm	4.08 mg/L	0.35 NTU	490.0 mV	22.00 ft	100.00 ml/min
2016-07-29 14:47:47	14:59	5.68 pH	26.74 °C	136.80 µS/cm	4.15 mg/L	0.31 NTU	506.2 mV	22.00 ft	100.00 ml/min
2016-07-29 14:52:47	20:00	5.66 pH	27.52 °C	136.19 µS/cm	4.18 mg/L	0.38 NTU	494.3 mV	22.00 ft	100.00 ml/min
2016-07-29 14:57:47	25:00	5.66 pH	27.66 °C	136.98 µS/cm	4.17 mg/L	0.34 NTU	453.8 mV	22.00 ft	100.00 ml/min
2016-07-29 15:02:47	30:00	5.68 pH	27.22 °C	134.33 µS/cm	4.04 mg/L	0.33 NTU	444.6 mV	22.00 ft	100.00 ml/min

Samples

Sample ID:	Description:
DGWC-14	Sampled at 1440 NTU 0.33 FD-1 FB-1 1440

Low-Flow

Date:	9/6/2016 14:30
Operator Name:	BH/DC/AE
Pump Model/Type:	SamplePro
Company Name:	Golder
Tubing Type:	polyethylene
Project Name:	McDonough GW
Site Name:	McDonough
Latitude:	0Âº 0' 0"
Longitude:	0Âº 0' 0"
Tubing Diameter:	.125in
Tubing Length:	65 ft
Sonde SN:	416162
Turbidity Make/Model:	Lamotte 2020
Pump placement from TOC:	65 ft
Well ID:	DGWC-15
Well diameter:	2 in
Well Total Depth:	70.86 ft
Screen Length:	10 ft
Depth to Water:	38.15 ft
Final Pumping Rate:	100 mL/min
Total System Volume:	0.3139405 L
Calculated Sample Rate:	300 sec
Stabilization Drawdown (in)	16.08
Total Volume Pumped (L):	15.5

Time	pH	ORP	Conductivi	DO	Temperatu	Turbidity	DTW
0	5.81	162.7	455.22	1.42	28.84	9.64	39.14
300	5.79	99.1	466	0.71	26.68	66.2	39.34
600	5.79	87.7	463.85	0.66	27.63	53.4	39.34
900	5.79	82.5	461.41	0.57	27.01	55.3	39.42
1200	5.79	76.6	460.01	0.5	25.11	41.6	39.49
1500	5.78	76.3	465.63	0.46	25.9	34.5	39.46
1800	5.78	75.9	461.56	0.44	27.07	28.6	39.46
2100	5.78	76.1	461.84	0.42	27.64	22.5	39.46
2400	5.79	76.2	458.94	0.39	28	19.2	39.39
2700	5.78	76.8	459.7	0.37	27.79	19	39.36
3000	5.79	76.7	451.7	0.36	27.28	16.1	39.36
3300	5.78	74	460.03	0.33	27.01	15.6	39.36
3600	5.8	74.1	452.67	0.31	27.84	14.8	39.37
3900	5.8	71.6	451.89	0.3	26.31	14.6	39.41
4200	5.81	68.4	455.31	0.3	24.91	13.92	39.45
4278	5.79	69.8	457.34	0.29	24.92	13.92	39.45
4578	5.8	64.9	458.88	0.27	24.79	12.63	39.46
4878	5.8	65.2	457.23	0.24	26.32	10.77	39.47
5178	5.8	67	455.07	0.24	26.95	9.06	39.4
5478	5.79	69.3	458.56	0.23	27.85	7.67	39.36
5778	5.79	73.1	456.01	0.22	28.16	8.34	39.36

6078	5.8	72.2	449.72	0.22	26.93	7.08	39.34
6378	5.8	68.9	455.03	0.22	25.78	8.42	39.35
6678	5.81	66	450.31	0.22	25.14	5.68	39.4
6978	5.8	63.9	454.17	0.22	24.49	7.02	39.44
7278	5.8	61.9	455.52	0.21	24.15	6.67	39.49
7578	5.8	61.8	459.33	0.2	24.64	6.49	39.55
7878	5.8	62.1	454.23	0.19	25.81	5.62	39.49
8178	5.8	62.6	452.22	0.19	24.68	4.94	39.49
8478	5.79	63.1	457.81		24.43	3.96	39.49

Low-Flow Test Report:

Test Date / Time: 2016-09-07 21:32:28
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWC-17 **Latitude:** **Longitude:** **Well Diameter: 2 IN** **Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 37.94 FT** **Total Depth: 47.94 FT** **Initial Depth to Water: 27.82 FT**	**Pump Type: MP-15** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC: 42 FT** **Estimated Total Volume Pumped: 17000 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 100 ML_PER_MIN** **Final Draw Down: 0.19 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 339100**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

Weather Conditions:
70 partly cloudy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10 %	+/- 5	
2016-08-12 21:32:28	00:00	5.04 pH	21.01 °C	531.67 µS/cm	0.54 mg/L	91.20 NTU	247.7 mV	28.01 ft	100.00 ml/min
2016-08-12 21:37:28	04:59	5.04 pH	21.35 °C	530.43 µS/cm	0.50 mg/L	33.10 NTU	180.6 mV	28.01 ft	100.00 ml/min
2016-08-12 21:42:28	09:59	5.04 pH	21.53 °C	530.67 µS/cm	0.44 mg/L	29.10 NTU	169.8 mV	28.01 ft	100.00 ml/min
2016-08-12 21:47:28	14:59	5.04 pH	21.25 °C	526.04 µS/cm	0.39 mg/L	27.10 NTU	162.1 mV	28.01 ft	100.00 ml/min
2016-08-12 21:52:28	19:59	5.04 pH	21.15 °C	525.82 µS/cm	0.37 mg/L	31.00 NTU	151.4 mV	28.01 ft	100.00 ml/min
2016-08-12 21:57:28	24:59	5.04 pH	21.10 °C	523.68 µS/cm	0.35 mg/L	26.10 NTU	151.2 mV	28.01 ft	100.00 ml/min
2016-08-12 22:02:28	29:59	5.04 pH	21.40 °C	524.50 µS/cm	0.32 mg/L	26.00 NTU	145.0 mV	28.01 ft	100.00 ml/min
2016-08-12 22:07:28	34:59	5.04 pH	22.13 °C	522.88 µS/cm	0.30 mg/L	22.90 NTU	143.7 mV	28.01 ft	100.00 ml/min
2016-08-12 22:12:28	39:59	5.04 pH	22.44 °C	521.32 µS/cm	0.30 mg/L	16.80 NTU	139.6 mV	28.01 ft	100.00 ml/min
2016-08-12 22:17:28	44:59	5.04 pH	22.53 °C	520.35 µS/cm	0.28 mg/L	12.20 NTU	136.7 mV	28.01 ft	100.00 ml/min

2016-08-12 22:22:28	50:00	5.04 pH	22.73 °C	520.98 µS/cm	0.28 mg/L	12.60 NTU	145.3 mV	28.01 ft	100.00 ml/min
2016-08-12 22:27:28	55:00	5.04 pH	22.94 °C	518.27 µS/cm	0.26 mg/L	12.10 NTU	145.9 mV	28.01 ft	100.00 ml/min
2016-08-12 22:32:28	59:59	5.05 pH	23.16 °C	517.07 µS/cm	0.25 mg/L	12.60 NTU	145.5 mV	28.01 ft	100.00 ml/min
2016-08-12 22:37:28	01:05:00	5.05 pH	22.98 °C	515.03 µS/cm	0.25 mg/L	12.10 NTU	142.9 mV	28.01 ft	100.00 ml/min
2016-08-12 22:42:28	01:10:00	5.04 pH	22.32 °C	515.95 µS/cm	0.24 mg/L	13.20 NTU	140.0 mV	28.01 ft	100.00 ml/min
2016-08-12 22:47:28	01:14:59	5.05 pH	22.45 °C	515.39 µS/cm	0.23 mg/L	11.70 NTU	137.5 mV	28.01 ft	100.00 ml/min
2016-08-12 22:52:28	01:19:59	5.04 pH	22.09 °C	514.05 µS/cm	0.23 mg/L	12.20 NTU	136.4 mV	28.01 ft	100.00 ml/min
2016-08-12 22:57:28	01:25:00	5.05 pH	22.45 °C	513.15 µS/cm	0.22 mg/L	11.90 NTU	134.7 mV	28.01 ft	100.00 ml/min
2016-08-12 23:02:28	01:30:00	5.04 pH	22.55 °C	513.37 µS/cm	0.23 mg/L	11.20 NTU	132.3 mV	28.01 ft	100.00 ml/min
2016-08-12 23:07:28	01:34:59	5.05 pH	23.29 °C	511.51 µS/cm	0.21 mg/L	9.86 NTU	133.5 mV	28.01 ft	100.00 ml/min
2016-08-12 23:12:28	01:39:59	5.05 pH	23.34 °C	510.41 µS/cm	0.21 mg/L	10.10 NTU	133.2 mV	28.01 ft	100.00 ml/min
2016-08-12 23:17:28	01:45:00	5.05 pH	23.83 °C	509.87 µS/cm	0.20 mg/L	8.82 NTU	132.7 mV	28.01 ft	100.00 ml/min
2016-08-12 23:22:28	01:50:00	5.05 pH	24.50 °C	507.69 µS/cm	0.20 mg/L	7.68 NTU	135.1 mV	28.01 ft	100.00 ml/min
2016-08-12 23:27:28	01:54:59	5.05 pH	24.70 °C	506.80 µS/cm	0.20 mg/L	7.17 NTU	137.3 mV	28.01 ft	100.00 ml/min
2016-08-12 23:32:28	01:59:59	5.05 pH	24.89 °C	505.22 µS/cm	0.19 mg/L	8.04 NTU	133.4 mV	28.01 ft	100.00 ml/min
2016-08-12 23:37:28	02:04:59	5.05 pH	25.23 °C	505.10 µS/cm	0.19 mg/L	6.32 NTU	134.7 mV	28.01 ft	100.00 ml/min
2016-08-12 23:42:28	02:09:59	5.05 pH	25.28 °C	504.39 µS/cm	0.19 mg/L	6.42 NTU	134.0 mV	28.01 ft	100.00 ml/min
2016-08-12 23:47:28	02:14:59	5.05 pH	25.60 °C	502.57 µS/cm	0.19 mg/L	5.75 NTU	125.6 mV	28.01 ft	100.00 ml/min
2016-08-12 23:52:28	02:19:59	5.05 pH	25.87 °C	506.35 µS/cm	0.19 mg/L	5.35 NTU	125.5 mV	28.01 ft	100.00 ml/min
2016-08-12 23:57:28	02:24:59	5.05 pH	26.24 °C	506.87 µS/cm	0.18 mg/L	5.80 NTU	137.2 mV	28.01 ft	100.00 ml/min
2016-08-13 00:02:28	02:29:59	5.05 pH	26.21 °C	507.60 µS/cm	0.20 mg/L	5.70 NTU	133.2 mV	28.01 ft	100.00 ml/min
2016-08-13 00:07:28	02:34:59	5.05 pH	26.88 °C	505.99 µS/cm	0.20 mg/L	5.44 NTU	127.7 mV	28.01 ft	100.00 ml/min
2016-08-13 00:12:28	02:40:00	5.05 pH	27.06 °C	504.58 µS/cm	0.19 mg/L	5.45 NTU	125.2 mV	28.01 ft	100.00 ml/min
2016-08-13 00:17:28	02:44:59	5.05 pH	27.10 °C	503.58 µS/cm	0.19 mg/L	4.93 NTU	119.2 mV	28.01 ft	100.00 ml/min
2016-08-13 00:22:28	02:50:00	5.05 pH	26.80 °C	503.83 µS/cm	0.19 mg/L	4.58 NTU	118.6 mV	28.01 ft	100.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 2016-09-01 08:00:10
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWC - 19 **Latitude:** **Longitude:** **Well Diameter: 2 IN** **Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 33.23 FT** **Total Depth: 43.23 FT** **Initial Depth to Water: 21.35 FT**	**Pump Type: Geopump** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC: 40 FT** **Estimated Total Volume Pumped: 4200 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 120 ML_PER_MIN** **Final Draw Down: 0.17 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 416162**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

4.72 NTU
Sampled at 16:05

Weather Conditions:
90 cloudy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10 %	+/- 5	
2016-09-01 08:00:10	00:00	4.73 pH	27.90 °C	626.56 µS/cm	0.96 mg/L	9.96 NTU	390.8 mV	21.51 ft	190.00 ml/min
2016-09-01 08:05:10	04:59	4.66 pH	26.13 °C	625.89 µS/cm	0.39 mg/L	9.67 NTU	513.3 mV	21.59 ft	190.00 ml/min
2016-09-01 08:10:10	09:59	4.66 pH	25.07 °C	633.84 µS/cm	0.31 mg/L	9.16 NTU	544.5 mV	21.62 ft	190.00 ml/min
2016-09-01 08:15:10	14:59	4.64 pH	27.42 °C	634.98 µS/cm	0.37 mg/L	10.75 NTU	569.0 mV	21.52 ft	120.00 ml/min
2016-09-01 08:20:10	19:59	4.65 pH	27.99 °C	629.73 µS/cm	0.34 mg/L	6.59 NTU	571.7 mV	21.52 ft	120.00 ml/min
2016-09-01 08:25:10	24:59	4.65 pH	28.16 °C	631.67 µS/cm	0.34 mg/L	3.76 NTU	578.5 mV	21.52 ft	120.00 ml/min
2016-09-01 08:30:10	29:59	4.64 pH	27.88 °C	633.70 µS/cm	0.34 mg/L	4.73 NTU	580.9 mV	21.52 ft	120.00 ml/min
2016-09-01 08:35:10	34:59	4.64 pH	27.44 °C	632.92 µS/cm	0.33 mg/L	4.72 NTU	584.1 mV	21.52 ft	120.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 2016-09-02 00:51:08
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWC - 20 **Latitude:** **Longitude:** **Well Diameter: 2 IN** **Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 33.38 FT** **Total Depth: 43.38 FT** **Initial Depth to Water: 19.92 FT**	**Pump Type: Geopump** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC: 38 FT** **Estimated Total Volume Pumped: 5600 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 140 ML_PER_MIN** **Final Draw Down: 0.88 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 416162**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

4.90 NTU
Sampled at 9:00

Weather Conditions:
75 overcast

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10 %	+/- 5	
2016-09-02 00:51:08	00:00	5.20 pH	21.78 °C	1,199.4 µS/cm	0.41 mg/L	8.10 NTU	305.0 mV	19.92 ft	140.00 ml/min
2016-09-02 00:56:08	05:00	4.78 pH	21.36 °C	1,209.9 µS/cm	0.31 mg/L	9.08 NTU	170.7 mV	20.68 ft	140.00 ml/min
2016-09-02 01:01:08	09:59	4.72 pH	21.64 °C	1,193.9 µS/cm	0.32 mg/L	7.19 NTU	140.4 mV	20.68 ft	140.00 ml/min
2016-09-02 01:06:08	15:00	4.71 pH	21.61 °C	1,175.3 µS/cm	0.31 mg/L	8.02 NTU	134.9 mV	20.70 ft	140.00 ml/min
2016-09-02 01:11:08	19:59	4.70 pH	21.53 °C	1,172.0 µS/cm	0.30 mg/L	5.17 NTU	130.1 mV	20.73 ft	140.00 ml/min
2016-09-02 01:16:07	24:59	4.70 pH	21.53 °C	1,172.2 µS/cm	0.28 mg/L	2.76 NTU	124.2 mV	20.76 ft	140.00 ml/min
2016-09-02 01:21:07	29:58	4.70 pH	21.50 °C	1,171.6 µS/cm	0.25 mg/L	4.90 NTU	116.5 mV	20.80 ft	140.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 2016-09-02 02:07:58
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWC - 21 **Latitude:** **Longitude:** **Well Diameter: 2 IN** **Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 62.61 FT** **Total Depth: 72.61 FT** **Initial Depth to Water: 13.6 FT**	**Pump Type: Geopump** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC: 67 FT** **Estimated Total Volume Pumped: 6000 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 150 ML_PER_MIN** **Final Draw Down: 0.26 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 416162**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

2.40 NTU
Sampled at 10:15

Weather Conditions:
75F overcast

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10 %	+/- 5	
2016-09-02 02:07:58	00:00	5.68 pH	21.91 °C	634.00 µS/cm	0.70 mg/L	2.85 NTU	203.8 mV	13.82 ft	150.00 ml/min
2016-09-02 02:12:58	05:00	5.69 pH	21.89 °C	645.44 µS/cm	0.44 mg/L	1.49 NTU	107.8 mV	13.82 ft	150.00 ml/min
2016-09-02 02:17:04	09:05	5.70 pH	21.86 °C	646.65 µS/cm	0.36 mg/L	2.16 NTU	97.0 mV	13.82 ft	150.00 ml/min
2016-09-02 02:22:04	14:05	5.70 pH	21.85 °C	645.54 µS/cm	0.29 mg/L	2.58 NTU	93.2 mV	13.84 ft	150.00 ml/min
2016-09-02 02:27:04	19:06	5.70 pH	21.79 °C	644.60 µS/cm	0.26 mg/L	2.28 NTU	92.0 mV	13.86 ft	150.00 ml/min
2016-09-02 02:32:04	24:05	5.70 pH	21.80 °C	646.18 µS/cm	0.25 mg/L	2.26 NTU	92.1 mV	13.86 ft	150.00 ml/min
2016-09-02 02:37:04	29:05	5.70 pH	21.71 °C	645.01 µS/cm	0.23 mg/L	2.16 NTU	93.2 mV	13.86 ft	150.00 ml/min
2016-09-02 02:42:04	34:05	5.70 pH	21.69 °C	641.97 µS/cm	0.22 mg/L	2.40 NTU	90.1 mV	13.86 ft	150.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 2016-09-02 03:21:12
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWC - 22 **Latitude:** **Longitude:** **Well Diameter: 2 IN** **Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 54.49 FT** **Total Depth: 64.49 FT** **Initial Depth to Water: 11.62 FT**	**Pump Type: Geopump** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC: 60 FT** **Estimated Total Volume Pumped: 4900 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 140 ML_PER_MIN** **Final Draw Down: 0.17 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 416162**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

2.68 NTU
Sampled at 11:25

Weather Conditions:
75F overcast

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10 %	+/- 5	
2016-09-02 03:21:12	00:00	5.84 pH	22.16 °C	649.09 µS/cm	0.53 mg/L	1.01 NTU	191.1 mV	11.80 ft	140.00 ml/min
2016-09-02 03:26:12	04:59	5.82 pH	22.92 °C	660.69 µS/cm	0.46 mg/L	2.52 NTU	104.0 mV	11.97 ft	140.00 ml/min
2016-09-02 03:31:12	10:00	5.74 pH	23.20 °C	666.77 µS/cm	0.36 mg/L	3.29 NTU	95.9 mV	11.97 ft	140.00 ml/min
2016-09-02 03:36:12	15:00	5.73 pH	23.15 °C	663.83 µS/cm	0.31 mg/L	2.66 NTU	97.5 mV	11.97 ft	140.00 ml/min
2016-09-02 03:41:12	20:00	5.74 pH	23.18 °C	663.73 µS/cm	0.28 mg/L	3.62 NTU	98.2 mV	11.97 ft	140.00 ml/min
2016-09-02 03:46:12	25:00	5.74 pH	22.92 °C	661.24 µS/cm	0.26 mg/L	2.96 NTU	97.0 mV	11.97 ft	140.00 ml/min
2016-09-02 03:51:11	29:59	5.74 pH	22.97 °C	661.25 µS/cm	0.24 mg/L	2.68 NTU	96.5 mV	11.97 ft	140.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 2016-09-07 01:56:30
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWC - 42 **Latitude:** **Longitude:** **Well Diameter: 2 IN** **Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 42.69 FT** **Total Depth: 52.69 FT** **Initial Depth to Water: 26.57 FT**	**Pump Type: SamplePro** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC: 45 FT** **Estimated Total Volume Pumped: 3300 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 110 ML_PER_MIN** **Final Draw Down: 0.94 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 339100**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

3.05 NTU
Sampled at 1321

Weather Conditions:
85 sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10 %	+/- 5	
2016-08-13 01:56:30	00:00	5.42 pH	26.78 °C	772.53 µS/cm	0.70 mg/L	10.54 NTU	194.8 mV	26.57 ft	110.00 ml/min
2016-08-13 02:01:30	05:00	5.41 pH	26.75 °C	785.13 µS/cm	0.54 mg/L	4.10 NTU	162.8 mV	27.54 ft	110.00 ml/min
2016-08-13 02:06:30	09:59	5.40 pH	27.01 °C	781.78 µS/cm	0.47 mg/L	3.39 NTU	156.7 mV	27.54 ft	110.00 ml/min
2016-08-13 02:11:30	14:59	5.38 pH	26.97 °C	783.55 µS/cm	0.40 mg/L	2.77 NTU	151.2 mV	27.51 ft	110.00 ml/min
2016-08-13 02:16:30	20:00	5.37 pH	27.71 °C	783.38 µS/cm	0.39 mg/L	2.53 NTU	150.8 mV	27.51 ft	110.00 ml/min
2016-08-13 02:21:30	25:00	5.36 pH	27.84 °C	778.67 µS/cm	0.35 mg/L	2.64 NTU	154.1 mV	27.51 ft	110.00 ml/min
2016-08-13 02:26:30	29:59	5.35 pH	27.68 °C	775.30 µS/cm	0.31 mg/L	3.05 NTU	145.1 mV	27.51 ft	110.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 2016-09-01 04:40:30
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWC-47 **Latitude:** **Longitude:** **Well Diameter: 2 IN** **Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 21.94 FT** **Total Depth: 31.94 FT** **Initial Depth to Water: 20.62 FT**	**Pump Type:** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC:** **Estimated Total Volume Pumped: 21000 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 140 ML_PER_MIN** **Final Draw Down: 6.68 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 416162**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

1.86 NTU
Sampled at 14:15

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10 %	+/- 5	
2016-09-01 04:40:30	00:00	4.79 pH	25.80 °C	839.65 µS/cm	0.35 mg/L	5.27 NTU	5.3 mV	22.20 ft	170.00 ml/min
2016-09-01 04:45:30	05:00	4.82 pH	26.35 °C	835.21 µS/cm	0.23 mg/L	4.67 NTU	-2.4 mV	22.45 ft	170.00 ml/min
2016-09-01 04:50:30	10:00	4.80 pH	25.95 °C	832.15 µS/cm	0.20 mg/L	4.40 NTU	-8.4 mV	22.85 ft	170.00 ml/min
2016-09-01 04:55:30	15:00	4.77 pH	25.77 °C	821.24 µS/cm	0.22 mg/L	3.25 NTU	-13.3 mV	23.23 ft	200.00 ml/min
2016-09-01 05:00:30	20:00	4.78 pH	25.30 °C	828.07 µS/cm	0.24 mg/L	3.96 NTU	-20.6 mV	23.50 ft	200.00 ml/min
2016-09-01 05:05:30	25:00	4.81 pH	24.96 °C	826.33 µS/cm	0.25 mg/L	2.96 NTU	-28.4 mV	23.75 ft	200.00 ml/min
2016-09-01 05:10:30	30:00	4.81 pH	24.82 °C	833.59 µS/cm	0.24 mg/L	2.86 NTU	-29.4 mV	24.00 ft	200.00 ml/min
2016-09-01 05:15:30	35:00	4.88 pH	24.16 °C	812.11 µS/cm	0.22 mg/L	2.84 NTU	-31.7 mV	24.30 ft	260.00 ml/min
2016-09-01 05:20:30	40:00	4.99 pH	23.42 °C	825.25 µS/cm	0.20 mg/L	2.40 NTU	-39.4 mV	24.75 ft	260.00 ml/min
2016-09-01 05:25:30	45:00	5.12 pH	23.24 °C	826.53 µS/cm	0.18 mg/L	2.34 NTU	-45.7 mV	25.20 ft	260.00 ml/min
2016-09-01 05:30:30	50:00	5.35 pH	23.33 °C	840.14 µS/cm	0.17 mg/L	2.16 NTU	-54.6 mV	25.65 ft	260.00 ml/min

2016-09-01 05:35:30	55:00	5.47 pH	23.42 °C	838.75 µS/cm	0.16 mg/L	2.18 NTU	-58.3 mV	25.85 ft	260.00 ml/min
2016-09-01 05:40:30	01:00:00	5.62 pH	23.32 °C	841.28 µS/cm	0.15 mg/L	2.21 NTU	-61.8 mV	26.11 ft	260.00 ml/min
2016-09-01 05:45:30	01:05:00	5.47 pH	24.45 °C	858.36 µS/cm	0.15 mg/L	1.87 NTU	-48.5 mV	26.29 ft	140.00 ml/min
2016-09-01 05:50:31	01:10:01	5.41 pH	26.13 °C	854.96 µS/cm	0.15 mg/L	1.96 NTU	-51.3 mV	26.32 ft	140.00 ml/min
2016-09-01 05:55:31	01:15:01	5.40 pH	26.28 °C	858.63 µS/cm	0.16 mg/L	2.21 NTU	-39.8 mV	26.50 ft	140.00 ml/min
2016-09-01 06:00:31	01:20:01	5.42 pH	25.90 °C	847.13 µS/cm	0.16 mg/L	1.96 NTU	-37.7 mV	26.66 ft	140.00 ml/min
2016-09-01 06:05:31	01:25:01	5.30 pH	27.10 °C	857.16 µS/cm	0.16 mg/L	1.64 NTU	-29.3 mV	26.75 ft	140.00 ml/min
2016-09-01 06:10:31	01:30:01	5.25 pH	27.65 °C	843.75 µS/cm	0.16 mg/L	1.44 NTU	-26.4 mV	26.84 ft	140.00 ml/min
2016-09-01 06:15:31	01:35:01	5.27 pH	26.50 °C	845.45 µS/cm	0.17 mg/L	1.66 NTU	-27.2 mV	26.96 ft	140.00 ml/min
2016-09-01 06:20:31	01:40:01	5.26 pH	25.70 °C	841.34 µS/cm	0.17 mg/L	1.52 NTU	-22.6 mV	27.01 ft	140.00 ml/min
2016-09-01 06:25:31	01:45:00	5.20 pH	25.31 °C	854.87 µS/cm	0.18 mg/L	1.16 NTU	-21.0 mV	27.09 ft	140.00 ml/min
2016-09-01 06:30:31	01:50:01	5.15 pH	25.18 °C	853.19 µS/cm	0.18 mg/L	1.52 NTU	-16.9 mV	27.15 ft	140.00 ml/min
2016-09-01 06:35:31	01:55:01	5.13 pH	25.31 °C	863.40 µS/cm	0.17 mg/L	1.64 NTU	-16.9 mV	27.23 ft	140.00 ml/min
2016-09-01 06:40:31	02:00:01	5.11 pH	26.16 °C	861.87 µS/cm	0.17 mg/L	1.86 NTU	-15.7 mV	27.30 ft	140.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 2016-09-01 14:05:30
Project: Plant McDonough CCR
Operator Name: Golder

Location Name: DGWC-48 **Latitude:** **Longitude:** **Well Diameter: 2 IN** **Casing Type: PVC** **Screen Length: 10 FT** **Top of Screen: 23.54 FT** **Total Depth: 33.54 FT** **Initial Depth to Water: 16.99 FT**	**Pump Type: Geopump** **Tubing Type: Polyethylene** **Tubing Inner Diameter: 0.125 IN** **Tubing Length:** **Pump Intake From TOC: 28 FT** **Estimated Total Volume Pumped: 4000 ML** **Flow Cell Volume: 90 ML** **Final Flow Rate: 100 ML_PER_MIN** **Final Draw Down: 0.97 FT**	**Instrument Used: SmarTROLL MP** **Serial Number: 339100**

Test Notes:
Golder
Plant McDonough
Lamotte 2020

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 0.2	+/- 10	+/- 10 %	+/- 5	
2016-09-01 14:05:30	00:00	4.66 pH	32.34 °C	946.54 µS/cm	3.63 mg/L	2.08 NTU	116.2 mV	17.40 ft	100.00 ml/min
2016-09-01 14:10:30	05:00	4.47 pH	24.93 °C	1,022.9 µS/cm	0.47 mg/L	2.60 NTU	92.6 mV	17.60 ft	100.00 ml/min
2016-09-01 14:15:30	10:00	4.47 pH	25.58 °C	1,020.0 µS/cm	0.29 mg/L	2.96 NTU	82.4 mV	17.79 ft	100.00 ml/min
2016-09-01 14:20:30	15:00	4.48 pH	25.68 °C	1,015.1 µS/cm	0.24 mg/L	1.23 NTU	70.4 mV	17.89 ft	100.00 ml/min
2016-09-01 14:25:30	20:00	4.49 pH	25.33 °C	1,010.7 µS/cm	0.22 mg/L	0.40 NTU	63.4 mV	17.92 ft	100.00 ml/min
2016-09-01 14:30:30	25:00	4.53 pH	24.82 °C	1,002.6 µS/cm	0.20 mg/L	0.49 NTU	55.4 mV	17.95 ft	100.00 ml/min
2016-09-01 14:35:30	30:00	4.63 pH	25.46 °C	994.86 µS/cm	0.19 mg/L	0.21 NTU	44.8 mV	17.96 ft	100.00 ml/min
2016-09-01 14:40:30	35:00	4.71 pH	25.87 °C	992.62 µS/cm	0.18 mg/L	0.27 NTU	36.5 mV	17.96 ft	100.00 ml/min
2016-09-01 14:45:30	40:00	4.70 pH	24.93 °C	978.61 µS/cm	0.17 mg/L	0.28 NTU	37.6 mV	17.96 ft	100.00 ml/min

Samples

Sample ID:	Description:

DGWC-48	Sampled @ 1445 NTU 0.28 FD-2

FIELD DATA FORMS

December 2016

Product Name: Low-Flow System

Date: 2016-12-06 10:03:39

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	Alexis peristaltic
Company Name	Golder Associates	Tubing Type	LDPE
Project Name	Plant McDonough	Tubing Diameter	.170 in
Site Name	Plant McDonough	Tubing Length	52 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	46 ft

Well Information:		Pumping Information:	
Well ID	DGWA-8	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.322098 L
Well Total Depth	51.34 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.48 in
Depth to Water	18.01 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:41:20	300.15	14.94	5.41	939.05	9.47	18.03	0.58	108.28
Last 5	09:46:20	600.02	15.83	5.42	938.06	7.41	18.04	0.35	109.06
Last 5	09:51:20	900.02	15.69	5.40	935.00	3.04	18.05	0.32	110.60
Last 5	09:56:20	1200.02	15.48	5.39	937.96	2.68	18.05	0.28	112.05
Last 5	10:01:20	1500.02	15.30	5.39	940.67	3.27	18.05	0.27	113.05
Variance 0			-0.13	-0.02	-3.07			-0.04	1.54
Variance 1			-0.21	-0.00	2.96			-0.04	1.45
Variance 2			-0.18	-0.00	2.71			-0.01	0.99

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-06 10:13:13

Project Information:		Pump Information:	
Operator Name	K. Jurinko	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	Plant McDonough	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	28.7 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	Lamotte 2020	Pump placement from TOC	28.7 ft

Well Information:		Pumping Information:	
Well ID	DGWA-9	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.1592584 L
Well Total Depth	33.71 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.2 in
Depth to Water	16.10 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:44:42	600.02	16.56	4.14	611.89	4.30	16.22	0.32	125.90
Last 5	09:49:42	900.02	16.33	4.15	612.67	2.81	16.22	0.26	114.57
Last 5	09:54:42	1200.02	16.17	4.15	608.44	1.37	16.22	0.21	107.57
Last 5	09:59:44	1502.02	16.07	4.15	611.64	1.11	16.20	0.20	103.33
Last 5	10:04:44	1802.02	16.15	4.15	614.24	0.76	16.20	0.18	100.14
Variance 0			-0.15	0.00	-4.22			-0.06	-7.00
Variance 1			-0.11	-0.00	3.20			-0.01	-4.24
Variance 2			0.09	-0.00	2.60			-0.01	-3.19

Notes

Sampled at 1006 by KJ on 12/6/16

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-06 16:09:59

Project Information:		Pump Information:	
Operator Name	K. Jurinko	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	Plant McDonough	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	47.7 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	Lamotte 2020	Pump placement from TOC	47.7 ft

Well Information:		Pumping Information:	
Well ID	DGWA-26	Final Pumping Rate	70 mL/min
Well diameter	2 in	Total System Volume	0.2051088 L
Well Total Depth	52.70 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	27.96 in
Depth to Water	26.40 ft	Total Volume Pumped	1.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:39:51	300.12	16.78	5.84	557.97	1.57	27.39	1.84	121.05
Last 5	15:44:51	600.02	16.82	5.84	555.98	1.17	27.78	1.78	102.48
Last 5	15:49:51	900.02	16.81	5.84	554.44	1.00	28.34	1.72	95.57
Last 5	15:54:51	1200.02	16.76	5.84	552.17	0.77	28.43	1.70	91.50
Last 5	15:59:51	1500.02	16.65	5.84	552.32	0.94	28.73	1.70	89.05
Variance 0			-0.01	-0.00	-1.54			-0.07	-6.90
Variance 1			-0.05	0.00	-2.26			-0.02	-4.08
Variance 2			-0.12	0.00	0.14			0.00	-2.44

Notes

Sampled at 1605 by KJ on 12/6/16. Significant drawdown

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-06 14:05:19

Project Information:		Pump Information:	
Operator Name	K. Jurinko	Pump Model/Type	alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	Plant McDonough	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	32.7 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	Lamotte 2020	Pump placement from TOC	32.7 ft

Well Information:		Pumping Information:	
Well ID	DGWA-27	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.1689111 L
Well Total Depth	37.82 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.48 in
Depth to Water	20.90 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:42:48	600.02	16.97	4.82	1446.03	1.31	20.94	0.25	200.87
Last 5	13:47:48	900.02	17.19	4.82	1406.43	1.77	20.94	0.20	192.26
Last 5	13:52:48	1200.02	17.19	4.82	1386.85	1.89	20.95	0.17	186.11
Last 5	13:57:48	1500.02	17.23	4.83	1370.14	1.63	20.94	0.15	181.67
Last 5	14:02:48	1800.02	17.23	4.83	1343.94	2.10	20.94	0.15	177.13
Variance 0			-0.00	0.00	-19.58			-0.04	-6.15
Variance 1			0.05	0.00	-16.71			-0.02	-4.44
Variance 2			-0.00	0.00	-26.20			-0.01	-4.54

Notes

Sampled by KJ at1402 on 12/6/16

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-06 13:27:48

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	Alexis peristaltic
Company Name	Golder Associates	Tubing Type	LDPE
Project Name	Plant McDonough	Tubing Diameter	.170 in
Site Name	Plant McDonough	Tubing Length	34 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	DGWC-5	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2417564 L
Well Total Depth	33.26 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.88 in
Depth to Water	5.30 ft	Total Volume Pumped	4.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:06:16	300.10	17.41	4.47	759.27	3.53	5.54	0.51	80.68
Last 5	13:11:15	600.03	17.72	4.45	761.37	3.20	5.56	0.32	98.44
Last 5	13:16:15	900.02	17.94	4.44	760.44	3.53	5.53	0.29	118.22
Last 5	13:21:15	1200.02	17.95	4.43	760.70	3.36	5.53	0.27	140.34
Last 5	13:26:15	1500.02	17.72	4.43	759.39	3.45	5.54	0.25	168.61
Variance 0			0.22	-0.01	-0.93			-0.03	19.79
Variance 1			0.00	-0.00	0.26			-0.02	22.12
Variance 2			-0.22	0.00	-1.30			-0.02	28.27

Notes

Grab Samples

Low-Flow

Date:	12/6/2016 11:59
Operator Name:	D. Herrera
Pump Model/Type:	Alexis peristaltic
Company Name:	Golder Associates
Tubing Type:	polyethylene
Project Name:	Plant McDonough
Site Name:	Plant McDonough
Latitude:	0Âº 0' 0"
Longitude:	0Âº 0' 0"
Tubing Diameter:	0.125in
Tubing Length:	50 ft
Sonde SN:	450877
Turbidity Make/Model:	LaMotte 2020we
Pump placement from TC	42 ft
Well ID:	DGWC-10
Well diameter:	2 in
Well Total Depth:	47.89 ft
Screen Length:	10 ft
Depth to Water:	21.07 ft
Final Pumping Rate:	150 mL/min
Total System Volume:	
Calculated Sample Rate:	300 sec
Stabilization Drawdown:	0.24 in
Total Volume Pumped:	5.25 L

Time	pH	ORP	Conductivi	DO	Temperatu	Turbidity	DTW
300.102209	4.72	225.3	765.5	0.8	15.14	5.79	21.07
600.026278	4.71	215.4	772.2	0.74	15.48	5.32	21.08
900.023871	4.71	207.9	765.6	0.71	15.52	4.89	21.08
1200.023692	4.74	201.9	768.2	0.63	15.39	3.12	21.09
1500.022786	4.76	199.5	768.1	0.64	15.26	4.58	21.09
1800.024786	4.83	195.1	773.9	0.62	15.58	3.53	21.09
2100.042786	4.9	185.8	772.9	0.63	15.81	3.94	21.09

Product Name: Low-Flow System

Date: 2016-12-06 15:46:33

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	Alexis peristaltic
Company Name	Golder Associates	Tubing Type	LDPE
Project Name	Plant McDonough	Tubing Diameter	.170 in
Site Name	Plant McDonough	Tubing Length	52 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	46 ft

Well Information:		Pumping Information:	
Well ID	DGWC-11	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.322098 L
Well Total Depth	51.79 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	5.04 in
Depth to Water	7.69 ft	Total Volume Pumped	7.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	15:24:24	2100.02	18.12	5.90	482.38	9.38	8.10	0.22	114.36
Last 5	15:29:24	2400.02	18.12	5.90	483.17	7.48	8.10	0.20	113.06
Last 5	15:34:24	2700.03	18.09	5.90	482.85	4.92	8.11	0.19	112.36
Last 5	15:39:24	3000.03	18.03	5.90	484.20	4.56	8.11	0.18	111.51
Last 5	15:44:24	3300.02	17.99	5.91	483.97	3.80	8.11	0.18	110.34
Variance 0			-0.04	-0.00	-0.32			-0.01	-0.70
Variance 1			-0.05	-0.00	1.35			-0.00	-0.85
Variance 2			-0.04	0.01	-0.23			-0.01	-1.17

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-07 09:53:40

Project Information:		Pump Information:	
Operator Name	K. Jurinko	Pump Model/Type	ALEXIS
Company Name	Golder	Tubing Type	polyethylene
Project Name	Plant McDonough	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	25 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	Lamotte 2020	Pump placement from TOC	25 ft

Well Information:		Pumping Information:	
Well ID	DGWC-12	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.1503296 L
Well Total Depth	28.32 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.16 in
Depth to Water	7.48 ft	Total Volume Pumped	3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:06:31	300.12	14.17	5.64	811.25	2.90	7.65	0.43	120.73
Last 5	09:11:31	600.02	14.94	5.63	798.60	3.03	7.65	0.30	125.58
Last 5	09:16:31	900.02	15.14	5.64	798.74	1.23	7.66	0.25	166.29
Last 5	09:21:31	1200.02	15.22	5.65	795.31	1.03	7.66	0.21	180.12
Last 5	09:26:31	1500.02	15.30	5.65	795.03	1.09	7.66	0.19	182.33
Variance 0			0.20	0.01	0.14			-0.06	40.70
Variance 1			0.08	0.01	-3.43			-0.04	13.84
Variance 2			0.09	0.00	-0.28			-0.02	2.21

Notes

Sampled at 0935 by KJ on 12/7/16. FD-1 sampled and extra radium

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-07 10:56:45

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	Samplepro
Company Name	Golder Associates	Tubing Type	LDPE
Project Name	Plant McDonough	Tubing Diameter	.170 in
Site Name	Plant McDonough	Tubing Length	48 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	DGWC-13	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.3042443 L
Well Total Depth	46.88 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.44 in
Depth to Water	33.37 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:35:11	900.03	16.56	5.99	443.88	3.32	33.48	2.78	115.86
Last 5	10:40:11	1200.02	16.83	5.98	443.84	2.37	33.51	2.73	116.10
Last 5	10:45:11	1500.02	16.74	5.97	442.59	2.32	33.51	2.68	116.30
Last 5	10:50:11	1800.03	16.73	5.97	443.58	1.66	33.49	2.67	116.41
Last 5	10:55:11	2100.02	16.58	5.96	443.10	1.02	33.49	2.64	116.59
Variance 0			-0.09	-0.01	-1.25			-0.04	0.20
Variance 1			-0.01	-0.00	0.99			-0.01	0.10
Variance 2			-0.16	-0.00	-0.48			-0.03	0.18

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-06 14:50:32

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	Plant McDonough GW sampling	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	42 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449474		
Turbidity Make/Model	Lamotte we2020	Pump placement from TOC	33 ft

Well Information:		Pumping Information:	
Well ID	DGWC-14	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.1913537 L
Well Total Depth	37.98 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.84 in
Depth to Water	22.62 ft	Total Volume Pumped	4.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:29:02	900.83	15.78	5.64	152.88	0.11	22.69	4.36	155.27
Last 5	14:34:02	1200.83	15.93	5.63	154.04	0.09	22.69	4.37	154.91
Last 5	14:39:02	1500.83	15.99	5.64	153.87	0.19	22.69	4.40	154.10
Last 5	14:44:02	1800.83	15.98	5.63	153.93	0.06	22.69	4.39	154.13
Last 5	14:49:02	2100.83	16.11	5.63	152.32	0.15	22.69	4.41	153.87
Variance 0			0.06	0.01	-0.17			0.02	-0.81
Variance 1			-0.01	-0.01	0.06			-0.00	0.03
Variance 2			0.13	-0.00	-1.60			0.02	-0.27

Notes

DGWC-14 GW sampling December 2016

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-07 14:38:26

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	Samplepro
Company Name	Golder Associates	Tubing Type	LDPE
Project Name	Plant McDonough	Tubing Diameter	.170 in
Site Name	Plant McDonough	Tubing Length	70 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	65 ft

Well Information:		Pumping Information:	
Well ID	DGWC-15	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.4024396 L
Well Total Depth	70.85 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	10.56 in
Depth to Water	39.34 ft	Total Volume Pumped	12.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	14:17:20	3601.90	17.95	5.94	472.80	6.80	40.18	0.13	110.48
Last 5	14:22:20	3901.90	18.03	5.94	473.09	6.35	40.21	0.12	110.10
Last 5	14:27:20	4201.90	18.06	5.94	472.96	5.59	40.19	0.11	109.73
Last 5	14:32:22	4503.90	18.08	5.93	472.56	5.34	40.21	0.11	109.58
Last 5	14:37:22	4803.90	18.19	5.94	472.69	4.99	40.22	0.11	109.00
Variance 0			0.03	-0.00	-0.13			-0.01	-0.38
Variance 1			0.02	-0.00	-0.40			-0.01	-0.14
Variance 2			0.11	0.00	0.13			0.00	-0.59

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-08 09:37:18

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	Samplepro
Company Name	Golder Associates	Tubing Type	LDPE
Project Name	Plant McDonough	Tubing Diameter	.170 in
Site Name	Plant McDonough	Tubing Length	49 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	DGWC-17	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.3087077 L
Well Total Depth	47.96 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.56 in
Depth to Water	28.2 ft	Total Volume Pumped	6.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:15:18	1799.91	15.38	5.11	592.66	7.48	28.39	0.45	95.56
Last 5	09:20:18	2099.91	15.35	5.13	588.28	6.35	28.38	0.39	93.92
Last 5	09:25:18	2399.90	15.50	5.12	587.60	4.85	28.36	0.36	92.72
Last 5	09:30:18	2699.91	15.39	5.12	584.62	4.22	28.38	0.33	91.38
Last 5	09:35:18	2999.90	15.57	5.12	584.54	3.84	28.33	0.30	89.77
Variance 0			0.15	-0.01	-0.68			-0.03	-1.20
Variance 1			-0.12	-0.00	-2.98			-0.03	-1.34
Variance 2			0.18	0.00	-0.08			-0.02	-1.61

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-07 13:12:07

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	Plant McDonough GW sampling	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	40 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449474		
Turbidity Make/Model	Lamotte we2020	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	DGWC-19	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.1865273 L
Well Total Depth	43.34 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.56 in
Depth to Water	22.22 ft	Total Volume Pumped	4.9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:47:16	899.98	18.52	4.63	623.39	1.28	22.35	0.73	543.58
Last 5	12:52:16	1199.97	18.71	4.63	623.10	1.01	22.35	0.84	544.74
Last 5	12:57:16	1499.98	18.64	4.63	620.23	1.34	22.35	0.81	546.47
Last 5	13:02:16	1799.98	18.79	4.61	620.17	0.88	22.35	0.81	546.22
Last 5	13:07:16	2099.98	18.88	4.63	618.01	1.20	22.35	0.81	547.85
Variance 0			-0.06	0.00	-2.87			-0.03	1.73
Variance 1			0.15	-0.02	-0.05			0.00	-0.25
Variance 2			0.09	0.02	-2.17			-0.00	1.63

Notes

DGWC-19 GW sampling December

DGWC-19 GW Sampling December 2016

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-07 16:15:44

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	Plant McDonough GW sampling	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449474		
Turbidity Make/Model	Lamotte we2020	Pump placement from TOC	37 ft

Well Information:		Pumping Information:	
Well ID	DGWC-19	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.1985932 L
Well Total Depth	43.32 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	9.24 in
Depth to Water	20.89 ft	Total Volume Pumped	4.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:52:34	600.02	18.12	4.67	1189.63	2.10	21.62	0.60	175.06
Last 5	15:57:34	900.02	17.90	4.68	1189.22	2.44	21.64	0.63	165.58
Last 5	16:02:34	1200.02	17.73	4.67	1185.55	1.52	21.65	0.60	157.91
Last 5	16:07:34	1500.02	17.63	4.68	1183.42	1.89	21.66	0.60	154.71
Last 5	16:12:34	1800.02	17.59	4.68	1178.33	1.56	21.66	0.64	149.32
Variance 0			-0.17	-0.01	-3.67			-0.02	-7.67
Variance 1			-0.10	0.01	-2.12			-0.00	-3.20
Variance 2			-0.04	0.00	-5.09			0.03	-5.38

Notes

DGWC-20 GW sampling December 2016

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-08 11:04:47

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	Plant McDonough GW sampling	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	75 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449474		
Turbidity Make/Model	Lamotte we2020	Pump placement from TOC	67 ft

Well Information:		Pumping Information:	
Well ID	DGWC-21	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.2709887 L
Well Total Depth	72.55 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.4 in
Depth to Water	14.95 ft	Total Volume Pumped	8.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:40:35	2099.89	14.58	5.66	678.06	0.17	15.14	0.84	110.54
Last 5	10:45:35	2399.89	14.50	5.60	728.36	0.21	15.14	0.70	108.81
Last 5	10:50:35	2699.89	14.67	5.65	676.35	0.24	15.14	1.08	108.07
Last 5	10:55:35	2999.89	15.15	5.63	678.55	0.18	15.15	0.44	105.72
Last 5	11:00:35	3299.89	15.42	5.64	679.89	0.43	15.15	0.28	99.84
Variance 0			0.18	0.06	-52.01			0.38	-0.74
Variance 1			0.48	-0.02	2.19			-0.64	-2.35
Variance 2			0.27	0.01	1.35			-0.15	-5.88

Notes

DGWC-21 GW sampling December 2016

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-08 12:17:50

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	Alexis peristaltic
Company Name	Golder Associates	Tubing Type	LDPE
Project Name	Plant McDonough	Tubing Diameter	.170 in
Site Name	Plant McDonough	Tubing Length	64 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWC-22	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.3756591 L
Well Total Depth	63.50 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.64 in
Depth to Water	13.12 ft	Total Volume Pumped	5.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:56:07	900.02	15.48	6.12	576.07	1.71	13.36	0.51	69.46
Last 5	12:01:07	1200.02	16.29	6.11	593.84	1.88	13.33	0.31	70.91
Last 5	12:06:07	1500.02	16.16	6.09	602.98	1.44	13.35	0.23	72.45
Last 5	12:11:07	1800.03	16.19	6.06	613.57	1.96	13.38	0.20	73.65
Last 5	12:16:07	2100.02	16.22	6.03	615.98	--	--	0.18	74.78
Variance 0			-0.13	-0.02	9.14			-0.09	1.54
Variance 1			0.03	-0.04	10.59			-0.03	1.20
Variance 2			0.03	-0.03	2.41			-0.02	1.13

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-08 11:29:31

Project Information:		Pump Information:	
Operator Name	K. Jurinko	Pump Model/Type	ALEXIS
Company Name	Golder	Tubing Type	polyethylene
Project Name	Plant McDonough	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	48 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	Lamotte 2020	Pump placement from TOC	48 ft

Well Information:		Pumping Information:	
Well ID	DGWC-42	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2058328 L
Well Total Depth	53.05 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6.24 in
Depth to Water	28.73 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:56:18	600.02	14.72	5.45	847.25	3.28	29.25	0.51	64.94
Last 5	11:01:18	900.02	14.81	5.45	841.01	3.17	29.25	0.47	57.07
Last 5	11:06:18	1200.02	14.99	5.44	846.63	2.99	29.25	0.42	51.90
Last 5	11:11:18	1500.02	15.21	5.42	835.95	2.41	29.25	0.40	49.26
Last 5	11:16:18	1800.02	14.95	5.41	832.42	2.58	29.25	0.37	47.26
Variance 0			0.18	-0.02	5.62			-0.06	-5.17
Variance 1			0.23	-0.02	-10.69			-0.02	-2.65
Variance 2			-0.26	-0.01	-3.53			-0.02	-1.99

Notes

Sampled at 1120 on 12/8/16 by KJ

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-08 14:04:41

Project Information:		Pump Information:	
Operator Name	K. Jurinko	Pump Model/Type	ALEXIS
Company Name	Golder	Tubing Type	polyethylene
Project Name	Plant McDonough	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	26 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	Lamotte 2020	Pump placement from TOC	26 ft

Well Information:		Pumping Information:	
Well ID	DGWC-47	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.1527428 L
Well Total Depth	31.92 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	76.96 in
Depth to Water	20.28 ft	Total Volume Pumped	27.9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:42:53	2400.02	16.38	4.56	783.02	1.58	24.89	0.44	98.11
Last 5	13:47:53	2700.02	15.08	4.89	800.21	1.98	25.15	1.26	29.89
Last 5	13:52:53	3000.02	16.01	5.02	784.05	1.12	25.89	0.25	46.83
Last 5	13:57:53	3300.02	16.38	5.59	802.17	1.33	26.52	0.13	5.00
Last 5	14:02:53	3600.06	15.57	5.71	789.84	1.63	26.61	0.12	-2.82
Variance 0			0.94	0.13	-16.17			-1.01	16.94
Variance 1			0.37	0.57	18.12			-0.12	-41.83
Variance 2			-0.81	0.13	-12.33			-0.01	-7.82

Notes

DGWC-47 sampling December 2016

Grab Samples

Product Name: Low-Flow System

Date: 2016-12-08 14:10:12

Project Information:		Pump Information:	
Operator Name	William Ballow	Pump Model/Type	Alexis peristaltic
Company Name	Golder Associates	Tubing Type	LDPE
Project Name	Plant McDonough	Tubing Diameter	.170 in
Site Name	Plant McDonough	Tubing Length	34 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	DGWC-48	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2417564 L
Well Total Depth	33.49 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	12.36 in
Depth to Water	17.25 ft	Total Volume Pumped	3.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:47:34	300.09	13.68	4.64	1132.60	3.91	17.80	0.44	120.00
Last 5	13:52:34	599.92	15.94	4.60	1122.84	3.39	18.10	0.23	120.16
Last 5	13:57:34	899.92	16.07	4.59	1114.15	2.80	18.20	0.20	119.61
Last 5	14:02:34	1199.92	15.96	4.59	1096.11	2.12	18.25	0.16	119.21
Last 5	14:07:34	1499.92	15.74	4.58	1112.43	1.32	18.28	0.16	118.34
Variance 0			0.13	-0.01	-8.69			-0.03	-0.55
Variance 1			-0.11	0.00	-18.04			-0.04	-0.40
Variance 2			-0.22	-0.01	16.32			-0.00	-0.88

Notes

Grab Samples

FIELD DATA FORMS

March – April 2017

Product Name: Low-Flow System

Date: 2017-03-30 11:03:04

Project Information:		Pump Information:	
Operator Name	BH	Pump Model/Type	Bladder
Company Name	Golder Associates	Tubing Type	Bonded
Project Name	1668496	Tubing Diameter	.125 in
Site Name	Plant McDonough	Tubing Length	47 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte	Pump placement from TOC	47 ft

Well Information:		Pumping Information:	
Well ID	DGWA-2	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4247809 L
Well Total Depth	52.20 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.32 in
Depth to Water	29.98 ft	Total Volume Pumped	20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:42:21	4799.90	18.83	5.75	812.69	6.82	30.34	1.42	-6.93
Last 5	10:47:21	5099.90	19.01	5.75	813.26	6.63	30.34	1.40	-8.64
Last 5	10:52:21	5399.90	18.93	5.75	810.24	6.23	30.34	1.27	-9.32
Last 5	10:57:21	5699.90	19.15	5.74	812.80	5.23	30.34	1.14	-10.40
Last 5	11:02:21	5999.90	19.32	5.75	808.72	4.88	30.34	1.03	-11.80
Variance 0			-0.08	-0.00	-3.02			-0.13	-0.68
Variance 1			0.22	-0.01	2.56			-0.12	-1.08
Variance 2			0.17	0.00	-4.08			-0.12	-1.41

Notes

Sampled at 1105/FB-3

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-28 14:05:52

Project Information:		Pump Information:	
Operator Name	BH	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	Poly
Project Name	1668496	Tubing Diameter	.125 in
Site Name	Plant McDonough	Tubing Length	29 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte	Pump placement from TOC	29 ft

Well Information:		Pumping Information:	
Well ID	DGWA-53	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.2194393 L
Well Total Depth	31.30 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	145 in
Depth to Water	9.42 ft	Total Volume Pumped	24 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:44:42	2400.02	18.67	6.28	344.88	8.42	16.05	0.06	23.04
Last 5	13:49:42	2700.02	18.72	6.28	339.47	8.57	17.64	0.07	23.57
Last 5	13:54:42	3000.02	18.60	6.28	334.30	8.99	19.16	0.07	23.88
Last 5	13:59:42	3299.67	17.99	6.28	334.80	9.23	20.86	0.08	24.26
Last 5	14:04:42	3599.67	17.80	6.29	331.86	7.66	21.50	0.10	25.34
Variance 0			-0.12	0.00	-5.18			0.01	0.32
Variance 1			-0.61	-0.00	0.50			0.01	0.37
Variance 2			-0.19	0.01	-2.93			0.01	1.09

Notes

Sampled at 1405 per Pete Robinson

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-28 10:04:51

Project Information:		Pump Information:	
Operator Name	BH	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	Poly
Project Name	1668496	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	DGWA-70	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.1985932 L
Well Total Depth	50.60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.68 in
Depth to Water	26.06 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:42:12	900.02	17.94	5.91	81.05	5.18	26.20	1.85	-31.26
Last 5	09:47:12	1200.02	17.98	5.92	81.50	4.63	26.20	1.75	-38.39
Last 5	09:52:12	1500.02	18.30	5.91	81.63	4.24	26.20	2.39	-45.58
Last 5	09:57:12	1800.02	18.42	5.91	81.57	4.49	26.20	2.16	-50.74
Last 5	10:02:12	2100.02	18.52	5.90	81.61	4.11	26.20	2.33	-56.11
Variance 0			0.31	-0.01	0.14			0.64	-7.19
Variance 1			0.12	0.00	-0.07			-0.23	-5.16
Variance 2			0.10	-0.01	0.04			0.17	-5.37

Notes

Sampled at 1005

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-28 17:41:44

Project Information:		Pump Information:	
Operator Name	BH	Pump Model/Type	Bladder
Company Name	Golder Associates	Tubing Type	Bonded
Project Name	1668496	Tubing Diameter	.125 in
Site Name	Plant McDonough	Tubing Length	42 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte	Pump placement from TOC	42 ft

Well Information:		Pumping Information:	
Well ID	DGWA-71	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.4774638 L
Well Total Depth	47.79 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6.72 in
Depth to Water	29.13 ft	Total Volume Pumped	21.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	17:19:59	3899.74	18.82	5.93	138.15	9.69	29.69	0.74	-18.69
Last 5	17:24:59	4199.74	18.71	5.94	136.56	7.84	29.69	0.72	-20.75
Last 5	17:29:59	4499.74	18.65	5.95	134.43	6.54	29.69	0.73	-21.31
Last 5	17:34:59	4799.74	18.65	5.95	135.05	6.38	29.69	0.73	-22.28
Last 5	17:39:59	5099.74	18.65	5.94	134.53	4.84	29.69	0.74	-23.89
Variance 0			-0.06	0.01	-2.13			0.01	-0.56
Variance 1			0.00	0.00	0.62			-0.00	-0.97
Variance 2			0.00	-0.00	-0.52			0.02	-1.61

Notes

Sampled at 1740

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-28 12:38:15

Project Information:		Pump Information:	
Operator Name	DT	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	Poly
Project Name	1668496	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	41 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463072		
Turbidity Make/Model	LaMotte	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	DGWC-4	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.09 L
Well Total Depth	46.71 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3 in
Depth to Water	16.38 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	12:14:24	3599.98	19.43	6.02	1463.20	9.26	16.63	0.26	86.38
Last 5	12:19:24	3899.98	19.41	6.01	1467.95	9.41	16.63	0.22	85.59
Last 5	12:24:24	4199.98	19.68	6.01	1476.76	9.05	16.63	0.22	84.52
Last 5	12:29:24	4499.98	19.67	6.01	1470.81	6.47	16.63	0.21	83.88
Last 5	12:34:24	4799.98	19.99	6.01	1464.33	7.45	16.63	0.20	83.26
Variance 0			0.27	-0.00	8.81			-0.00	-1.06
Variance 1			-0.02	-0.00	-5.95			-0.01	-0.65
Variance 2			0.32	0.00	-6.48			-0.01	-0.62

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-28 14:43:48

Project Information:		Pump Information:	
Operator Name	DT	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	Poly
Project Name	1668496	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	28 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463072		
Turbidity Make/Model	LaMotte	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	DGWC-5	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.09 L
Well Total Depth	33.25 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.48 in
Depth to Water	5.99 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	14:21:58	600.02	20.72	4.44	713.18	0.39	6.04	1.41	148.86
Last 5	14:26:58	900.02	20.28	4.43	719.59	1.15	6.05	1.41	172.11
Last 5	14:31:58	1199.85	20.39	4.44	723.22	0.96	6.03	1.41	202.52
Last 5	14:36:58	1499.85	20.76	4.43	724.72	0.16	6.03	1.41	258.58
Last 5	14:41:58	1799.85	20.15	4.44	719.70	0.32	6.03	1.38	337.08
Variance 0			0.11	0.00	3.63			0.00	30.42
Variance 1			0.37	-0.00	1.50			0.00	56.05
Variance 2			-0.61	0.01	-5.01			-0.03	78.50

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-29 11:04:49

Project Information:		Pump Information:	
Operator Name	BH	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	Poly
Project Name	1668496	Tubing Diameter	.125 in
Site Name	Plant McDonough	Tubing Length	46 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte	Pump placement from TOC	46 ft

Well Information:		Pumping Information:	
Well ID	DGWC-8	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2953174 L
Well Total Depth	51.33 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.84 in
Depth to Water	18.88 ft	Total Volume Pumped	3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:42:20	299.83	21.68	5.34	876.44	1.35	18.94	0.86	24.15
Last 5	10:47:20	599.69	21.55	5.23	891.05	1.18	18.95	0.48	23.87
Last 5	10:52:20	899.68	21.19	5.22	892.71	0.39	18.96	0.28	26.38
Last 5	10:57:20	1199.68	21.15	5.23	890.30	0.30	18.96	0.23	29.26
Last 5	11:02:20	1499.69	21.24	5.23	894.25	0.47	18.95	0.20	32.31
Variance 0			-0.36	-0.01	1.66			-0.21	2.51
Variance 1			-0.04	0.01	-2.41			-0.04	2.89
Variance 2			0.10	-0.00	3.95			-0.03	3.04

Notes

Sampled at 1105 with Adv Eng

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-28 16:36:29

Project Information:		Pump Information:	
Operator Name	DT	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	Poly
Project Name	1668496	Tubing Diameter	.125 in
Site Name	Plant McDonough	Tubing Length	28 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463072		
Turbidity Make/Model	LaMotte	Pump placement from TOC	ft

Well Information:		Pumping Information:	
Well ID	DGWC-9	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.09 L
Well Total Depth	33.65 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.4 in
Depth to Water	17.05 ft	Total Volume Pumped	3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	16:13:44	900.02	21.94	4.17	601.89	2.22	17.23	0.23	228.09
Last 5	16:18:44	1200.02	21.28	4.16	603.74	0.80	17.25	0.22	206.98
Last 5	16:23:44	1500.02	22.00	4.16	605.21	0.72	17.25	0.22	192.02
Last 5	16:28:44	1799.88	22.07	4.16	602.21	0.40	17.25	0.21	180.62
Last 5	16:33:44	2099.88	21.82	4.16	605.44	0.90	17.25	0.20	171.65
Variance 0			0.71	0.00	1.47			-0.00	-14.97
Variance 1			0.07	0.00	-2.99			-0.01	-11.40
Variance 2			-0.25	-0.00	3.23			-0.01	-8.96

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-29 10:03:57

Project Information:		Pump Information:	
Operator Name	DT	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	Poly
Project Name	1668496	Tubing Diameter	.125 in
Site Name	Plant McDonough	Tubing Length	42 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463072		
Turbidity Make/Model	LaMotte	Pump placement from TOC	42 ft

Well Information:		Pumping Information:	
Well ID	DGWC-10	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.09 L
Well Total Depth	47.80 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3 in
Depth to Water	22.80 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:38:03	1800.02	18.96	4.60	765.98	0.74	22.69	0.23	87.03
Last 5	09:43:03	2099.93	19.09	4.61	764.26	0.53	22.69	0.21	86.14
Last 5	09:48:03	2399.93	19.06	4.60	765.77	0.50	22.69	0.21	86.05
Last 5	09:53:03	2699.93	19.23	4.61	767.47	0.59	22.69	0.20	85.74
Last 5	09:58:03	2999.93	19.28	4.62	766.86	0.25	22.69	0.19	85.34
Variance 0			-0.03	-0.01	1.51			-0.01	-0.09
Variance 1			0.17	0.00	1.70			-0.01	-0.31
Variance 2			0.05	0.01	-0.61			-0.01	-0.40

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-29 14:15:51

Project Information:		Pump Information:	
Operator Name	DT	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	Poly
Project Name	1668496	Tubing Diameter	.125in
Site Name	Plant McDonough	Tubing Length	46 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463072		
Turbidity Make/Model	LaMotte	Pump placement from TOC	46 ft

Well Information:		Pumping Information:	
Well ID	DGWC-11	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.09 L
Well Total Depth	51.72 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.76 in
Depth to Water	8.20 ft	Total Volume Pumped	5.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:54:46	1500.02	21.69	5.74	491.01	0.71	8.43	0.14	67.18
Last 5	13:59:45	1799.69	21.61	5.73	489.80	0.50	8.43	0.14	66.98
Last 5	14:04:45	2099.68	21.19	5.74	486.66	0.57	8.43	0.13	67.15
Last 5	14:09:45	2399.68	21.63	5.74	490.07	0.47	8.43	0.13	66.46
Last 5	14:14:45	2699.68	21.43	5.74	488.79	0.58	8.43	0.13	66.31
Variance 0			-0.42	0.00	-3.14			-0.01	0.17
Variance 1			0.44	0.00	3.41			-0.00	-0.69
Variance 2			-0.19	-0.00	-1.29			-0.01	-0.14

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-29 15:42:29

Project Information:		Pump Information:	
Operator Name	DT	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	Poly
Project Name	1668496	Tubing Diameter	.125 in
Site Name	Plant McDonough	Tubing Length	23 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463072		
Turbidity Make/Model	LaMotte	Pump placement from TOC	23 ft

Well Information:		Pumping Information:	
Well ID	DGWC-12	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.09 L
Well Total Depth	28.29 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.65 in
Depth to Water	7.53 ft	Total Volume Pumped	3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	15:21:57	300.09	20.92	5.62	759.06	8.80	7.75	0.20	94.52
Last 5	15:26:57	600.03	20.10	5.62	771.42	6.08	7.75	0.18	111.01
Last 5	15:31:57	900.03	19.57	5.62	771.92	4.59	7.75	0.20	129.60
Last 5	15:36:57	1200.02	19.50	5.62	773.78	3.65	7.75	0.20	149.91
Last 5	15:41:57	1500.02	19.51	5.61	773.23	2.61	7.75	0.20	175.50
Variance 0			-0.53	0.00	0.50			0.02	18.59
Variance 1			-0.07	0.00	1.86			0.00	20.31
Variance 2			0.01	-0.01	-0.55			-0.00	25.59

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-30 12:18:29

Project Information:		Pump Information:	
Operator Name	BH	Pump Model/Type	Bladder
Company Name	Golder Associates	Tubing Type	Poly
Project Name	1668496	Tubing Diameter	.125 in
Site Name	Plant McDonough	Tubing Length	41 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	DGWC-13	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.3980004 L
Well Total Depth	46.69 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.24 in
Depth to Water	33.58 ft	Total Volume Pumped	3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:56:55	299.92	21.34	6.02	476.25	14.70	33.60	3.89	-16.78
Last 5	12:01:55	599.86	21.04	5.96	476.78	11.40	33.60	4.08	-16.71
Last 5	12:06:55	899.85	20.98	5.95	478.46	7.79	33.60	4.25	-16.24
Last 5	12:11:55	1199.86	21.02	5.94	480.81	5.78	33.60	4.28	-15.97
Last 5	12:16:55	1499.85	21.23	5.94	480.83	4.35	33.60	4.24	-15.70
Variance 0			-0.06	-0.01	1.68			0.17	0.47
Variance 1			0.05	-0.01	2.35			0.04	0.27
Variance 2			0.21	0.00	0.02			-0.04	0.27

Notes

Sampled at 1220

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-29 11:43:25

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Geopump
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	34 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte	Pump placement from TOC	34 ft

Well Information:		Pumping Information:	
Well ID	DGWC-14	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.1985932 L
Well Total Depth	37.95 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.2 in
Depth to Water	21.92 ft	Total Volume Pumped	12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:20:51	3600.52	21.50	5.76	170.19	0.36	22.02	3.93	137.39
Last 5	11:25:51	3900.41	21.50	5.73	169.96	0.24	22.02	4.08	166.18
Last 5	11:30:51	4200.42	21.82	5.73	169.79	0.24	22.02	4.64	193.13
Last 5	11:35:51	4500.42	21.98	5.72	169.72	0.23	22.02	4.85	222.34
Last 5	11:40:57	4806.42	22.17	5.68	169.28	0.17	22.02	4.45	247.97
Variance 0			0.32	-0.00	-0.17			0.56	26.96
Variance 1			0.17	-0.01	-0.07			0.21	29.21
Variance 2			0.19	-0.04	-0.45			-0.40	25.63

Notes

DGWC-14 Sampling
DGCW-14 Sampled at 11:40

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-30 14:14:39

Project Information:		Pump Information:	
Operator Name	BH	Pump Model/Type	Bladder
Company Name	Golder Associates	Tubing Type	Poly
Project Name	1668496	Tubing Diameter	.125 in
Site Name	Plant McDonough	Tubing Length	60 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte	Pump placement from TOC	60 ft

Well Information:		Pumping Information:	
Well ID	DGWC-15	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.4828054 L
Well Total Depth	67.10 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	11.16 in
Depth to Water	39.40 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:51:55	2099.84	24.78	5.78	468.79	6.96	40.33	0.23	-36.95
Last 5	13:56:55	2399.84	24.76	5.78	468.93	6.60	40.33	0.21	-35.43
Last 5	14:01:55	2699.84	25.14	5.78	469.40	6.21	40.33	0.19	-34.57
Last 5	14:06:55	2999.84	24.94	5.79	469.53	5.86	40.33	0.19	-33.92
Last 5	14:11:55	3299.84	24.01	5.80	468.00	4.40	40.33	0.18	-32.88
Variance 0			0.38	0.00	0.47			-0.02	0.86
Variance 1			-0.20	0.00	0.13			-0.00	0.65
Variance 2			-0.93	0.01	-1.53			-0.01	1.03

Notes

Sampled at 1415/EB-2

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-30 16:04:33

Project Information:		Pump Information:	
Operator Name	BH	Pump Model/Type	Bladder
Company Name	Golder Associates	Tubing Type	Bonded
Project Name	1668496	Tubing Diameter	.125 in
Site Name	Plant McDonough	Tubing Length	42 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte	Pump placement from TOC	42 ft

Well Information:		Pumping Information:	
Well ID	DGWC-17	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.4024638 L
Well Total Depth	47.95 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.24 in
Depth to Water	28.04 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	15:43:09	600.02	23.69	5.11	579.18	19.70	28.19	0.34	-25.22
Last 5	15:48:09	900.02	23.40	5.09	580.13	16.00	28.19	0.23	-28.53
Last 5	15:53:09	1199.81	22.08	5.09	575.55	9.09	28.24	0.22	-30.13
Last 5	15:58:09	1499.81	21.81	5.08	577.59	7.17	28.29	0.14	-31.39
Last 5	16:03:08	1799.81	21.56	5.08	575.68	3.40	28.31	0.13	-32.96
Variance 0			-1.32	0.00	-4.58			-0.02	-1.60
Variance 1			-0.27	-0.01	2.05			-0.08	-1.26
Variance 2			-0.25	0.00	-1.91			-0.01	-1.57

Notes

Sampled at 1605

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-29 14:16:08

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Geopump
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	41 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	DGWC-19	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2058328 L
Well Total Depth	43.25 ft	Calculated Sample Rate	300 sec
Screen Length	10.00 ft	Stabilization Drawdown	1.32 in
Depth to Water	21.75 ft	Total Volume Pumped	4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:51:19	1500.02	24.28	4.69	637.88	9.58	21.85	0.29	557.11
Last 5	13:56:19	1800.02	24.85	4.69	636.15	6.68	21.86	0.28	565.40
Last 5	14:01:20	2100.45	24.52	4.69	634.03	5.14	21.86	0.28	572.96
Last 5	14:06:20	2400.45	24.97	4.69	637.17	5.60	21.86	0.27	575.86
Last 5	14:11:20	2700.45	24.38	4.70	629.46	4.48	21.86	0.28	580.16
Variance 0			-0.32	-0.00	-2.12			-0.00	7.56
Variance 1			0.45	-0.00	3.14			-0.00	2.90
Variance 2			-0.59	0.01	-7.72			0.01	4.30

Notes

DGWC-19 sampling

Sampled DGWC-19 at 14:10 on 3/29/17

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-29 15:46:12

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Geopump
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	40 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte	Pump placement from TOC	40 ft

Well Information:		Pumping Information:	
Well ID	DGWC-20	Final Pumping Rate	110 mL/min
Well diameter	2 in	Total System Volume	0.2058328 L
Well Total Depth	43.30 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	7.8 in
Depth to Water	21.10 ft	Total Volume Pumped	2.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	15:23:23	300.02	22.91	4.72	1203.07	4.11	21.61	0.53	439.57
Last 5	15:28:23	600.02	23.42	4.72	1184.33	6.06	21.73	0.39	417.17
Last 5	15:33:23	900.02	22.44	4.72	1178.28	4.36	21.75	0.34	396.61
Last 5	15:38:23	1200.02	22.55	4.70	1173.42	3.01	21.75	0.31	374.21
Last 5	15:43:23	1500.65	22.94	4.70	1166.37	1.97	21.75	0.28	358.10
Variance 0			-0.99	-0.00	-6.05			-0.05	-20.56
Variance 1			0.11	-0.02	-4.86			-0.03	-22.40
Variance 2			0.40	0.00	-7.05			-0.02	-16.11

Notes

Sampling DGWC-20

DGWC-20 sampled at 15:45 on 3/27/2017

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-30 10:24:06

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Geopump
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	64 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte	Pump placement from TOC	64 ft

Well Information:		Pumping Information:	
Well ID	DGWC-21	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2734019 L
Well Total Depth	72.60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.04 in
Depth to Water	15.58 ft	Total Volume Pumped	8.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:00:17	3901.48	19.36	5.84	587.94	0.29	15.75	4.03	121.59
Last 5	10:05:20	4204.48	19.44	5.84	605.05	0.11	15.75	1.18	122.76
Last 5	10:10:20	4504.40	19.63	5.81	617.00	0.32	15.75	1.81	123.80
Last 5	10:15:20	4804.40	20.30	5.78	627.20	0.06	15.75	2.10	125.17
Last 5	10:20:27	5111.40	20.65	5.79	631.75	0.03	15.75	1.68	126.81
Variance 0			0.19	-0.03	11.95			0.63	1.04
Variance 1			0.67	-0.02	10.20			0.29	1.37
Variance 2			0.35	0.01	4.55			-0.42	1.64

Notes

Sampling DGWC-21

Sampled DGWC-21 at 10:20 on 3/30/2017

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-29 14:25:37

Project Information:		Pump Information:	
Operator Name	BH	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	Poly
Project Name	1668496	Tubing Diameter	.125 in
Site Name	Plant McDonough	Tubing Length	58 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWC-22	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.3488785 L
Well Total Depth	63.45 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.32 in
Depth to Water	13.81 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	14:03:58	600.03	25.59	5.80	687.58	0.22	13.92	0.65	-6.37
Last 5	14:08:58	900.02	25.02	5.79	680.69	0.12	13.92	0.40	-4.84
Last 5	14:13:58	1200.02	24.78	5.78	685.62	0.03	13.92	0.42	-4.04
Last 5	14:18:58	1500.02	25.26	5.77	676.52	0.39	13.92	0.31	-2.52
Last 5	14:23:58	1799.63	25.30	5.77	682.32	0.55	13.92	0.28	-0.75
Variance 0			-0.24	-0.02	4.93			0.02	0.80
Variance 1			0.48	-0.00	-9.10			-0.11	1.52
Variance 2			0.04	-0.01	5.79			-0.03	1.77

Notes

Sampled at 1425 with Adv Eng

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-30 16:32:40

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Geopump
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	58 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWC-23	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2468569 L
Well Total Depth	63.20 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	11.8 in
Depth to Water	14.86 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	16:08:44	300.02	22.57	6.03	638.85	2.87	15.20	0.90	230.83
Last 5	16:13:44	600.02	23.02	6.04	638.95	1.35	15.47	0.57	237.23
Last 5	16:18:44	900.13	22.96	6.04	636.89	0.26	15.69	0.58	252.39
Last 5	16:23:44	1200.03	22.99	6.03	640.08	4.10	15.80	0.62	267.17
Last 5	16:28:44	1500.02	23.06	6.03	636.24	2.93	15.85	0.55	273.96
Variance 0			-0.06	-0.00	-2.05			0.00	15.16
Variance 1			0.03	-0.01	3.19			0.05	14.78
Variance 2			0.07	0.00	-3.84			-0.08	6.79

Notes

Sampling DGWC-23

Sampled DGWC-23 at 16:30 on 3/30/2017

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-31 14:15:46

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Samplepro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	50 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte	Pump placement from TOC	50 ft

Well Information:		Pumping Information:	
Well ID	DGWC-42	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2275514 L
Well Total Depth	52.70 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	30.48 in
Depth to Water	29.68 ft	Total Volume Pumped	7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:53:25	1800.50	21.05	5.37	859.36	6.48	32.22	1.48	149.92
Last 5	13:58:25	2100.49	21.32	5.37	866.01	5.65	32.22	1.24	147.42
Last 5	14:03:26	2401.49	21.54	5.37	861.63	4.95	32.22	1.06	145.53
Last 5	14:08:26	2701.49	21.71	5.37	861.81	4.78	32.22	0.94	143.68
Last 5	14:13:26	3001.49	21.59	5.36	866.29	4.97	32.22	0.82	141.87
Variance 0			0.22	0.00	-4.37			-0.19	-1.88
Variance 1			0.16	-0.00	0.17			-0.12	-1.85
Variance 2			-0.11	-0.01	4.48			-0.12	-1.82

Notes

Sampling DGWC-42

Sampled DGWC-42 at 14:15 on 3/31/2017

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-31 12:21:01

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Geopump
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	25 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte	Pump placement from TOC	25 ft

Well Information:		Pumping Information:	
Well ID	DGWC-47	Final Pumping Rate	440 mL/min
Well diameter	2 in	Total System Volume	0.1720482 L
Well Total Depth	31.93 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	96.72 in
Depth to Water	18.75 ft	Total Volume Pumped	31 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:56:36	2999.92	18.67	4.21	705.86	1.05	25.23	0.32	247.30
Last 5	12:01:36	3299.92	19.60	4.18	0.00	1.37	25.60	1.61	240.27
Last 5	12:06:39	3603.10	18.65	4.28	704.85	5.73	26.15	0.65	223.13
Last 5	12:11:39	3902.92	18.51	4.39	699.10	4.01	26.45	0.56	198.47
Last 5	12:16:49	4212.92	18.46	4.58	693.83	2.72	26.81	0.46	181.44
Variance 0			-0.96	0.10	704.85			-0.96	-17.14
Variance 1			-0.13	0.11	-5.74			-0.09	-24.66
Variance 2			-0.05	0.19	-5.27			-0.10	-17.04

Notes

Sampling DGWC-47

Sampled DGWC-47 at 12:20 on 3/31/2017

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-30 14:43:00

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Geopump
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte	Pump placement from TOC	30 ft

Well Information:		Pumping Information:	
Well ID	DGWC-48	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.1744614 L
Well Total Depth	33.49 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	9 in
Depth to Water	16.65 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	14:16:36	300.02	23.35	4.18	1040.80	2.00	17.35	0.55	165.18
Last 5	14:21:36	600.02	23.48	4.19	1040.02	0.96	17.40	0.49	191.33
Last 5	14:26:36	900.02	23.64	4.19	1041.70	0.95	17.40	0.47	226.53
Last 5	14:31:36	1200.02	23.83	4.19	1038.93	0.80	17.40	0.50	248.55
Last 5	14:41:36	1800.70	24.05	4.19	1036.59	0.58	17.40	0.43	275.33
Variance 0			0.16	-0.01	1.67			-0.02	35.20
Variance 1			0.19	0.00	-2.77			0.03	22.03
Variance 2			0.22	0.00	-2.33			-0.07	26.78

Notes

Sampling DGWC-48

Sampled DGWC-48 at 14:45 on 3/30/2017

Grab Samples

FIELD DATA FORMS

May 2017

Product Name: Low-Flow System

Date: 2017-05-11 16:27:08

Project Information:		Pump Information:	
Operator Name	AME	Pump Model/Type	SamplePro Bladder Pump
Company Name	Golder Associates	Tubing Type	Poly
Project Name	New Background Sampling =2	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	47 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449471		
Turbidity Make/Model	LaMotte 2020	Pump placement from TOC	47 ft

Well Information:		Pumping Information:	
Well ID	DGWA-2	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2034196 L
Well Total Depth	52.20 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.64 in
Depth to Water	29.08 ft	Total Volume Pumped	17.7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	15:49:42	5703.87	21.99	5.68	795.30	5.73	29.30	0.12	120.70
Last 5	15:54:42	6003.87	22.00	5.68	794.30	6.31	29.30	0.12	121.00
Last 5	15:59:43	6304.86	21.82	5.68	791.47	4.78	29.30	0.11	121.58
Last 5	16:04:43	6604.87	21.64	5.67	794.16	4.49	29.30	0.11	122.28
Last 5	16:09:43	6904.87	21.55	5.67	794.18	4.47	29.30	0.11	122.98
Variance 0			-0.18	-0.00	-2.83			-0.01	0.58
Variance 1			-0.17	-0.00	2.69			-0.00	0.69
Variance 2			-0.09	-0.01	0.01			-0.00	0.70

Notes

Sampled at 1612; 4.47 NTU; FB-1 @ 1500; extra Rad

Grab Samples

Product Name: Low-Flow System

Date: 2017-05-11 16:05:36

Project Information:		Pump Information:	
Operator Name	DT	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	Poly
Project Name	New Background Sampling = 2	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	29 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020	Pump placement from TOC	29 ft

Well Information:		Pumping Information:	
Well ID	DGWA-53	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.1599823 L
Well Total Depth	31.30 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	159.84 in
Depth to Water	9.08 ft	Total Volume Pumped	42 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	15:43:07	5099.90	20.12	6.60	371.71	1.25	22.40	8.34	-32.34
Last 5	15:48:08	5400.90	20.20	6.60	371.58	1.24	22.40	8.34	-32.74
Last 5	15:53:08	5700.90	20.37	6.60	371.09	1.24	22.40	8.28	-33.10
Last 5	15:58:08	6000.90	20.29	6.60	369.92	1.20	22.40	8.32	-32.42
Last 5	16:03:08	6300.90	20.31	6.60	370.35	1.06	22.40	8.33	-31.94
Variance 0			0.16	-0.00	-0.49			-0.06	-0.36
Variance 1			-0.08	0.00	-1.17			0.04	0.68
Variance 2			0.02	-0.00	0.43			0.01	0.48

Notes

Began purging DGWA-53 at 1254. SmarTroll disconnected at 1355 and IPad overheated at 1411. Stopped Purging DGWA-53 at 1603 and began sampling. Three Volume Method

Grab Samples

Product Name: Low-Flow System

Date: 2017-05-15 11:34:52

Project Information:		Pump Information:	
Operator Name	KNJ	Pump Model/Type	SamplePro Bladder Pump
Company Name	Golder Associates	Tubing Type	Poly
Project Name	New Background Sampling =2	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	55 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	DGWA-70A	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.312725 L
Well Total Depth	60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.24 in
Depth to Water	41.68 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:09:12	600.03	22.55	5.67	80.36	11.25	41.92	5.28	125.47
Last 5	11:14:12	900.03	22.45	5.69	80.06	9.72	41.95	5.13	125.43
Last 5	11:19:12	1199.93	22.51	5.69	79.91	7.43	41.95	5.02	125.72
Last 5	11:24:12	1499.93	22.54	5.71	80.64	4.38	41.95	4.94	125.61
Last 5	11:29:12	1799.93	22.52	5.72	81.06	3.53	41.95	4.94	124.81
Variance 0			0.06	0.00	-0.15			-0.11	0.29
Variance 1			0.03	0.01	0.73			-0.08	-0.11
Variance 2			-0.02	0.01	0.42			-0.01	-0.81

Notes

Sampled at 1130 by KNJ on 5/15/17

Grab Samples

Product Name: Low-Flow System

Date: 2017-05-12 11:14:24

Project Information:		Pump Information:	
Operator Name	DT	Pump Model/Type	SamplePro Bladder Pump
Company Name	Golder Associates	Tubing Type	Poly
Project Name	New Background Sampling = 2	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	42 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449471		
Turbidity Make/Model	LaMotte 2020	Pump placement from TOC	42 ft

Well Information:		Pumping Information:	
Well ID	DGWA-71	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.1913537 L
Well Total Depth	47.79 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.56 in
Depth to Water	28.74 ft	Total Volume Pumped	8.0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:48:49	1200.03	18.46	5.20	139.09	6.23	29.10	0.63	113.21
Last 5	10:53:49	1500.03	18.49	5.28	136.98	5.25	29.10	0.64	108.07
Last 5	10:58:49	1800.03	18.43	5.31	135.35	4.71	29.12	0.65	104.41
Last 5	11:03:49	2100.03	18.46	5.40	134.23	4.59	29.12	0.65	98.97
Last 5	11:08:49	2400.03	18.49	5.46	133.52	4.51	29.12	0.65	94.47
Variance 0			-0.06	0.04	-1.63			0.01	-3.66
Variance 1			0.04	0.08	-1.12			0.00	-5.44
Variance 2			0.03	0.06	-0.71			-0.00	-4.50

Notes

Began purging DGWA-71 at 1028

Stopped Purging DGWA-71 at 1108 and began sampling. SmarTroll did not record data at 1043 but turbidity and DTW were recorded

Grab Samples

Product Name: Low-Flow System

Date: 2017-05-12 14:15:30

Project Information:		Pump Information:	
Operator Name	DT	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	Poly
Project Name	New Background Sampling = 2	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	41 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449471		
Turbidity Make/Model	LaMotte 2020	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	DGWC-4	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.1889405 L
Well Total Depth	46.71 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.4 in
Depth to Water	16.80 ft	Total Volume Pumped	7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:52:35	3299.82	24.33	5.91	1526.94	1.40	17.00	0.26	144.03
Last 5	13:57:35	3599.82	24.15	5.90	1516.54	1.26	17.00	0.26	147.00
Last 5	14:02:35	3899.82	24.06	5.88	1518.95	1.21	17.00	0.26	148.48
Last 5	14:07:35	4199.82	23.12	5.85	1519.19	1.21	17.00	0.27	151.89
Last 5	14:12:35	4499.82	23.75	5.87	1528.29	1.20	17.00	0.27	150.70
Variance 0			-0.09	-0.01	2.40			0.00	1.48
Variance 1			-0.94	-0.03	0.24			0.01	3.41
Variance 2			0.63	0.02	9.10			0.01	-1.19

Notes

Began purging DGWC-4 at 1257

Stopped Purging and began sampling at 1412

Grab Samples

Product Name: Low-Flow System

Date: 2017-05-12 16:34:44

Project Information:		Pump Information:	
Operator Name	DT	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	Poly
Project Name	New Background Sampling = 2	Tubing Diameter	0.125 in
Site Name	Plant McDonough	Tubing Length	58 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449471		
Turbidity Make/Model	LaMotte 2020	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWC-23	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2299646 L
Well Total Depth	63.20 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	23.4 in
Depth to Water	15.15 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	16:11:56	300.10	21.69	5.72	624.53	1.26	16.20	0.91	153.95
Last 5	16:16:56	600.03	21.19	5.82	628.09	0.89	16.55	0.70	165.05
Last 5	16:21:56	900.03	21.06	5.89	627.74	1.09	16.85	0.69	174.14
Last 5	16:26:56	1200.04	20.93	5.94	625.48	1.01	17.05	0.64	181.80
Last 5	16:31:56	1500.03	20.84	5.97	627.10	0.78	17.10	0.52	190.30
Variance 0			-0.13	0.07	-0.35			-0.01	9.08
Variance 1			-0.13	0.05	-2.25			-0.05	7.67
Variance 2			-0.09	0.03	1.62			-0.12	8.50

Notes

Began Purging DGWC-23 at 1606

Stopped purging DGWC-23 and began sampling at 1631

Grab Samples

FIELD DATA FORMS

June 2017

Product Name: Low-Flow System

Date: 2017-06-15 10:47:18

Project Information:		Pump Information:	
Operator Name	DH	Pump Model/Type	SamplePro
Company Name	Golder	Tubing Type	polyethylene
Project Name	SamplePro	Tubing Diameter	.170 in
Site Name	McDonough	Tubing Length	48 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463072		
Turbidity Make/Model	LaMotte	Pump placement from TOC	48 ft

Well Information:		Pumping Information:	
Well ID	DGWA-2	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6992443 L
Well Total Depth	52.20 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.36 in
Depth to Water	28.94 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 0
Last 5	10:21:06	600.02	22.91	5.76	731.89	14.31	29.22	0.30	77.99
Last 5	10:26:06	900.52	22.90	5.76	726.96	13.23	29.22	0.24	76.70
Last 5	10:31:06	1200.52	23.11	5.76	723.71	11.87	29.22	0.21	75.59
Last 5	10:36:06	1500.53	23.16	5.76	714.95	10.06	29.22	0.19	74.76
Last 5	10:41:06	1800.52	23.34	5.75	709.06	9.61	29.22	0.17	74.33
Variance 0			0.21	-0.01	-3.25			-0.03	-1.11
Variance 1			0.05	-0.00	-8.76			-0.02	-0.83
Variance 2			0.18	-0.01	-5.90			-0.02	-0.43

Notes

Sampling DGWA-2

Sampled DGWA-2 and FD-1 on 6/15/2017 at 10:40

Grab Samples

Product Name: Low-Flow System

Date: 2017-06-15 10:07:18

Project Information:		Pump Information:	
Operator Name	BH	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	Alexis	Tubing Diameter	.170 in
Site Name	McDonough	Tubing Length	26 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte	Pump placement from TOC	26 ft

Well Information:		Pumping Information:	
Well ID	DGWA-53	Final Pumping Rate	500 mL/min
Well diameter	2 in	Total System Volume	0.206049 L
Well Total Depth	31.30 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	142 in
Depth to Water	7.85 ft	Total Volume Pumped	15.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 0
Last 5	09:45:23	1799.89	19.53	6.36	347.89	5.81	14.57	0.02	22.25
Last 5	09:50:23	2099.89	19.53	6.36	340.22	6.25	16.65	0.03	23.03
Last 5	09:55:23	2399.89	19.90	6.36	334.71	5.36	17.90	0.05	22.86
Last 5	10:00:23	2699.89	19.65	6.38	341.55	5.29	19.52	0.11	18.29
Last 5	10:05:23	2999.89	21.77	6.41	366.04	5.61	19.72	0.08	-14.61
Variance 0			0.37	0.01	-5.52			0.01	-0.17
Variance 1			-0.25	0.01	6.85			0.07	-4.57
Variance 2			2.12	0.03	24.48			-0.03	-32.89

Notes

Sampled at 1005 after pumping three well volumes per Pete

Grab Samples

Product Name: Low-Flow System

Date: 2017-06-15 15:37:38

Project Information:		Pump Information:	
Operator Name	DH	Pump Model/Type	SamplePro
Company Name	Golder	Tubing Type	polyethylene
Project Name	SamplePro	Tubing Diameter	.170 in
Site Name	McDonough	Tubing Length	57 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463072		
Turbidity Make/Model	LaMotte	Pump placement from TOC	57 ft

Well Information:		Pumping Information:	
Well ID	DGWA-70A	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.7751225 L
Well Total Depth	62.65 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.8 in
Depth to Water	41.92 ft	Total Volume Pumped	17 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 0
Last 5	15:13:35	3600.93	22.19	5.74	64.71	14.60	42.32	4.21	24.29
Last 5	15:18:35	3900.93	22.58	5.74	64.63	12.50	42.32	4.17	24.33
Last 5	15:23:35	4200.93	22.62	5.74	64.14	11.00	42.32	4.13	25.26
Last 5	15:28:35	4500.93	22.93	5.75	63.79	9.06	42.32	4.09	25.03
Last 5	15:33:35	4800.93	22.34	5.74	62.88	9.12	42.32	4.12	26.60
Variance 0			0.04	-0.00	-0.48			-0.05	0.93
Variance 1			0.31	0.01	-0.35			-0.03	-0.23
Variance 2			-0.60	-0.01	-0.91			0.03	1.58

Notes

Sampled DGWA-70A on 6/15/17 at 15:35. Sampled FB-1 on 6/15/17 at14:30

Grab Samples

Product Name: Low-Flow System

Date: 2017-06-16 09:27:44

Project Information:		Pump Information:	
Operator Name	DH	Pump Model/Type	SamplePro
Company Name	Golder	Tubing Type	polyethylene
Project Name	SamplePro	Tubing Diameter	.170 in
Site Name	McDonough	Tubing Length	42 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463072		
Turbidity Make/Model	LaMotte	Pump placement from TOC	42 ft

Well Information:		Pumping Information:	
Well ID	DGWA-71	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6724638 L
Well Total Depth	47.49 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.4 in
Depth to Water	28.8 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 0
Last 5	09:05:39	1200.02	18.87	5.79	124.48	7.09	29.00	0.28	37.66
Last 5	09:10:39	1500.02	18.92	5.79	119.30	6.76	29.00	0.39	34.87
Last 5	09:15:39	1800.02	19.04	5.79	114.88	6.17	29.00	0.48	33.37
Last 5	09:20:39	2100.02	19.14	5.80	113.12	6.20	29.00	0.51	31.11
Last 5	09:25:40	2400.81	19.19	5.81	111.53	5.06	29.00	0.53	29.69
Variance 0			0.12	-0.01	-4.41			0.09	-1.50
Variance 1			0.10	0.01	-1.76			0.03	-2.26
Variance 2			0.04	0.01	-1.60			0.02	-1.42

Notes

Sampled DGWA-71 at 9:25 on 6/16/17

Grab Samples

Product Name: Low-Flow System

Date: 2017-06-15 13:05:01

Project Information:		Pump Information:	
Operator Name	BH	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	Alexis	Tubing Diameter	.170 in
Site Name	McDonough	Tubing Length	41 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	DGWC-4	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2730004 L
Well Total Depth	46.71 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.16 in
Depth to Water	16.64 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 0
Last 5	12:43:42	600.03	25.57	6.04	1440.13	4.44	16.81	0.36	61.64
Last 5	12:48:42	899.81	25.46	6.04	1446.53	3.22	16.81	0.27	66.94
Last 5	12:53:42	1199.81	25.89	6.03	1457.46	3.06	16.81	0.24	70.58
Last 5	12:58:42	1499.80	25.88	6.03	1446.59	2.89	16.82	0.24	74.21
Last 5	13:03:42	1799.81	24.82	6.03	1440.29	3.50	16.82	0.23	77.63
Variance 0			0.43	-0.01	10.94			-0.03	3.64
Variance 1			-0.01	0.00	-10.87			-0.00	3.63
Variance 2			-1.06	-0.00	-6.30			-0.01	3.42

Notes

Sampled at 1305

Grab Samples

Product Name: Low-Flow System

Date: 2017-06-15 15:16:53

Project Information:		Pump Information:	
Operator Name	BH	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene .
Project Name	Alexis	Tubing Diameter	170 in
Site Name	McDonough	Tubing Length	58 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWC-23	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.3488785 L
Well Total Depth	63.20 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	17.52 in
Depth to Water	14.57 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 0
Last 5	14:55:42	600.03	24.82	6.01	605.55	4.08	15.34	0.43	105.70
Last 5	15:00:42	900.03	24.91	6.01	609.72	5.49	15.68	0.38	109.95
Last 5	15:05:42	1200.03	24.78	6.00	602.59	5.64	15.87	0.30	115.85
Last 5	15:10:42	1500.03	24.83	6.00	595.87	1.15	15.98	0.30	122.89
Last 5	15:15:42	1800.03	25.61	6.00	591.87	3.60	16.03	0.32	123.41
Variance 0			-0.14	-0.01	-7.12			-0.08	5.91
Variance 1			0.06	-0.00	-6.73			0.00	7.04
Variance 2			0.78	-0.00	-3.99			0.01	0.52

Notes

Sampled at 1315

Grab Samples

FIELD DATA FORMS

July 2017

Low-Flow

Date:	7/11/2017 10:05
Operator Name:	B. Hodges
Pump Model/Type:	SamplePro
Company Name:	Golder Associates
Tubing Type:	polyethylene
Project Name:	McDonough
Site Name:	Plant McDonough
Latitude:	0Âº 0' 0"
Longitude:	0Âº 0' 0"
Tubing Diameter:	.17in
Tubing Length:	47 ft
Sonde SN:	449622
Turbidity Make/Model:	LaMotte
Pump placement from TOC:	47 ft
Well ID:	DGWA-2
Well diameter:	2 in
Well Total Depth:	52.40 ft
Screen Length:	10 ft
Depth to Water:	28.40 ft
Final Pumping Rate:	100 mL/min
Total System Volume:	0.4247809 L
Calculated Sample Rate:	300 sec
Stabilization Drawdown:	2.4 in
Total Volume Pumped:	3 L

Time	pH	ORP	Conductivi	DO	Temperatu	Turbidity	DTW
300.126672	5.88	78.5	779.4	1.85	22.82	7.67	28.55
600.021645	5.87	73.1	751.7	0.69	22	3.85	28.59
900.017948	5.86	70.2	747.4	0.45	22.22	3.02	28.6
1200.018488	5.86	68	741.6	0.36	22.58	1.27	28.6
1500.01986	5.85	66.5	742.7	0.32	22.19	1.25	28.6
1800.018578	5.87	65.2	738.5	0.28	22.18	0.83	28.6

Product Name: Low-Flow System

Date: 2017-07-12 10:42:08

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	26 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte	Pump placement from TOC	26 ft

Well Information:		Pumping Information:	
Well ID	DGWA-53	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.206049 L
Well Total Depth	31.30 ft	Calculated Sample Rate	30 sec
Screen Length	10 ft	Stabilization Drawdown	9 in
Depth to Water	6.28 ft	Total Volume Pumped	0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:39:14	30.03	26.12	5.91	416.02	3.05	7.01	2.81	53.10
Last 5									
Last 5									
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
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

Sampled after pumping dry. Turbidity rose to 6.37 after metals, 10.59 after inorganics, and 11.43 after radium. WL dropped 3.28 ft in 37 minutes

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 10:19:31

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	57 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte	Pump placement from TOC	57 ft

Well Information:		Pumping Information:	
Well ID	DGWA-70A	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4694151 L
Well Total Depth	62.55 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	8.28 in
Depth to Water	41.26 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:54:22	300.15	21.63	5.56	70.43	5.59	41.85	5.24	43.15
Last 5	09:59:22	600.03	21.37	5.59	68.25	5.79	42.90	5.10	40.39
Last 5	10:04:22	900.03	20.90	5.59	68.24	4.65	41.95	5.05	39.70
Last 5	10:09:22	1200.03	21.10	5.61	68.63	4.62	41.95	5.01	38.36
Last 5	10:14:22	1499.82	21.16	5.62	68.77	3.55	41.95	4.97	38.60
Variance 0			-0.47	0.00	-0.01			-0.05	-0.69
Variance 1			0.20	0.02	0.38			-0.05	-1.34
Variance 2			0.06	0.01	0.14			-0.03	0.24

Notes

Sampled DGWA-70A at 1015 on 7/11/2017

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 12:16:52

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	42 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte	Pump placement from TOC	42 ft

Well Information:		Pumping Information:	
Well ID	DGWA-71	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4024638 L
Well Total Depth	47.79 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	7.2 in
Depth to Water	28.05 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:53:24	600.03	21.51	5.73	109.64	5.76	28.60	0.71	19.86
Last 5	11:58:24	900.03	21.81	5.71	107.62	4.11	28.65	0.73	17.37
Last 5	12:03:24	1200.03	21.42	5.71	105.58	2.41	28.65	0.70	15.63
Last 5	12:08:24	1500.03	20.94	5.72	105.24	2.83	28.65	0.71	13.57
Last 5	12:13:24	1800.03	21.73	5.74	104.84	1.79	28.65	0.67	11.74
Variance 0			-0.39	-0.01	-2.04			-0.02	-1.74
Variance 1			-0.48	0.02	-0.34			0.01	-2.05
Variance 2			0.80	0.01	-0.40			-0.04	-1.84

Notes

Sampled DGWA-71 at 12:15 on 7/11/2017

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 09:46:13

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	41.0 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte	Pump placement from TOC	41.0 ft

Well Information:		Pumping Information:	
Well ID	DGWC-4	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3980004 L
Well Total Depth	46.61 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.04 in
Depth to Water	16.00 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:23:23	599.99	21.69	6.10	1436.68	0.52	16.17	0.35	74.81
Last 5	09:28:23	899.98	21.74	6.07	1457.75	0.40	16.17	0.31	72.08
Last 5	09:33:23	1199.98	21.83	6.05	1467.87	0.28	16.17	0.27	70.66
Last 5	09:38:23	1499.98	21.69	6.04	1485.99	0.34	16.17	0.25	68.83
Last 5	09:43:23	1799.98	21.90	6.04	1483.98	0.24	16.17	0.23	67.75
Variance 0			0.10	-0.02	10.12			-0.04	-1.42
Variance 1			-0.15	-0.01	18.12			-0.01	-1.83
Variance 2			0.21	-0.00	-2.00			-0.02	-1.08

Notes

Began purging at 0913

Stopped purging DGWC-4 at 0943 and began sampling

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 11:34:27

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	28.25 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte	Pump placement from TOC	28.25 ft

Well Information:		Pumping Information:	
Well ID	DGWC-5	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3410917 L
Well Total Depth	33.25 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.76 in
Depth to Water	5.70 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:12:32	300.10	23.39	4.46	658.67	0.62	5.93	1.17	64.69
Last 5	11:17:31	600.03	22.89	4.48	658.01	0.61	5.93	1.13	71.65
Last 5	11:22:31	900.03	23.07	4.48	659.50	0.42	5.93	1.12	78.52
Last 5	11:27:31	1200.03	23.34	4.46	664.11	0.26	5.93	1.13	84.90
Last 5	11:32:31	1500.03	23.83	4.46	658.50	0.39	5.93	1.10	91.64
Variance 0			0.18	-0.00	1.49			-0.01	6.86
Variance 1			0.27	-0.01	4.61			0.02	6.38
Variance 2			0.49	-0.01	-5.61			-0.04	6.74

Notes

Began purging at 1107

Stopped purging DGWC-5 at 1132 and began sampling

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 14:35:43

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	46.33 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte	Pump placement from TOC	46.33 ft

Well Information:		Pumping Information:	
Well ID	DGWC-8	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4217904 L
Well Total Depth	51.33 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.44 in
Depth to Water	15.03 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:18:25	300.09	24.20	5.39	839.98	0.61	15.15	0.32	89.30
Last 5	14:23:25	600.03	24.52	5.34	872.92	1.12	15.15	0.22	90.33
Last 5	14:28:25	900.03	24.38	5.33	874.40	0.92	15.15	0.21	92.15
Last 5	14:33:25	1200.03	23.33	5.33	871.53	0.51	15.15	0.20	94.28
Last 5									
Variance 0			0.33	-0.06	32.94			-0.09	1.03
Variance 1			-0.14	-0.01	1.49			-0.02	1.83
Variance 2			-1.05	0.00	-2.87			-0.01	2.12

Notes

iPad overheated and had to begin sampling again at 1413
Stopped purging and began sampling DGWC-8

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 14:05:57

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	29 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte	Pump placement from TOC	29 ft

Well Information:		Pumping Information:	
Well ID	DGWC-9	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2194393 L
Well Total Depth	33.73 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.80 in
Depth to Water	11.97 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:44:48	600.02	26.79	4.54	624.08	0.73	12.13	0.34	61.98
Last 5	13:49:48	900.02	27.00	4.33	627.75	0.03	12.12	0.30	54.96
Last 5	13:54:49	1200.91	25.99	4.31	612.87	0.20	12.12	0.25	52.20
Last 5	13:59:49	1500.91	25.06	4.28	616.77	0.53	12.12	0.23	50.87
Last 5	14:04:49	1800.91	25.65	4.23	622.80	0.06	12.12	0.23	48.97
Variance 0			-1.01	-0.03	-14.88			-0.04	-2.75
Variance 1			-0.93	-0.03	3.90			-0.02	-1.34
Variance 2			0.59	-0.05	6.04			-0.00	-1.90

Notes

Sampled at 1405

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 09:29:33

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	42.80 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte	Pump placement from TOC	42.80 ft

Well Information:		Pumping Information:	
Well ID	DGWC-10	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2810345 L
Well Total Depth	47.80 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.76 in
Depth to Water	16.30 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:06:31	300.12	21.40	4.71	765.84	0.86	16.50	0.44	112.15
Last 5	09:11:31	600.03	21.38	4.72	761.40	1.62	16.53	0.30	108.40
Last 5	09:16:31	900.03	21.55	4.77	757.95	1.24	16.53	0.24	107.07
Last 5	09:21:31	1200.03	21.42	4.77	752.88	0.62	16.53	0.23	105.91
Last 5	09:26:31	1500.03	21.11	4.81	758.63	0.88	16.53	0.22	105.05
Variance 0			0.17	0.05	-3.45			-0.06	-1.34
Variance 1			-0.13	-0.00	-5.08			-0.02	-1.15
Variance 2			-0.31	0.04	5.75			-0.01	-0.87

Notes

Began purging DGWC-10 at 0901

Stopped purging DGWC-10 at 0926 and began sampling

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 11:18:49

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	46.0 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte	Pump placement from TOC	46.0 ft

Well Information:		Pumping Information:	
Well ID	DGWC-11	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2953174 L
Well Total Depth	51.72 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6.6 in
Depth to Water	5.35 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:56:06	600.03	22.22	5.80	492.59	0.91	5.90	0.26	87.44
Last 5	11:01:06	899.98	22.18	5.81	492.54	0.66	5.90	0.24	86.60
Last 5	11:06:06	1199.98	22.11	5.81	492.93	0.77	5.90	0.21	85.39
Last 5	11:11:06	1499.98	22.22	5.82	491.97	0.45	5.90	0.21	84.26
Last 5	11:16:06	1799.98	22.31	5.82	494.12	0.65	5.90	0.20	83.23
Variance 0			-0.07	0.00	0.39			-0.02	-1.21
Variance 1			0.11	0.01	-0.96			-0.01	-1.13
Variance 2			0.09	0.00	2.14			-0.01	-1.03

Notes

Began purging DGWC-11 at 1046

Stopped purging DGWC-11 at 1116 and began sampling

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 12:34:11

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	23.0 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte	Pump placement from TOC	23.0 ft

Well Information:		Pumping Information:	
Well ID	DGWC-12	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.1926587 L
Well Total Depth	28.24 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.28 in
Depth to Water	6.81 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:12:11	300.10	22.15	5.72	764.41	6.79	7.00	0.21	94.51
Last 5	12:17:11	600.03	21.75	5.73	765.36	6.96	7.00	0.17	96.56
Last 5	12:22:11	900.03	21.64	5.74	761.20	4.83	7.00	0.19	97.04
Last 5	12:27:11	1200.03	21.55	5.78	747.95	3.16	7.00	0.18	96.98
Last 5	12:32:11	1500.03	21.95	5.81	741.76	1.58	7.00	0.18	95.62
Variance 0			-0.11	0.02	-4.15			0.01	0.48
Variance 1			-0.09	0.03	-13.26			-0.01	-0.06
Variance 2			0.40	0.03	-6.18			-0.00	-1.36

Notes

Began purging DGWC-12 at 1207

Stopped purging DGWC-12 at 1232 and began sampling

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 09:20:03

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	41 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	DGWC-13	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3980004 L
Well Total Depth	46.65 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3 in
Depth to Water	32.55 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	08:57:39	300.12	20.38	5.85	460.94	1.43	32.75	1.26	84.77
Last 5	09:02:38	600.03	20.38	5.85	460.29	0.80	32.80	1.13	82.49
Last 5	09:07:38	900.01	20.48	5.84	462.49	0.70	32.80	1.09	80.69
Last 5	09:12:38	1200.01	20.43	5.84	460.73	0.76	32.80	1.04	79.61
Last 5	09:17:38	1500.01	20.47	5.84	461.43	0.50	32.80	1.01	78.37
Variance 0			0.10	-0.00	2.20			-0.05	-1.79
Variance 1			-0.05	-0.00	-1.76			-0.05	-1.09
Variance 2			0.04	0.00	0.70			-0.03	-1.24

Notes

Sampled DGWC-13 on 7/12/17 at 9:20

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 11:25:42

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	32 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte	Pump placement from TOC	32 ft

Well Information:		Pumping Information:	
Well ID	DGWC-14	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2328295 L
Well Total Depth	37.95 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.8 in
Depth to Water	20.60 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:02:47	300.10	21.54	5.67	145.10	0.37	20.75	4.40	59.81
Last 5	11:07:47	600.03	21.49	5.67	144.09	1.13	20.75	4.42	60.12
Last 5	11:12:47	900.03	21.63	5.66	144.57	0.86	20.75	4.46	60.26
Last 5	11:17:47	1200.03	22.84	5.67	144.15	1.66	20.75	4.39	59.10
Last 5	11:22:47	1500.03	23.24	5.66	142.38	1.93	20.75	4.31	59.42
Variance 0			0.14	-0.02	0.48			0.04	0.14
Variance 1			1.21	0.01	-0.42			-0.07	-1.16
Variance 2			0.40	-0.01	-1.76			-0.09	0.32

Notes

Sampled DGWC-14 on 7/12/17 at 7/12/17

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 13:09:20

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	65 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte	Pump placement from TOC	65 ft

Well Information:		Pumping Information:	
Well ID	DGWC-15	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5051225 L
Well Total Depth	70.38 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	24 in
Depth to Water	38.39 ft	Total Volume Pumped	7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:40:05	600.03	22.58	5.79	456.84	8.70	40.25	0.27	65.35
Last 5	12:50:05	1200.03	22.48	5.80	456.56	7.04	40.40	0.15	64.43
Last 5	12:55:05	1500.03	22.97	5.80	458.48	5.88	40.40	0.13	63.53
Last 5	13:00:05	1800.03	23.19	5.81	454.79	5.62	40.40	0.11	62.88
Last 5	13:05:05	2100.03	22.88	5.81	458.40	4.83	40.40	0.11	62.51
Variance 0			0.49	0.00	1.92			-0.02	-0.90
Variance 1			0.22	0.01	-3.70			-0.01	-0.65
Variance 2			-0.31	-0.00	3.61			-0.01	-0.37

Notes

Sampled DGWC-15 on 7/12/17 at 13:10

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 09:39:48

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	42 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte	Pump placement from TOC	42 ft

Well Information:		Pumping Information:	
Well ID	DGWC-17	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2774638 L
Well Total Depth	47.95 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.56 in
Depth to Water	26.20 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:18:07	600.02	22.18	5.07	553.58	10.59	26.33	0.49	65.22
Last 5	09:23:08	900.07	22.00	5.02	552.50	5.37	26.33	0.38	63.11
Last 5	09:28:07	1200.03	22.19	5.01	553.88	3.37	26.33	0.31	61.35
Last 5	09:33:07	1500.02	22.25	5.01	552.92	2.47	26.33	0.28	60.01
Last 5	09:38:07	1800.02	22.38	5.00	553.37	1.22	26.33	0.26	58.87
Variance 0			0.19	-0.01	1.38			-0.06	-1.76
Variance 1			0.06	-0.00	-0.96			-0.03	-1.34
Variance 2			0.13	-0.01	0.44			-0.02	-1.14

Notes

Sampled at 0940/FB-2

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 12:23:02

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	38 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	DGWC-19	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2596101 L
Well Total Depth	43.25 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.56 in
Depth to Water	19.60 ft	Total Volume Pumped	3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:01:40	300.02	27.19	5.03	654.71	6.98	19.72	0.52	61.09
Last 5	12:06:40	600.02	26.06	4.92	660.08	4.00	19.73	0.35	60.25
Last 5	12:11:40	900.02	26.45	4.80	662.49	6.69	19.73	0.28	57.81
Last 5	12:16:41	1200.84	26.19	4.74	661.56	3.41	19.73	0.24	58.70
Last 5	12:21:41	1500.84	25.69	4.76	656.35	4.51	19.73	0.22	59.78
Variance 0			0.39	-0.12	2.41			-0.07	-2.44
Variance 1			-0.26	-0.06	-0.93			-0.04	0.89
Variance 2			-0.50	0.02	-5.21			-0.02	1.08

Notes

Sampled at 1225

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 14:46:27

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	38 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	DGWC-20	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2596101 L
Well Total Depth	43.30 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	14.4 in
Depth to Water	19.74 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:22:59	300.10	24.23	4.67	1131.48	4.98	20.80	0.24	74.86
Last 5	14:27:59	600.03	24.31	4.67	1149.15	3.86	20.85	0.21	74.59
Last 5	14:32:59	900.03	24.25	4.68	1136.90	3.44	20.90	0.18	75.28
Last 5	14:37:59	1199.86	24.59	4.66	1141.33	2.67	20.93	0.18	74.80
Last 5	14:42:59	1499.87	24.40	4.67	1138.81	2.55	20.94	0.17	75.05
Variance 0			-0.07	0.01	-12.25			-0.02	0.70
Variance 1			0.35	-0.03	4.43			-0.01	-0.48
Variance 2			-0.19	0.01	-2.52			-0.01	0.25

Notes

Sampled DGWC-20 on 7/12/17 at 14:45

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 14:15:20

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	67.60 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte	Pump placement from TOC	67.60 ft

Well Information:		Pumping Information:	
Well ID	DGWC-21	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5167274 L
Well Total Depth	72.60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.52 in
Depth to Water	15.94 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:53:27	300.10	25.10	5.69	672.70	0.88	16.15	0.49	108.36
Last 5	13:58:27	600.03	24.95	5.71	676.20	0.67	16.15	0.33	107.21
Last 5	14:03:27	900.03	24.91	5.71	675.12	0.39	16.15	0.28	107.61
Last 5	14:08:27	1200.03	24.90	5.71	677.38	0.55	16.15	0.26	107.70
Last 5	14:13:27	1500.03	24.61	5.71	679.74	0.43	16.15	0.24	107.92
Variance 0			-0.04	-0.00	-1.08			-0.05	0.40
Variance 1			-0.01	-0.00	2.26			-0.02	0.09
Variance 2			-0.29	-0.00	2.37			-0.01	0.22

Notes

Began purging DGWC-21 at 1348

Stopped purging DGWC-21 at 1413 and began sampling

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-13 08:54:14

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	58 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWC-22	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3488785 L
Well Total Depth	63.45 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.28 in
Depth to Water	15.18 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	08:33:06	300.02	23.43	6.17	700.63	0.03	15.36	0.78	115.23
Last 5	08:38:06	600.26	23.25	5.85	701.39	0.08	15.37	0.47	111.91
Last 5	08:43:06	900.26	23.34	5.75	701.96	0.12	15.37	0.39	112.19
Last 5	08:48:06	1200.26	23.26	5.73	703.84	0.15	15.37	0.34	110.95
Last 5	08:53:06	1500.26	23.09	5.71	703.83	0.07	15.37	0.33	111.28
Variance 0			0.09	-0.10	0.57			-0.09	0.28
Variance 1			-0.09	-0.02	1.88			-0.05	-1.24
Variance 2			-0.16	-0.03	-0.01			-0.01	0.33

Notes

Sampled at 0855/FB-3

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 14:02:45

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	58 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWC-23	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.3488785 L
Well Total Depth	63.20 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	19.32 in
Depth to Water	15.09 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:41:44	600.02	29.12	5.95	639.30	0.84	16.10	0.52	71.02
Last 5	13:46:44	900.02	29.06	5.98	635.15	1.46	16.32	0.45	69.17
Last 5	13:51:44	1200.02	29.13	5.98	639.38	0.62	16.50	0.38	68.17
Last 5	13:56:44	1500.02	29.48	5.95	640.20	0.21	16.62	0.38	67.94
Last 5	14:01:44	1800.02	28.59	5.97	635.60	0.33	16.70	0.35	68.16
Variance 0			0.06	0.00	4.23			-0.07	-0.99
Variance 1			0.36	-0.03	0.81			-0.01	-0.24
Variance 2			-0.89	0.02	-4.59			-0.02	0.22

Notes

Sampled at 1405

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-13 10:34:24

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	47 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte	Pump placement from TOC	47 ft

Well Information:		Pumping Information:	
Well ID	DGWC-42	Final Pumping Rate	300 mL/min
Well diameter	2 in	Total System Volume	0.4247809 L
Well Total Depth	52.70 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	17.64 in
Depth to Water	29.68 ft	Total Volume Pumped	28.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:11:09	4500.93	22.25	5.29	905.93	8.63	31.15	0.06	85.01
Last 5	10:16:11	4802.94	21.58	5.28	903.42	8.34	31.15	0.06	85.12
Last 5	10:21:11	5102.91	21.72	5.28	908.46	63.53	31.15	0.06	84.60
Last 5	10:26:11	5402.86	22.10	5.28	901.63	5.89	31.15	0.06	84.13
Last 5	10:31:11	5702.85	22.55	5.27	904.08	4.81	31.15	0.06	83.05
Variance 0			0.14	-0.00	5.03			0.00	-0.51
Variance 1			0.38	-0.00	-6.83			-0.00	-0.47
Variance 2			0.45	-0.01	2.45			0.00	-1.08

Notes

Sampled DGWC-42 at 10:30 on 7/13/17

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-13 15:13:07

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	27 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte	Pump placement from TOC	27 ft

Well Information:		Pumping Information:	
Well ID	DGWC-47	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.206049 L
Well Total Depth	31.93 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	110 in
Depth to Water	17.30 ft	Total Volume Pumped	30 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:44:35	4202.89	22.06	4.58	584.58	1.72	25.35	0.56	108.76
Last 5	14:49:35	4502.75	22.37	4.33	646.35	1.65	25.55	0.21	106.31
Last 5	14:54:35	4802.73	21.59	4.17	652.18	1.33	26.05	0.07	106.74
Last 5	14:59:35	5102.73	21.88	4.92	641.30	1.98	26.30	0.18	104.74
Last 5	15:04:35	5402.73	21.71	4.95	628.31	1.70	26.60	0.17	103.97
Variance 0			-0.79	-0.16	5.83			-0.13	0.43
Variance 1			0.29	0.75	-10.89			0.10	-2.00
Variance 2			-0.17	0.03	-12.99			-0.01	-0.77

Notes

Sampled DGWC-47 by purging 3 well volumes on 7/13/17 at 15:10

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-13 12:37:05

Project Information:		Pump Information:	
Operator Name	D. Herrera	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	McDonough	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	28 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	DGWC-48	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2149758 L
Well Total Depth	33.49 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	20.28 in
Depth to Water	15.11 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:11:41	300.10	22.95	4.33	1054.93	5.98	16.45	0.36	105.02
Last 5	12:16:41	600.03	23.51	4.34	1066.45	5.21	16.60	0.22	105.29
Last 5	12:21:41	900.03	24.04	4.30	1048.63	3.71	16.75	0.21	105.57
Last 5	12:26:41	1200.03	24.50	4.30	1059.62	2.74	16.80	0.26	105.39
Last 5	12:31:41	1500.03	24.50	4.30	1056.70	3.33	16.80	0.17	105.74
Variance 0			0.53	-0.04	-17.82			-0.00	0.28
Variance 1			0.46	-0.00	10.99			0.04	-0.18
Variance 2			-0.00	0.00	-2.92			-0.09	0.35

Notes

Sampled DGWC-48 at 12:30 on 7/13/17

Grab Samples

FIELD DATA FORMS

August 2017

Product Name: Low-Flow System

Date: 2017-08-08 10:31:29

Project Information:		Pump Information:	
Operator Name	K Jurinko	Pump Model/Type	SamplePro
Company Name	Golder	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.170 in
Site Name	McDonough	Tubing Length	57 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449471		
Turbidity Make/Model	LaMotte	Pump placement from TOC	57 ft

Well Information:		Pumping Information:	
Well ID	DGWA-70A	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4694151 L
Well Total Depth	62.55 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	8.88 in
Depth to Water	41.54 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:58:43	300.16	20.93	5.64	74.37	22.80	42.10	5.49	198.32
Last 5	10:03:42	600.03	18.35	5.59	70.87	14.20	42.15	5.02	184.66
Last 5	10:08:42	900.03	18.02	5.60	72.73	6.97	42.30	4.92	173.01
Last 5	10:13:42	1200.03	17.82	5.60	73.05	4.02	42.28	4.92	169.80
Last 5									
Variance 0			-2.58	-0.06	-3.50			-0.46	-13.66
Variance 1			-0.33	0.01	1.85			-0.11	-11.65
Variance 2			-0.20	0.00	0.33			0.01	-3.20

Notes

Sampled at 1016 on 8/8/17 and FD-1

Grab Samples

FIELD DATA FORMS

October – November 2017

Product Name: Low-Flow System

Date: 2017-10-24 10:26:46

Project Information:		Pump Information:	
Operator Name	C. Gargan	Pump Model/Type	Samplepro
Company Name	Golder	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	47.5 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	440275		
Turbidity Make/Model	LaMotte	Pump placement from TOC	47.5 ft

Well Information:		Pumping Information:	
Well ID	DGWA-2	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.4270126 L
Well Total Depth	52.42 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.92 in
Depth to Water	29.67 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:02:41	600.04	18.70	5.80	617.27	1.24	29.83	0.64	109.80
Last 5	10:07:41	900.03	18.88	5.82	613.55	0.87	29.83	0.47	108.73
Last 5	10:12:41	1200.05	19.06	5.82	613.75	1.63	29.83	0.38	107.77
Last 5	10:17:41	1500.03	19.18	5.82	606.18	0.84	29.83	0.33	107.06
Last 5	10:22:41	1800.05	19.36	5.82	601.28	0.82	29.83	0.29	106.19
Variance 0			0.18	0.00	0.20			-0.09	-0.96
Variance 1			0.12	0.00	-7.57			-0.06	-0.71
Variance 2			0.18	0.00	-4.91			-0.03	-0.88

Notes

Sampled 1030

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-24 10:26:52

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	DGWC-8	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.290854 L
Well Total Depth	51.33 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.84 in
Depth to Water	21.19 ft	Total Volume Pumped	3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:03:12	300.11	17.27	5.06	828.08	0.67	21.26	0.56	111.43
Last 5	10:08:12	600.03	17.77	5.02	817.10	0.30	21.26	0.25	112.38
Last 5	10:13:12	900.02	17.63	5.02	816.50	0.90	21.26	0.21	113.55
Last 5	10:18:12	1200.02	17.88	5.04	820.06	0.37	21.26	0.19	114.54
Last 5	10:23:12	1500.03	17.78	5.05	819.77	0.44	21.26	0.18	115.81
Variance 0			-0.14	0.01	-0.60			-0.04	1.17
Variance 1			0.25	0.01	3.56			-0.02	0.99
Variance 2			-0.11	0.01	-0.28			-0.01	1.27

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-24 12:49:57

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	29 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	29 ft

Well Information:		Pumping Information:	
Well ID	DGWC-9	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2194393 L
Well Total Depth	33.73 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.92 in
Depth to Water	19.28 ft	Total Volume Pumped	4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:19:55	300.04	21.77	4.13	633.48	5.93	19.44	0.51	116.67
Last 5	12:24:55	600.03	20.97	4.12	643.58	3.91	19.44	0.36	118.31
Last 5	12:29:55	900.03	20.35	4.10	644.75	3.00	19.44	0.39	119.61
Last 5	12:34:55	1200.03	20.66	4.09	647.49	3.09	19.44	0.23	120.58
Last 5	12:44:55	1799.77	20.83	4.06	656.24	1.80	19.44	0.27	121.55
Variance 0			-0.62	-0.02	1.17			0.03	1.30
Variance 1			0.32	-0.01	2.73			-0.16	0.96
Variance 2			0.17	-0.03	8.75			0.04	0.97

Notes

Grab Samples

Low-Flow

Date:	10/24/2017 12:35
Operator Name:	C. Gargan
Pump Model/Type:	Samplepro
Company Name:	Golder
Tubing Type:	polyethylene
Project Name:	1668496
Site Name:	Plant McDonough
Latitude:	0Âº 0' 0"
Longitude:	0Âº 0' 0"
Tubing Diameter:	.17in
Tubing Length:	26.3 ft
Sonde SN:	440275
Turbidity Make/Model:	LaMotte
Pump placement from TOC:	26.3 ft
Well ID:	DGWA-53
Well diameter:	2 in
Well Total Depth:	31.31 ft
Screen Length:	10 ft
Depth to Water:	9.49 ft
Final Pumping Rate:	100 mL/min
Total System Volume:	0.4270126 L
Calculated Sample Rate:	300 sec
Stabilization Drawdown:	16.32 in
Total Volume Pumped:	3 L

Time	pH	ORP	Conductivity	DO	Temperatu	Turbidity	DTW
300	5.51	105.50	0.00	9.78	31.40	5.04	11.08
600	5.51	105.50	0.00	9.78	31.40	5.00	11.49
900	5.51	105.50	0.00	9.78	31.40	5.04	11.78
1200	5.51	105.50	0.00	9.78	31.40	4.43	11.94
1500	5.51	105.50	0.00	9.78	31.40	3.91	12.18
1800	5.51	105.50	0.00	9.78	31.40	3.29	12.44

Product Name: Low-Flow System

Date: 2017-10-24 15:37:04

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.170 in
Site Name	Plant McDonough	Tubing Length	57.5 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte	Pump placement from TOC	57.5 ft

Well Information:		Pumping Information:	
Well ID	DGWA-70A	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.4716468 L
Well Total Depth	62.54 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	41.66 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:15:54	600.32	20.04	5.71	72.70	3.05	41.95	5.00	230.96
Last 5	15:20:54	900.32	20.12	5.72	72.23	2.08	41.96	4.96	227.32
Last 5	15:25:54	1200.32	20.27	5.71	72.29	1.47	41.96	4.92	225.47
Last 5	15:30:54	1500.32	20.31	5.71	72.31	1.05	41.96	4.87	223.41
Last 5	15:35:54	1800.32	20.17	5.71	72.19	1.29	41.96	4.82	219.41
Variance 0			0.14	-0.01	0.07			-0.04	-1.85
Variance 1			0.05	-0.01	0.01			-0.05	-2.07
Variance 2			-0.15	0.01	-0.12			-0.05	-3.99

Notes

Sampled at 1540

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-24 13:34:32

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.170 in
Site Name	Plant McDonough	Tubing Length	42.5 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte	Pump placement from TOC	42.5 ft

Well Information:		Pumping Information:	
Well ID	DGWA-71	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.4046955 L
Well Total Depth	47.79 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	28.68 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:12:24	600.02	18.03	5.86	102.29	3.07	28.98	2.05	133.11
Last 5	13:17:24	900.02	17.96	5.85	100.43	2.40	28.98	2.41	132.26
Last 5	13:22:24	1200.03	17.99	5.86	100.26	1.74	28.98	3.18	129.48
Last 5	13:27:24	1500.02	18.01	5.86	96.74	1.54	28.98	3.27	134.93
Last 5	13:32:24	1800.02	17.95	5.86	96.26	1.73	28.98	2.66	137.13
Variance 0			0.03	0.01	-0.18			0.77	-2.79
Variance 1			0.02	-0.01	-3.52			0.09	5.45
Variance 2			-0.07	0.00	-0.48			-0.61	2.20

Notes

Sampled at 1335 with Extra Radium

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-24 15:38:21

Project Information:		Pump Information:	
Operator Name	C Gargan	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	DGWC-4	Tubing Diameter	in
Site Name	Plant McDonough	Tubing Length	41 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	440275		
Turbidity Make/Model	LaMotte	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	DGWC-4	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.09 L
Well Total Depth	46.71 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.32 in
Depth to Water	18.55 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	15:16:59	600.04	20.26	6.04	1472.72	3.56	18.66	0.26	72.60
Last 5	15:21:59	900.03	20.17	6.03	1474.51	3.72	18.66	0.24	73.12
Last 5	15:26:59	1200.04	20.21	6.00	1502.98	2.08	18.66	0.23	73.68
Last 5	15:31:59	1500.10	20.34	5.99	1505.11	2.34	18.66	0.22	74.20
Last 5	15:37:00	1801.04	20.20	5.99	1501.75	2.20	18.66	0.21	74.83
Variance 0			0.04	-0.03	28.47			-0.01	0.56
Variance 1			0.13	-0.01	2.13			-0.01	0.52
Variance 2			-0.14	-0.00	-3.36			-0.01	0.63

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-25 10:31:48

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	28 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	DGWC-5	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.2149758 L
Well Total Depth	33.25 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.4 in
Depth to Water	6.15 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:09:30	300.05	16.27	4.31	677.76	1.10	6.32	0.79	317.20
Last 5	10:14:30	600.03	17.90	4.35	667.48	1.13	6.35	0.53	432.68
Last 5	10:19:31	900.95	18.33	4.37	657.38	0.71	6.35	0.46	449.91
Last 5	10:24:31	1200.96	18.05	4.38	657.05	0.70	6.35	0.44	457.40
Last 5	10:29:31	1500.95	18.00	4.54	703.21	0.90	6.35	0.42	479.45
Variance 0			0.43	0.02	-10.09			-0.07	17.23
Variance 1			-0.28	0.01	-0.33			-0.02	7.49
Variance 2			-0.05	0.16	46.16			-0.01	22.06

Notes

Sampled at 1030

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-24 14:31:22

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	43 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	DGWC-10	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2819272 L
Well Total Depth	47.80 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.64 in
Depth to Water	22.85 ft	Total Volume Pumped	4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:08:51	300.03	21.69	4.85	743.40	2.18	23.07	3.36	137.57
Last 5	14:13:51	600.02	20.31	4.82	754.69	0.92	23.07	3.17	137.20
Last 5	14:18:51	900.02	20.06	4.82	757.41	0.40	23.07	2.87	137.06
Last 5	14:23:51	1200.03	20.21	4.80	756.66	0.38	23.07	2.73	136.81
Last 5	14:28:51	1500.03	20.23	4.80	758.10	0.98	23.07	2.69	136.47
Variance 0			-0.25	-0.01	2.72			-0.30	-0.14
Variance 1			0.15	-0.02	-0.75			-0.14	-0.25
Variance 2			0.02	0.00	1.44			-0.05	-0.34

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-24 16:32:49

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	47 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	47 ft

Well Information:		Pumping Information:	
Well ID	DGWC-11	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2997809 L
Well Total Depth	51.72 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	8.4 in
Depth to Water	8.15 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:14:19	300.02	21.91	5.75	508.39	0.53	8.73	0.54	127.37
Last 5	16:19:19	599.71	20.86	5.78	510.28	0.67	8.79	0.31	126.64
Last 5	16:24:19	899.71	20.48	5.79	511.37	0.70	8.83	0.38	126.06
Last 5	16:29:19	1199.71	20.21	5.79	512.31	0.45	8.85	0.23	125.53
Last 5									
Variance 0			-1.05	0.03	1.89			-0.23	-0.74
Variance 1			-0.38	0.01	1.09			0.06	-0.57
Variance 2			-0.27	0.00	0.95			-0.15	-0.53

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-25 10:36:08

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	23 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte	Pump placement from TOC	23 ft

Well Information:		Pumping Information:	
Well ID	DGWC-12	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.1926587 L
Well Total Depth	28.24 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3 in
Depth to Water	8.05 ft	Total Volume Pumped	3.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:07:36	300.19	16.96	6.05	838.18	5.99	8.30	0.25	84.33
Last 5	10:12:35	599.80	16.78	6.08	864.66	9.09	8.30	0.25	82.17
Last 5	10:22:35	1199.84	16.74	6.04	843.31	4.21	8.30	0.26	72.77
Last 5	10:27:35	1499.80	16.82	6.05	843.29	3.15	8.30	0.24	74.99
Last 5	10:32:38	1802.83	16.74	6.07	847.41	2.40	8.30	0.24	63.78
Variance 0			-0.04	-0.04	-21.35			0.01	-9.40
Variance 1			0.08	0.01	-0.02			-0.02	2.22
Variance 2			-0.08	0.02	4.12			-0.00	-11.21

Notes

Began purging at 1002

Stopped purging and began sampling. Slowed the purge rate from 200 ml/min to 120 ml/min

Grab Samples

Product Name: Low-Flow System

Date: 2017-11-15 15:50:20

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.170 in
Site Name	Plant McDonough	Tubing Length	42 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte	Pump placement from TOC	42 ft

Well Information:		Pumping Information:	
Well ID	DGWC-13	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.4024638 L
Well Total Depth	46.71 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.2 in
Depth to Water	38.91 ft	Total Volume Pumped	4.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:26:38	300.09	19.41	6.04	473.89	2.94	34.07	2.62	40.66
Last 5	15:31:38	600.05	18.86	5.93	485.34	3.26	34.10	2.47	42.22
Last 5	15:36:38	900.01	18.75	5.91	486.27	3.25	34.02	2.44	45.23
Last 5	15:41:40	1202.01	18.67	5.88	487.53	2.71	34.01	2.48	46.97
Last 5	15:46:40	1502.00	18.73	5.87	487.72	1.90	34.01	2.47	48.98
Variance 0			-0.12	-0.02	0.93			-0.02	3.01
Variance 1			-0.08	-0.03	1.26			0.04	1.75
Variance 2			0.07	-0.00	0.19			-0.01	2.00

Notes

Sampled DGWC-13 at 1545

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-25 13:48:44

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	33 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte	Pump placement from TOC	33 ft

Well Information:		Pumping Information:	
Well ID	DGWC-14	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.237293 L
Well Total Depth	37.95 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.2 in
Depth to Water	20.70 ft	Total Volume Pumped	3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:24:08	300.07	19.77	6.31	148.31	0.55	20.80	5.05	28.47
Last 5	13:29:08	600.08	20.30	6.20	143.01	0.41	20.80	4.94	35.36
Last 5	13:34:08	900.04	19.80	6.17	144.74	0.24	20.80	4.89	75.63
Last 5	13:39:08	1200.06	19.61	6.17	144.03	0.26	20.80	4.93	47.50
Last 5	13:44:08	1500.08	20.26	6.18	145.28	0.41	20.80	4.92	31.31
Variance 0			-0.50	-0.03	1.72			-0.05	40.27
Variance 1			-0.19	-0.00	-0.71			0.04	-28.13
Variance 2			0.65	0.01	1.25			-0.01	-16.19

Notes

Began purging 1318

Stopped purging and began sampling

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-25 14:17:16

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.170 in
Site Name	Plant McDonough	Tubing Length	66 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte	Pump placement from TOC	66 ft

Well Information:		Pumping Information:	
Well ID	DGWC-15	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.5095859 L
Well Total Depth	70.83 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	11.28 in
Depth to Water	38.49 ft	Total Volume Pumped	5.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:52:05	1800.02	20.48	5.89	467.17	5.64	39.43	0.97	23.12
Last 5	13:57:05	2100.02	20.66	5.88	469.38	5.28	39.43	0.79	27.41
Last 5	14:02:05	2400.20	20.67	5.89	467.60	4.01	39.43	0.67	30.65
Last 5	14:07:05	2700.20	20.71	5.90	467.52	3.53	39.43	0.58	30.60
Last 5	14:12:05	3000.20	20.66	5.90	469.54	2.43	39.43	0.54	29.80
Variance 0			0.01	0.00	-1.79			-0.13	3.24
Variance 1			0.04	0.01	-0.07			-0.09	-0.05
Variance 2			-0.04	0.01	2.01			-0.04	-0.81

Notes

Sampled at 1415 with Extra Radium

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-25 15:43:15

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	43 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	DGWC-17	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2819272 L
Well Total Depth	47.95 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.2 in
Depth to Water	27.35 ft	Total Volume Pumped	0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:20:56	300.13	20.42	5.80	560.11	1.00	27.45	0.70	27.09
Last 5	15:25:56	600.06	20.21	5.74	558.69	0.68	27.45	0.46	25.13
Last 5	15:30:56	900.09	20.13	5.73	558.42	0.71	27.45	0.35	27.19
Last 5	15:35:56	1200.10	19.90	5.72	556.71	0.48	27.45	0.30	34.40
Last 5	15:40:56	1500.03	19.70	5.73	554.02	0.37	27.45	0.27	31.91
Variance 0			-0.09	-0.01	-0.27			-0.11	2.06
Variance 1			-0.22	-0.01	-1.70			-0.05	7.21
Variance 2			-0.20	0.01	-2.69			-0.03	-2.49

Notes

Began purging at 1315

Stopped purging and began sampling

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-25 10:14:18

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	38 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	DGWC-19	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2596101 L
Well Total Depth	43.25 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.56 in
Depth to Water	20.79 ft	Total Volume Pumped	3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:50:44	300.10	16.20	4.77	622.31	0.64	20.92	0.58	81.69
Last 5	09:55:44	600.03	16.02	4.84	629.53	0.39	20.92	0.31	67.44
Last 5	10:00:44	900.02	17.02	4.65	641.37	0.20	20.92	0.23	82.17
Last 5	10:05:44	1200.02	17.00	4.65	638.85	0.41	20.92	0.20	87.81
Last 5	10:10:44	1500.02	17.41	4.66	642.75	0.73	20.92	0.18	91.20
Variance 0			1.00	-0.19	11.84			-0.08	14.73
Variance 1			-0.02	0.00	-2.52			-0.02	5.63
Variance 2			0.41	0.00	3.90			-0.02	3.40

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-25 13:32:05

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	38 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	DGWC-20	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2596101 L
Well Total Depth	43.30 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	9.24 in
Depth to Water	20.78 ft	Total Volume Pumped	5.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:09:34	899.68	19.73	4.54	1035.49	0.50	21.51	1.87	116.07
Last 5	13:14:38	1203.67	19.85	4.69	1098.74	0.24	21.53	0.48	112.12
Last 5	13:19:38	1503.68	19.90	4.71	1096.07	0.27	21.55	0.28	111.43
Last 5	13:24:38	1803.68	19.99	4.71	1093.70	0.07	21.55	0.20	111.09
Last 5	13:29:38	2103.67	19.96	4.71	1086.48	0.86	21.55	0.17	110.80
Variance 0			0.05	0.02	-2.67			-0.20	-0.69
Variance 1			0.09	0.00	-2.37			-0.08	-0.35
Variance 2			-0.03	0.00	-7.22			-0.03	-0.29

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-25 15:17:24

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	67 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	67 ft

Well Information:		Pumping Information:	
Well ID	DGWC-21	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.3890494 L
Well Total Depth	72.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.88 in
Depth to Water	16.56 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:01:21	300.03	21.35	5.67	633.78	0.44	16.77	0.55	108.57
Last 5	15:06:21	600.02	20.74	5.68	650.32	0.33	16.78	0.30	109.08
Last 5	15:11:21	900.02	20.55	5.67	656.13	0.34	16.79	0.23	109.35
Last 5	15:16:21	1200.02	20.57	5.68	651.92	0.42	16.80	0.20	109.47
Last 5									
Variance 0			-0.60	0.01	16.54			-0.26	0.50
Variance 1			-0.19	-0.01	5.81			-0.06	0.27
Variance 2			0.02	0.00	-4.21			-0.03	0.12

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-25 16:36:51

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	58 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWC-22	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.3488785 L
Well Total Depth	63.45 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.16 in
Depth to Water	16.67 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:19:29	299.76	21.26	5.91	606.92	0.30	16.83	0.63	107.20
Last 5	16:24:29	599.76	20.08	5.80	677.21	0.28	16.84	0.32	109.59
Last 5	16:29:29	899.75	20.16	5.77	678.02	0.09	16.85	0.23	109.69
Last 5	16:34:29	1199.76	20.32	5.77	678.00	0.49	16.85	0.20	109.94
Last 5									
Variance 0			-1.18	-0.11	70.29			-0.31	2.38
Variance 1			0.09	-0.03	0.81			-0.09	0.11
Variance 2			0.16	-0.00	-0.02			-0.03	0.25

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-26 10:07:54

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	58 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWC-23	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.3488785 L
Well Total Depth	63.20 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	28.2 in
Depth to Water	16.78 ft	Total Volume Pumped	4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:44:02	600.03	15.48	5.87	627.82	0.22	18.30	0.42	125.79
Last 5	09:49:02	900.02	15.84	5.89	620.19	0.42	18.60	0.31	126.84
Last 5	09:54:02	1200.02	15.84	5.89	619.20	0.33	18.84	0.27	127.27
Last 5	09:59:09	1506.77	15.95	5.90	619.36	0.96	19.09	0.25	125.63
Last 5	10:04:09	1806.78	16.20	5.90	616.92	0.61	19.13	0.24	124.48
Variance 0			-0.00	0.00	-0.99			-0.04	0.44
Variance 1			0.11	0.01	0.17			-0.02	-1.64
Variance 2			0.25	0.00	-2.44			-0.02	-1.15

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-25 16:26:52

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.170 in
Site Name	Plant McDonough	Tubing Length	47.5 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte	Pump placement from TOC	47.5 ft

Well Information:		Pumping Information:	
Well ID	DGWC-42	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.4270126 L
Well Total Depth	52.70 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	5.64 in
Depth to Water	30.54 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:02:21	1500.02	19.68	5.39	893.50	12.14	31.01	0.48	80.39
Last 5	16:07:21	1800.02	19.50	5.39	892.34	9.46	31.01	0.56	77.20
Last 5	16:12:21	2100.48	19.44	5.38	896.40	8.15	31.01	0.40	74.04
Last 5	16:17:21	2400.48	19.30	5.39	893.95	6.38	31.01	0.33	71.73
Last 5	16:22:21	2700.48	19.30	5.38	895.85	4.63	31.01	0.31	69.15
Variance 0			-0.07	-0.01	4.07			-0.15	-3.17
Variance 1			-0.14	0.01	-2.45			-0.07	-2.31
Variance 2			0.00	-0.00	1.90			-0.02	-2.58

Notes

Sampled at 1625

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-26 13:37:52

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	27 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	27 ft

Well Information:		Pumping Information:	
Well ID	DGWC-47	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2105124 L
Well Total Depth	31.93 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	17.64 in
Depth to Water	18.38 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:15:30	600.02	22.20	4.41	593.35	0.15	19.21	0.47	98.96
Last 5	13:20:30	900.02	21.79	4.42	590.30	0.17	19.54	0.38	96.25
Last 5	13:25:31	1201.02	21.62	4.42	596.69	0.35	19.66	0.34	93.46
Last 5	13:30:31	1501.02	21.55	4.42	595.85	0.61	19.77	0.32	91.80
Last 5	13:35:35	1804.06	22.04	4.41	597.76	0.40	19.85	0.31	90.22
Variance 0			-0.17	0.00	6.39			-0.04	-2.79
Variance 1			-0.07	-0.01	-0.84			-0.02	-1.66
Variance 2			0.49	-0.00	1.90			-0.00	-1.58

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-26 15:23:30

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis Peristaltic
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	28 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	DGWC-48	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.2149758 L
Well Total Depth	33.49 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	9.72 in
Depth to Water	16.39 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:00:02	300.05	22.64	4.45	978.98	0.58	17.00	0.48	122.93
Last 5	15:05:02	600.03	21.52	4.43	986.67	1.34	17.14	0.27	121.32
Last 5	15:10:02	899.85	21.42	4.41	989.32	1.05	17.17	0.23	120.29
Last 5	15:15:02	1199.85	21.28	4.40	982.63	1.76	17.19	0.20	119.52
Last 5	15:20:02	1499.85	21.38	4.39	979.55	2.28	17.20	0.18	118.81
Variance 0			-0.10	-0.02	2.65			-0.05	-1.03
Variance 1			-0.13	-0.01	-6.69			-0.03	-0.77
Variance 2			0.10	-0.01	-3.08			-0.02	-0.71

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-11-15 15:22:19

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	26 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte	Pump placement from TOC	26 ft

Well Information:		Pumping Information:	
Well ID	DGWA-53	Final Pumping Rate	0 mL/min
Well diameter	2 in	Total System Volume	0.206049 L
Well Total Depth	31.29 ft	Calculated Sample Rate	30 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	9.79 ft	Total Volume Pumped	0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:21:10	30.13	18.74	6.50	450.61	3.20	17.17	1.65	-89.20
Last 5									
Last 5									
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
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

Sampled at 1525 after pumping well dry

Grab Samples

Product Name: Low-Flow System

Date: 2017-11-15 11:06:13

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	SamplePro
Company Name	Golder	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	43 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	DGWA-71	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.4069272 L
Well Total Depth	47.79 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.16 in
Depth to Water	28.91 ft	Total Volume Pumped	4.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:44:14	599.95	16.70	5.76	102.25	7.27	29.09	0.61	92.51
Last 5	10:49:14	899.95	16.76	5.77	99.93	6.31	29.09	0.51	90.90
Last 5	10:54:14	1199.95	16.83	5.77	98.35	5.75	29.09	0.48	90.59
Last 5	10:59:14	1499.96	16.87	5.77	97.54	5.49	29.09	0.54	88.17
Last 5	11:04:14	1799.95	16.91	5.77	95.67	4.72	29.09	0.81	89.50
Variance 0			0.07	0.00	-1.59			-0.03	-0.32
Variance 1			0.04	-0.00	-0.81			0.06	-2.42
Variance 2			0.04	0.01	-1.87			0.27	1.34

Notes

Sampled at 1105

Grab Samples

Product Name: Low-Flow System

Date: 2017-11-15 10:24:34

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.170 in
Site Name	Plant McDonough	Tubing Length	42 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte	Pump placement from TOC	42 ft

Well Information:		Pumping Information:	
Well ID	DGWC-4	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.2774638 L
Well Total Depth	46.71 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.16 in
Depth to Water	18.90 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:02:26	300.11	15.62	5.85	1689.63	2.36	19.07	0.97	117.51
Last 5	10:07:26	600.02	15.96	5.87	1690.34	1.99	19.08	0.44	114.52
Last 5	10:12:26	900.02	16.07	5.90	1661.11	0.90	19.08	0.33	113.54
Last 5	10:17:26	1200.01	16.07	5.91	1668.73	0.81	19.08	0.28	112.83
Last 5	10:22:26	1500.01	16.07	5.92	1654.76	1.20	19.08	0.29	112.40
Variance 0			0.10	0.03	-29.23			-0.10	-0.98
Variance 1			0.00	0.01	7.62			-0.05	-0.72
Variance 2			0.00	0.01	-13.97			0.00	-0.42

Notes

Sampled DGWC-4 at 1020

Grab Samples

Product Name: Low-Flow System

Date: 2017-11-15 11:37:26

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	.170 in
Site Name	Plant McDonough	Tubing Length	43 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	DGWC-10	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.2819272 L
Well Total Depth	47.80 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.04 in
Depth to Water	24.60 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:15:28	300.05	18.66	5.69	763.77	0.53	24.76	1.08	112.88
Last 5	11:20:28	600.02	17.93	5.06	762.12	0.88	24.77	0.47	112.09
Last 5	11:25:28	900.01	17.86	4.94	760.98	0.47	24.77	0.35	111.73
Last 5	11:30:28	1200.00	17.99	4.90	767.14	0.64	24.77	0.30	111.13
Last 5	11:35:28	1499.99	18.21	4.90	766.71	1.88	24.77	0.27	110.57
Variance 0			-0.06	-0.13	-1.13			-0.12	-0.36
Variance 1			0.13	-0.03	6.16			-0.05	-0.59
Variance 2			0.22	-0.01	-0.43			-0.03	-0.57

Notes

Sampled DGWC-10 at 1135

Grab Samples

FIELD DATA FORMS

February – March 2018

Product Name: Low-Flow System

Date: 2018-02-27 15:06:18

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	47 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	47 ft

Well Information:		Pumping Information:	
Well ID	DGWA-2	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.4247809 L
Well Total Depth	52.42 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.52 in
Depth to Water	30.53 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:43:53	600.02	20.49	5.88	577.47	3.66	30.75	0.55	110.44
Last 5	14:48:53	900.11	20.11	5.88	571.40	3.65	30.75	0.43	110.46
Last 5	14:53:53	1200.11	19.99	5.87	561.22	3.20	30.74	0.37	111.01
Last 5	14:58:53	1500.11	19.89	5.87	555.22	3.17	30.74	0.31	111.59
Last 5	15:03:53	1800.11	19.77	5.85	551.07	2.98	30.74	0.28	112.15
Variance 0			-0.12	-0.01	-10.18			-0.06	0.54
Variance 1			-0.10	-0.00	-6.00			-0.05	0.59
Variance 2			-0.12	-0.02	-4.15			-0.03	0.56

Notes

Sampled at 1505

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-27 11:14:45

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	DGWC-8	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.290854 L
Well Total Depth	51.33 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.84 in
Depth to Water	26.72 ft	Total Volume Pumped	1.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	11:01:21	300.03	17.40	5.50	643.52	2.67	26.78	1.11	51.68
Last 5	11:06:21	600.02	17.45	5.13	659.93	2.34	26.79	0.36	73.72
Last 5	11:11:21	900.03	17.71	5.06	660.54	1.01	26.79	0.46	83.75
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.05	-0.37	16.42			-0.75	22.04
Variance 2			0.26	-0.07	0.61			0.10	10.02

Notes

Timer froze at 1110. Resume readings at 1115.

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-27 11:31:02

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	DGWC-8	Final Pumping Rate	0 mL/min
Well diameter	2 in	Total System Volume	0.290854 L
Well Total Depth	51.33 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	26.72 ft	Total Volume Pumped	0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	11:20:44	300.02	17.62	5.08	666.83	0.97	26.79	0.27	81.78
Last 5	11:25:44	600.02	17.85	5.10	670.10	0.75	26.79	0.19	78.52
Last 5									
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.22	0.01	3.28			-0.09	-3.26
Variance 2			0.00	0.00	0.00			0.00	0.00

Notes

Timer froze, again, at 1130. Resuming readings at 1135.

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-27 11:50:13

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	DGWC-8	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.290854 L
Well Total Depth	51.33 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.84 in
Depth to Water	26.72 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	11:37:01	300.03	17.97	5.09	669.69	0.34	26.79	0.17	74.34
Last 5	11:42:01	600.03	18.00	5.09	670.57	0.87	26.79	0.16	72.74
Last 5	11:47:01	900.02	18.12	5.08	672.30	0.40	26.79	0.15	71.71
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.03	-0.00	0.89			-0.01	-1.60
Variance 2			0.12	-0.01	1.72			-0.01	-1.04

Notes

Sampled DGWC-8 at 1145, 2-27-18.

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-27 13:33:12

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	29 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	29 ft

Well Information:		Pumping Information:	
Well ID	DGWC-9	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2194393 L
Well Total Depth	33.73 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.24 in
Depth to Water	21.48 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	13:11:13	300.03	20.78	4.11	621.29	3.02	21.69	0.37	75.22
Last 5	13:16:13	599.94	19.76	4.07	627.81	5.91	21.71	0.26	84.66
Last 5	13:21:13	899.93	19.58	4.06	630.59	5.80	21.75	0.23	89.70
Last 5	13:26:13	1199.93	19.44	4.05	632.20	5.35	21.75	0.21	93.49
Last 5	13:31:13	1499.93	19.45	4.04	642.98	3.94	21.75	0.19	96.32
Variance 0			-0.18	-0.02	2.78			-0.03	5.04
Variance 1			-0.14	-0.01	1.62			-0.02	3.79
Variance 2			0.01	-0.01	10.77			-0.02	2.84

Notes

Sampled DGWC-9 at 1330, 2-27-18

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-08 12:59:48

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	26 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte	Pump placement from TOC	26 ft

Well Information:		Pumping Information:	
Well ID	DGWA-53	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.206049 L
Well Total Depth	31.29 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	66.12 in
Depth to Water	8.15 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10	+/- 10
Last 5	12:36:06	3626.98	15.53	6.16	376.48	8.77	12.96	0.13	39.49
Last 5	12:41:08	3928.98	15.55	6.14	380.79	7.77	13.13	0.12	38.62
Last 5	12:46:09	4229.97	15.21	6.17	378.13	7.35	13.37	0.13	36.62
Last 5	12:51:11	4531.97	15.98	6.18	380.32	7.22	13.51	0.12	34.27
Last 5	12:56:12	4832.96	16.51	6.18	378.52	7.95	13.66	0.11	32.50
Variance 0			-0.34	0.03	-2.66			0.00	-2.00
Variance 1			0.76	0.01	2.19			-0.01	-2.35
Variance 2			0.54	0.00	-1.80			-0.01	-1.77

Notes

Sampled DGWA-53 at 1255. Pete Robinson from SC authorized sampling if NTU < 10 due to previous purging experiences.

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-27 10:38:07

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	57 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	57 ft

Well Information:		Pumping Information:	
Well ID	DGWA-70A	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.4694151 L
Well Total Depth	62.54 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.8 in
Depth to Water	40.84 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:16:02	300.02	17.36	5.58	67.79	7.25	41.15	4.61	87.96
Last 5	10:21:02	600.02	17.41	5.53	67.30	4.41	41.21	4.50	87.36
Last 5	10:26:02	900.02	17.45	5.51	66.60	2.65	41.24	4.51	88.45
Last 5	10:31:02	1200.02	17.21	5.47	66.36	2.09	41.24	4.52	93.39
Last 5	10:36:02	1500.02	17.10	5.50	68.32	2.14	41.24	4.33	91.61
Variance 0			0.04	-0.02	-0.70			0.01	1.09
Variance 1			-0.24	-0.04	-0.24			0.01	4.94
Variance 2			-0.11	0.03	1.96			-0.19	-1.78

Notes

Sampled at 1035/FB-1

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-27 08:59:42

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	43 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	DGWA-71	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.4069272 L
Well Total Depth	47.79 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.64 in
Depth to Water	28.41 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	08:37:31	600.02	15.62	5.77	92.72	1.79	28.62	0.91	86.41
Last 5	08:42:31	900.02	15.90	5.68	91.76	1.17	28.63	0.67	82.36
Last 5	08:47:31	1200.02	16.02	5.66	91.51	0.77	28.63	0.60	81.11
Last 5	08:52:31	1500.02	16.10	5.65	90.58	0.59	28.63	0.59	79.84
Last 5	08:57:31	1800.02	16.12	5.66	89.92	0.62	28.63	0.60	79.00
Variance 0			0.12	-0.03	-0.24			-0.07	-1.26
Variance 1			0.08	-0.01	-0.93			-0.01	-1.27
Variance 2			0.02	0.00	-0.66			0.01	-0.84

Notes

Sampled at 0900

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-27 09:42:42

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	41.0 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	41.0 ft

Well Information:		Pumping Information:	
Well ID	DGWC-4	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.2730004 L
Well Total Depth	46.71 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.64 in
Depth to Water	18.98 ft	Total Volume Pumped	3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	09:19:26	300.11	14.22	6.11	1621.29	1.36	19.20	0.30	121.01
Last 5	09:24:26	600.02	14.76	6.07	1611.04	0.58	19.20	0.22	122.10
Last 5	09:29:26	900.01	14.81	6.06	1608.50	0.64	19.20	0.19	122.87
Last 5	09:34:26	1200.00	15.03	6.05	1605.81	0.33	19.20	0.17	123.55
Last 5	09:39:26	1499.99	15.20	6.03	1609.27	0.41	19.20	0.17	124.24
Variance 0			0.05	-0.01	-2.54			-0.03	0.77
Variance 1			0.22	-0.01	-2.69			-0.02	0.68
Variance 2			0.17	-0.02	3.47			-0.00	0.69

Notes

Began purging & 0914 at DGWC-4 in 2-27-18
Stopped purging at 0939

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-27 11:22:41

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	28.0 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	28.0 ft

Well Information:		Pumping Information:	
Well ID	DGWC-5	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2149758 L
Well Total Depth	33.25 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.72 in
Depth to Water	6.37 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	11:05:55	300.04	16.40	4.87	854.35	0.73	6.64	0.46	117.34
Last 5	11:10:55	600.02	16.58	4.88	865.01	0.59	6.65	0.37	123.89
Last 5	11:15:55	900.01	16.82	4.89	868.53	0.45	6.67	0.35	130.52
Last 5	11:20:55	1200.00	16.87	4.87	866.74	0.13	6.68	0.33	137.92
Last 5									
Variance 0			0.18	0.01	10.66			-0.10	6.55
Variance 1			0.24	0.00	3.52			-0.02	6.63
Variance 2			0.05	-0.01	-1.79			-0.02	7.40

Notes

Started purging DGWC-5 @ 1100
Stopped purging at 1120

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-27 14:56:02

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	43 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	DGWC-10	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2819272 L
Well Total Depth	47.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.4 in
Depth to Water	25.89 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:34:30	300.03	20.38	5.55	708.71	1.11	26.07	0.58	118.67
Last 5	14:39:30	600.03	19.64	5.55	717.03	1.09	26.09	0.32	113.43
Last 5	14:44:30	900.02	19.45	5.54	717.73	1.59	26.09	0.25	109.12
Last 5	14:49:30	1200.02	19.63	5.55	719.04	1.64	26.09	0.22	105.45
Last 5	14:54:30	1500.02	19.80	5.55	721.53	1.67	26.09	0.23	102.41
Variance 0			-0.18	-0.01	0.70			-0.06	-4.31
Variance 1			0.18	0.00	1.31			-0.03	-3.67
Variance 2			0.17	0.01	2.49			0.00	-3.05

Notes

Sampled DGWC-10 at 1455, 2-27-18

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-27 14:31:04

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	47.0 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	47.0 ft

Well Information:		Pumping Information:	
Well ID	DGWC-11	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2997809 L
Well Total Depth	51.72 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	9 in
Depth to Water	9.95 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:19:06	300.03	18.90	5.87	526.79	1.23	10.25	0.19	135.96
Last 5	14:24:06	600.02	18.70	5.94	531.96	1.44	10.28	0.17	131.67
Last 5	14:29:06	900.01	18.79	5.94	530.41	1.19	10.30	0.15	130.89
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.20	0.06	5.17			-0.02	-4.29
Variance 2			0.09	0.01	-1.55			-0.02	-0.78

Notes

Began purging DGWC-11 @ 1414 on 2-27-18
Stopped purging at 1429

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-27 17:23:05

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	23.0 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	23.0 ft

Well Information:		Pumping Information:	
Well ID	DGWC-12	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.1926587 L
Well Total Depth	28.24 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.68 in
Depth to Water	6.73 ft	Total Volume Pumped	14.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	16:59:39	5700.89	18.54	5.74	733.85	6.34	6.87	0.17	132.87
Last 5	17:04:39	6000.88	18.61	5.73	731.01	5.82	6.87	0.17	133.45
Last 5	17:09:39	6300.87	18.39	5.72	731.91	5.42	6.87	0.17	134.14
Last 5	17:14:39	6600.86	17.84	5.72	732.66	5.22	6.87	0.17	134.31
Last 5	17:19:39	6900.86	17.32	5.73	733.95	4.88	6.87	0.17	133.69
Variance 0			-0.23	-0.01	0.90			0.00	0.69
Variance 1			-0.55	-0.00	0.75			-0.00	0.17
Variance 2			-0.52	0.01	1.30			-0.00	-0.61

Notes

Began purging at 1524 DGWC-12
Stopped purging at 1720

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-28 09:05:16

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	41 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	DGWC-13	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.3980004 L
Well Total Depth	46.66 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.68 in
Depth to Water	25.54 ft	Total Volume Pumped	4.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	08:43:03	600.02	14.72	6.34	142.65	2.53	25.65	0.53	82.17
Last 5	08:48:03	900.02	14.90	6.16	142.65	1.02	25.66	0.42	79.46
Last 5	08:53:03	1200.02	14.86	6.07	141.95	1.23	25.67	0.33	77.13
Last 5	08:58:03	1500.02	14.70	6.01	142.69	0.59	25.68	0.30	77.08
Last 5	09:03:03	1800.02	14.85	5.99	142.11	0.49	25.68	0.26	76.28
Variance 0			-0.04	-0.08	-0.71			-0.09	-2.33
Variance 1			-0.16	-0.07	0.74			-0.04	-0.05
Variance 2			0.16	-0.02	-0.58			-0.03	-0.80

Notes

Sampled at 0905

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-27 16:15:03

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	33 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	33 ft

Well Information:		Pumping Information:	
Well ID	DGWC-14	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.237293 L
Well Total Depth	37.95 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.96 in
Depth to Water	20.98 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:57:05	300.03	19.54	5.72	146.33	1.01	21.06	4.19	62.95
Last 5	16:02:05	600.02	19.23	5.67	141.74	0.41	21.06	4.37	66.42
Last 5	16:07:05	900.02	19.01	5.64	137.80	0.89	21.06	4.60	69.02
Last 5	16:12:05	1200.02	18.96	5.63	137.48	0.36	21.06	4.62	71.31
Last 5									
Variance 0			-0.31	-0.05	-4.59			0.18	3.48
Variance 1			-0.22	-0.03	-3.94			0.23	2.60
Variance 2			-0.04	-0.01	-0.32			0.02	2.29

Notes

Sampled DGWC-14 at 1610, 2-27-18

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-28 11:06:05

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	66 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	66 ft

Well Information:		Pumping Information:	
Well ID	DGWC-15	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.5095859 L
Well Total Depth	70.83 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	12.96 in
Depth to Water	39.24 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:42:28	300.02	14.77	6.05	456.97	9.87	39.66	2.76	96.76
Last 5	10:47:28	600.02	16.33	5.88	458.53	4.87	39.95	1.06	93.59
Last 5	10:52:28	900.02	16.69	5.82	456.28	3.68	40.14	0.48	92.99
Last 5	10:57:28	1200.02	16.48	5.80	456.66	2.74	40.24	0.35	92.63
Last 5	11:02:28	1500.02	16.40	5.80	454.18	1.68	40.32	0.26	92.07
Variance 0			0.37	-0.06	-2.26			-0.58	-0.60
Variance 1			-0.22	-0.02	0.38			-0.12	-0.36
Variance 2			-0.08	-0.00	-2.48			-0.09	-0.56

Notes

Sampled at 1105/FB-2

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-28 09:11:58

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	43 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	DGWC-17	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2819272 L
Well Total Depth	47.95 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.2 in
Depth to Water	27.95 ft	Total Volume Pumped	3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	08:48:14	300.11	14.82	5.34	533.75	8.90	28.10	0.30	93.66
Last 5	08:53:13	600.03	14.94	5.27	529.37	10.10	28.10	0.26	91.96
Last 5	08:58:13	900.02	14.90	5.25	524.70	13.10	28.05	0.27	92.51
Last 5	09:03:13	1200.01	14.81	5.24	524.25	3.83	28.05	0.27	93.53
Last 5	09:08:13	1500.01	14.40	5.22	526.50	2.25	28.05	0.30	94.69
Variance 0			-0.05	-0.02	-4.67			0.01	0.55
Variance 1			-0.09	-0.01	-0.44			0.00	1.03
Variance 2			-0.40	-0.02	2.25			0.03	1.15

Notes

Began purging at 0843

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-28 11:57:33

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	38.0 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	38.0 ft

Well Information:		Pumping Information:	
Well ID	DGWC-19	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2596101 L
Well Total Depth	43.25 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.96 in
Depth to Water	20.10 ft	Total Volume Pumped	3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	11:34:11	300.09	16.29	4.73	658.04	1.67	20.26	0.47	117.96
Last 5	11:39:11	600.02	16.74	4.66	655.71	0.36	20.26	0.30	123.52
Last 5	11:44:11	900.02	16.80	4.62	654.14	0.37	20.26	0.26	127.68
Last 5	11:49:11	1200.01	16.96	4.62	653.90	0.42	20.26	0.24	129.99
Last 5	11:54:11	1500.01	17.05	4.63	649.90	0.43	20.26	0.21	132.50
Variance 0			0.07	-0.03	-1.57			-0.04	4.15
Variance 1			0.16	0.00	-0.24			-0.02	2.31
Variance 2			0.09	0.01	-4.00			-0.03	2.51

Notes

Began purging at 1129

Stopped purging and began sampling at 1155

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-28 14:52:31

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	38.0 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	38.0 ft

Well Information:		Pumping Information:	
Well ID	DGWC-20	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2596101 L
Well Total Depth	43.30 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	8.4 in
Depth to Water	20.30 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:35:01	300.04	18.03	4.65	1099.31	1.03	20.85	0.36	146.98
Last 5	14:40:01	600.03	18.16	4.57	1095.86	0.81	20.95	0.29	151.57
Last 5	14:45:01	900.02	18.12	4.53	1091.40	0.64	21.00	0.25	154.20
Last 5	14:50:01	1200.01	18.25	4.51	1090.86	0.16	21.00	0.23	154.31
Last 5									
Variance 0			0.13	-0.08	-3.45			-0.07	4.59
Variance 1			-0.04	-0.04	-4.46			-0.04	2.62
Variance 2			0.13	-0.02	-0.55			-0.02	0.11

Notes

Began purging at 1430 @ DGWC-20
Stopped purging and began sampling

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-28 15:17:21

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	67 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	67 ft

Well Information:		Pumping Information:	
Well ID	DGWC-21	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.3890494 L
Well Total Depth	72.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.4 in
Depth to Water	16.3 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:00:14	300.09	17.99	5.77	679.10	2.02	16.48	0.67	46.93
Last 5	15:05:14	599.89	18.15	5.74	682.88	0.85	16.50	0.38	52.59
Last 5	15:10:14	899.92	18.29	5.72	681.69	0.67	16.50	0.32	58.34
Last 5	15:15:14	1199.90	18.29	5.71	682.57	0.52	16.50	0.29	63.89
Last 5									
Variance 0			0.16	-0.03	3.77			-0.29	5.66
Variance 1			0.14	-0.02	-1.19			-0.06	5.74
Variance 2			0.00	-0.01	0.89			-0.03	5.55

Notes

Sampled DGWC-21 at 1515, 2-28-18

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-28 16:46:28

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	58 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWC-22	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.3488785 L
Well Total Depth	63.45 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.28 in
Depth to Water	15.62 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	16:28:05	300.03	18.03	5.77	693.80	0.14	15.81	0.85	76.87
Last 5	16:33:05	600.02	18.32	5.72	709.19	0.35	15.81	0.35	78.96
Last 5	16:38:05	900.02	18.29	5.77	702.98	0.44	15.81	0.28	80.38
Last 5	16:43:05	1200.02	18.25	5.77	696.22	0.68	15.81	0.25	81.50
Last 5									
Variance 0			0.29	-0.05	15.39			-0.50	2.09
Variance 1			-0.03	0.05	-6.21			-0.06	1.42
Variance 2			-0.04	-0.00	-6.76			-0.03	1.12

Notes

Sampled DGWC-22 at 1645, 2-28-18

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-01 10:09:15

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	58 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWC-23	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.3488785 L
Well Total Depth	63.2 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	21.96 in
Depth to Water	14.81 ft	Total Volume Pumped	3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	09:47:07	299.96	18.26	6.19	693.13	1.32	15.58	1.34	124.65
Last 5	09:52:07	599.90	18.92	6.18	691.91	0.59	15.91	1.00	127.17
Last 5	09:57:07	899.90	18.89	6.18	687.53	0.33	16.39	0.89	131.16
Last 5	10:02:07	1199.90	19.10	6.19	688.08	2.10	16.50	0.85	135.54
Last 5	10:07:07	1499.90	18.96	6.19	689.51	1.40	16.64	0.80	140.72
Variance 0			-0.03	0.00	-4.38			-0.11	3.98
Variance 1			0.21	0.00	0.56			-0.03	4.38
Variance 2			-0.13	-0.00	1.42			-0.05	5.19

Notes

Sampled DGWC-23 at 1005, 3-1-18

Grab Samples

Product Name: Low-Flow System

Date: 2018-02-28 15:29:33

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	48 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	48 ft

Well Information:		Pumping Information:	
Well ID	DGWC-42	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.4292443 L
Well Total Depth	52.70 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	8.28 in
Depth to Water	30.44 ft	Total Volume Pumped	5.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:06:32	1500.02	18.38	5.39	847.99	16.60	31.13	0.27	96.83
Last 5	15:11:32	1800.02	18.37	5.39	848.61	11.50	31.13	0.25	96.02
Last 5	15:16:33	2100.30	18.31	5.38	848.57	7.05	31.13	0.23	94.98
Last 5	15:21:33	2400.30	18.34	5.38	848.65	5.21	31.13	0.21	93.87
Last 5	15:26:33	2700.30	18.39	5.37	848.87	3.95	31.13	0.21	93.24
Variance 0			-0.06	-0.00	-0.05			-0.02	-1.04
Variance 1			0.04	-0.00	0.09			-0.01	-1.11
Variance 2			0.05	-0.01	0.22			-0.01	-0.62

Notes

Sampled at 1530

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-01 12:48:41

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	27 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	27 ft

Well Information:		Pumping Information:	
Well ID	DGWC-47	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2105124 L
Well Total Depth	31.93 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	21.72 in
Depth to Water	17.5 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:26:20	599.92	16.27	3.92	605.91	2.26	18.78	0.54	349.48
Last 5	12:31:20	899.92	16.19	3.92	606.32	1.78	18.95	0.44	351.19
Last 5	12:36:21	1200.91	16.12	3.92	606.45	1.59	19.10	0.39	351.85
Last 5	12:41:21	1500.92	16.12	3.93	606.82	1.67	19.21	0.35	352.52
Last 5	12:46:21	1800.92	16.09	3.93	605.14	1.64	19.31	0.33	352.20
Variance 0			-0.07	0.00	0.13			-0.05	0.66
Variance 1			-0.00	0.00	0.37			-0.04	0.67
Variance 2			-0.03	0.01	-1.68			-0.02	-0.33

Notes

Sampled DGWC-47 at 1245, 3-1-18

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-02 11:07:45

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	1668496	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	28 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	364452		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	DGWC-48	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.2149758 L
Well Total Depth	33.49 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	10.2 in
Depth to Water	15.25 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:45:19	300.04	14.76	4.11	958.14	0.50	15.90	0.45	127.26
Last 5	10:50:19	600.02	14.75	4.12	958.90	0.51	16.05	0.36	128.33
Last 5	10:55:19	900.02	14.80	4.11	955.21	0.49	16.10	0.31	129.97
Last 5	11:00:19	1200.01	14.92	4.13	952.19	0.39	16.10	0.31	131.40
Last 5	11:05:19	1500.01	15.16	4.14	960.51	0.50	16.10	0.29	132.46
Variance 0			0.05	-0.00	-3.69			-0.05	1.63
Variance 1			0.12	0.02	-3.03			-0.00	1.44
Variance 2			0.25	0.01	8.32			-0.01	1.05

Notes

Started purging at 1040 at DGWC-48
Stopped purging and began sampling

Grab Samples

FIELD DATA FORMS

July 2018

Product Name: Low-Flow System

Date: 2018-07-11 09:16:21

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	47 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	47 ft

Well Information:		Pumping Information:	
Well ID	DGWC-2	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4247809 L
Well Total Depth	52.42 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.32 in
Depth to Water	30.19 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	09:04:35	300.11	21.29	5.84	455.16	8.15	30.54	0.61	137.33
Last 5	09:09:35	600.03	20.91	5.84	454.51	3.60	30.55	0.28	131.24
Last 5	09:14:35	900.02	21.03	5.85	451.16	3.10	30.55	0.22	128.34
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.38	-0.00	-0.65			-0.33	-6.09
Variance 2			0.12	0.01	-3.35			-0.06	-2.91

Notes

Sampled DGWC-2 at 0915

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 14:11:40

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	46 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	46 ft

Well Information:		Pumping Information:	
Well ID	DGWC-8	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.2953174 L
Well Total Depth	51.33 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.08 in
Depth to Water	28.67 ft	Total Volume Pumped	3.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	13:48:28	600.04	24.42	5.10	597.07	1.37	28.76	0.00	499.67
Last 5	13:53:28	900.04	24.22	5.10	598.14	1.16	28.76	0.00	514.89
Last 5	13:58:28	1200.04	24.56	5.11	599.25	0.99	28.76	0.32	530.28
Last 5	14:03:28	1500.05	23.57	5.12	595.15	1.02	28.76	0.30	549.46
Last 5	14:08:28	1800.04	22.73	5.11	600.97	1.00	28.76	0.29	561.66
Variance 0			0.34	0.01	1.11			0.32	15.38
Variance 1			-0.99	0.00	-4.10			-0.02	19.18
Variance 2			-0.84	-0.01	5.82			-0.02	12.20

Notes

Started purging at 1338

Stopped purging and began sampling at 1410

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 12:51:34

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	29 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	29 ft

Well Information:		Pumping Information:	
Well ID	DGWC-9	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2194393 L
Well Total Depth	33.73 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.0 in
Depth to Water	23.31 ft	Total Volume Pumped	3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:28:34	300.15	23.71	4.15	650.95	8.68	23.55	0.50	169.64
Last 5	12:38:34	900.02	23.20	4.04	665.00	5.05	23.60	0.38	181.39
Last 5	12:43:34	1200.02	22.84	4.03	663.66	3.58	23.60	0.27	182.58
Last 5	12:48:34	1500.02	23.54	4.03	666.90	3.90	23.60	0.25	184.56
Last 5									
Variance 0			-0.51	-0.11	14.05			-0.12	11.75
Variance 1			-0.36	-0.01	-1.34			-0.11	1.18
Variance 2			0.70	0.00	3.24			-0.02	1.99

Notes

Software malfunction did not allow second reading. Sampled at 1250

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-12 08:46:03

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	26 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	26 ft

Well Information:		Pumping Information:	
Well ID	DGWA-53	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.206049 L
Well Total Depth	31.30 ft	Calculated Sample Rate	60 sec
Screen Length	10 ft	Stabilization Drawdown	3.48 in
Depth to Water	9.85 ft	Total Volume Pumped	0.1 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	08:44:27	60.03	24.29	6.33	388.06	27.60	10.14	0.72	-51.10
Last 5									
Last 5									
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
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

Sampled filtered and total per Joju Abraham. Sampled after purging dry.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 11:02:19

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	58 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWA-70A	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4738785 L
Well Total Depth	62.54 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	8.4 in
Depth to Water	39.9 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:50:08	300.10	21.93	5.36	60.04	7.55	40.44	4.88	87.73
Last 5	10:55:08	600.03	20.29	5.41	60.38	5.51	40.57	4.83	85.19
Last 5	11:00:08	900.02	20.20	5.44	60.54	4.91	40.60	4.79	86.63
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-1.64	0.06	0.35			-0.05	-2.54
Variance 2			-0.09	0.03	0.15			-0.04	1.45

Notes

Sampled DGWA-70A at 1100

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 09:42:24

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	43 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	DGWA-71	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4069272 L
Well Total Depth	47.79 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	5.64 in
Depth to Water	28.24 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	09:25:09	300.11	20.10	5.67	78.80	3.83	28.62	1.02	88.89
Last 5	09:30:09	600.04	19.29	5.61	78.18	2.40	28.71	0.69	76.31
Last 5	09:35:09	900.03	19.28	5.62	77.14	2.68	28.71	0.57	75.06
Last 5	09:40:09	1200.03	19.13	5.63	76.29	2.22	28.71	0.63	75.18
Last 5									
Variance 0			-0.81	-0.06	-0.62			-0.32	-12.58
Variance 1			-0.01	0.01	-1.04			-0.12	-1.25
Variance 2			-0.15	0.02	-0.85			0.05	0.12

Notes

Sampled DGWA-71 at 0940

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 09:26:43

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	41 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	DGWC-4	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.2730004 L
Well Total Depth	46.71 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.4 in
Depth to Water	20.60 ft	Total Volume Pumped	3.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	09:05:01	600.04	20.82	5.97	1604.60	0.81	20.80	0.43	370.98
Last 5	09:10:01	900.04	20.86	5.96	1608.43	0.79	20.80	0.38	522.45
Last 5	09:15:01	1200.04	20.87	5.97	1604.44	0.89	20.80	0.36	568.14
Last 5	09:20:02	1501.04	20.88	5.96	1611.99	0.89	20.80	0.34	565.39
Last 5	09:25:02	1801.04	21.11	5.96	1604.56	0.85	20.80	0.33	567.07
Variance 0			0.01	0.01	-3.99			-0.02	45.68
Variance 1			0.01	-0.01	7.55			-0.02	-2.75
Variance 2			0.22	-0.00	-7.43			-0.01	1.68

Notes

Started purging at 0855

Stopped purging and began sampling at 0925

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 11:07:57

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	28 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	DGWC-5	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.2149758 L
Well Total Depth	33.25 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.64 in
Depth to Water	7.43 ft	Total Volume Pumped	4.9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:45:18	900.04	22.94	4.42	528.04	1.14	7.65	2.89	622.01
Last 5	10:50:18	1200.03	23.08	4.42	529.74	1.21	7.65	2.92	609.37
Last 5	10:55:18	1500.03	22.89	4.76	790.36	0.91	7.65	1.20	589.16
Last 5	11:00:18	1800.06	22.76	4.76	798.07	0.86	7.65	1.11	581.47
Last 5	11:05:18	2100.03	23.11	4.77	799.28	0.79	7.65	1.05	576.31
Variance 0			-0.19	0.35	260.62			-1.72	-20.21
Variance 1			-0.13	-0.00	7.71			-0.10	-7.69
Variance 2			0.35	0.00	1.20			-0.05	-5.16

Notes

Started purging at 1030

Stopped purging and began sampling @ 1105

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 12:51:05

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	43 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	DGWC-10	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2819272 L
Well Total Depth	47.80 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.64 in
Depth to Water	27.56 ft	Total Volume Pumped	12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:29:08	6002.61	23.88	5.28	667.42	9.83	27.78	0.77	103.36
Last 5	12:34:08	6302.61	23.83	5.28	666.20	9.76	27.78	0.75	103.50
Last 5	12:39:08	6602.61	23.88	5.28	667.83	9.55	27.78	0.74	103.59
Last 5	12:44:08	6902.61	23.91	5.28	666.67	9.47	27.78	0.71	103.90
Last 5	12:49:08	7202.61	24.10	5.27	669.83	8.88	27.78	0.70	104.07
Variance 0			0.05	-0.00	1.64			-0.01	0.09
Variance 1			0.03	-0.00	-1.16			-0.03	0.31
Variance 2			0.19	-0.01	3.16			-0.01	0.17

Notes

Sampled above 5 NTU after 2 hours per Pete Robinson

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 15:02:11

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	47 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	47 ft

Well Information:		Pumping Information:	
Well ID	DGWC-11	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.2997809 L
Well Total Depth	51.72 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	5.64 in
Depth to Water	11.14 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:39:25	300.11	26.06	5.67	523.68	1.55	11.51	1.78	79.80
Last 5	14:44:25	600.10	24.19	5.63	542.05	3.53	11.61	0.45	86.79
Last 5	14:49:25	900.10	23.92	5.63	547.11	3.76	11.61	0.33	90.14
Last 5	14:54:25	1200.10	23.61	5.63	547.83	4.34	11.61	0.27	92.22
Last 5	14:59:25	1500.10	24.90	5.62	547.52	4.49	11.61	0.24	93.31
Variance 0			-0.27	-0.01	5.06			-0.11	3.35
Variance 1			-0.31	-0.00	0.72			-0.06	2.08
Variance 2			1.29	-0.00	-0.30			-0.03	1.09

Notes

Sampled at 1500

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 17:15:40

Project Information:		Pump Information:	
Operator Name	B. Hodges	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	23 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	23 ft

Well Information:		Pumping Information:	
Well ID	DGWC-12	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.1926587 L
Well Total Depth	28.24 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.8 in
Depth to Water	8.50 ft	Total Volume Pumped	18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	17:02:58	300.01	23.69	5.65	718.77	4.87	8.66	0.12	172.60
Last 5	17:07:58	600.01	23.82	5.65	718.52	3.68	8.66	0.12	179.07
Last 5	17:12:58	900.00	23.83	5.65	718.07	4.57	8.66	0.12	185.00
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.12	0.01	-0.26			-0.00	6.47
Variance 2			0.01	0.00	-0.45			0.00	5.92

Notes

Sampled at 1715 after consulting with Pete Robinson. SmartTroll overheated and Turbidity meter required recalibration due to heat.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 15:01:43

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	42 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	42 ft

Well Information:		Pumping Information:	
Well ID	DGWC-13	Final Pumping Rate	175 mL/min
Well diameter	2 in	Total System Volume	0.4024638 L
Well Total Depth	46.66 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.92 in
Depth to Water	33.55 ft	Total Volume Pumped	3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:45:00	300.05	21.70	5.91	427.98	7.61	33.71	3.50	120.54
Last 5	14:50:00	600.03	20.90	5.93	429.46	4.82	33.71	3.35	119.37
Last 5	14:55:00	900.03	20.83	5.93	430.88	4.85	33.71	3.26	119.02
Last 5	15:00:03	1203.03	21.32	5.92	433.29	4.61	33.71	3.21	118.57
Last 5									
Variance 0			-0.81	0.02	1.47			-0.15	-1.17
Variance 1			-0.07	0.00	1.42			-0.09	-0.35
Variance 2			0.49	-0.01	2.41			-0.05	-0.45

Notes

Sampled DGWC-13 at 1500

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 09:37:04

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	33 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	33 ft

Well Information:		Pumping Information:	
Well ID	DGWC-14	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.237293 L
Well Total Depth	37.95 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.84 in
Depth to Water	20.70 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	09:15:20	300.05	22.76	5.63	135.31	0.79	20.77	4.59	78.14
Last 5	09:20:20	600.04	22.74	5.60	134.55	0.83	20.77	4.56	80.30
Last 5	09:25:20	900.04	22.81	5.60	133.71	0.80	20.77	4.57	84.06
Last 5	09:30:20	1200.04	23.01	5.60	133.40	0.75	20.77	4.56	88.69
Last 5	09:35:20	1500.04	23.07	5.61	132.30	0.79	20.77	4.53	95.57
Variance 0			0.07	-0.00	-0.85			0.01	3.76
Variance 1			0.20	0.00	-0.31			-0.01	4.63
Variance 2			0.07	0.00	-1.11			-0.03	6.88

Notes

Started purging at 0910

Stopped purging and began sampling at 0935

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 11:46:52

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	66 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	66 ft

Well Information:		Pumping Information:	
Well ID	DGWC-15	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5095859 L
Well Total Depth	70.83 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	21.72 in
Depth to Water	38.74 ft	Total Volume Pumped	11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	11:35:01	300.04	22.48	5.86	442.27	2.05	40.55	0.11	110.21
Last 5	11:40:01	600.03	22.13	5.86	442.68	1.68	40.55	0.11	109.37
Last 5	11:45:01	900.01	22.03	5.87	442.53	1.51	40.55	0.10	108.39
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.35	0.00	0.41			-0.01	-0.84
Variance 2			-0.10	0.01	-0.15			-0.01	-0.98

Notes

Had to redo low flow due to drawdown not within criteria (> 0.3′). FINAL field parameters in this file. Sampled DGWC-15 at 1145

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 11:21:55

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	43 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	DGWC-17	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.2819272 L
Well Total Depth	47.95 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.8 in
Depth to Water	28.85 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	11:00:03	300.04	22.56	5.04	542.41	0.87	29.00	0.47	117.39
Last 5	11:05:03	600.04	21.91	5.03	543.16	0.88	29.00	0.35	130.00
Last 5	11:10:03	900.04	22.35	5.05	543.54	0.79	29.00	0.28	140.51
Last 5	11:15:04	1201.04	22.76	5.06	543.28	0.83	29.00	0.25	153.92
Last 5	11:20:04	1501.04	22.31	5.07	541.76	0.78	29.00	0.25	174.32
Variance 0			0.44	0.02	0.38			-0.06	10.51
Variance 1			0.41	0.01	-0.26			-0.03	13.41
Variance 2			-0.45	0.00	-1.52			-0.01	20.40

Notes

Started purging at 1055

Stopped purging and began sampling at 1120

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 13:53:41

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	38 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	DGWC-19	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.2596101 L
Well Total Depth	43.25 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.8 in
Depth to Water	20.80 ft	Total Volume Pumped	4.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	13:30:37	900.04	23.15	4.71	644.23	0.87	20.95	1.13	430.35
Last 5	13:35:37	1200.04	23.09	4.72	637.02	0.84	20.95	0.57	453.24
Last 5	13:40:37	1500.05	22.87	4.72	634.96	0.83	20.95	0.41	464.98
Last 5	13:45:37	1800.05	22.80	4.71	635.18	0.80	20.95	0.34	473.25
Last 5	13:50:37	2100.05	22.84	4.71	637.28	0.77	20.95	0.31	479.57
Variance 0			-0.22	-0.00	-2.06			-0.16	11.74
Variance 1			-0.08	-0.00	0.22			-0.08	8.27
Variance 2			0.04	-0.00	2.10			-0.03	6.32

Notes

Started purging at 1315

Stopped purging and began sampling at 1350

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 15:13:30

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	38 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	DGWC-20	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.2596101 L
Well Total Depth	43.30 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	12.36 in
Depth to Water	21.17 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:50:49	300.04	24.74	4.66	1016.65	4.25	22.05	0.67	499.47
Last 5	14:55:49	600.04	24.65	4.65	1016.36	2.39	22.19	0.81	495.84
Last 5	15:00:49	900.04	24.67	4.67	1009.72	2.56	22.20	0.87	488.97
Last 5	15:05:49	1200.05	24.42	4.68	998.64	1.23	22.20	0.78	480.86
Last 5	15:10:49	1500.05	24.60	4.68	1003.94	1.28	22.20	0.60	473.35
Variance 0			0.02	0.01	-6.64			0.06	-6.87
Variance 1			-0.25	0.01	-11.08			-0.09	-8.11
Variance 2			0.18	0.00	5.30			-0.18	-7.51

Notes

Started purging at 1445

Stopped purging and began sampling at 1510

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 15:16:49

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	68 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	68 ft

Well Information:		Pumping Information:	
Well ID	DGWC-21	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3935128 L
Well Total Depth	72.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.84 in
Depth to Water	17.29 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:55:22	300.04	27.65	5.64	630.77	3.04	17.58	0.68	138.04
Last 5	15:05:22	900.03	25.00	5.70	647.70	6.81	17.61	0.26	137.24
Last 5	15:10:23	1201.02	25.17	5.70	647.92	7.38	17.61	0.24	137.02
Last 5	15:15:24	1502.01	24.90	5.71	640.12	4.96	17.61	0.23	136.77
Last 5									
Variance 0			-2.65	0.06	16.94			-0.42	-0.80
Variance 1			0.17	-0.00	0.21			-0.02	-0.21
Variance 2			-0.26	0.00	-7.80			-0.01	-0.25

Notes

Sampled DGWC-21 at 1515

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-12 08:41:29

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	58 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWC-22	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.3488785 L
Well Total Depth	63.45 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.8 in
Depth to Water	17.05 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	08:18:39	300.12	22.49	5.71	649.22	1.31	17.20	0.54	87.04
Last 5	08:23:39	600.04	22.47	5.63	654.52	1.18	17.20	0.36	88.13
Last 5	08:28:39	900.03	22.27	5.62	655.83	1.03	17.20	0.30	90.93
Last 5	08:33:39	1200.03	22.42	5.61	657.51	0.95	17.20	0.27	94.31
Last 5	08:38:39	1500.03	22.45	5.62	653.52	0.90	17.20	0.25	98.11
Variance 0			-0.20	-0.01	1.31			-0.06	2.80
Variance 1			0.15	-0.01	1.68			-0.03	3.38
Variance 2			0.03	0.01	-3.99			-0.02	3.80

Notes

Started purging at 0813

Stopped purging and began sampling at 0840

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-12 10:14:09

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	58 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWC-23	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3488785 L
Well Total Depth	63.20 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	25.2 in
Depth to Water	17.20 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	09:56:31	300.10	22.67	5.95	584.61	0.83	18.30	0.53	124.80
Last 5	10:01:31	600.04	21.93	5.95	588.68	0.85	18.85	0.43	138.19
Last 5	10:06:31	900.03	21.64	5.96	583.62	0.78	19.20	0.35	150.87
Last 5	10:11:32	1201.03	21.73	5.97	582.89	0.81	19.30	0.31	163.44
Last 5									
Variance 0			-0.74	0.00	4.07			-0.10	13.39
Variance 1			-0.29	0.01	-5.06			-0.08	12.68
Variance 2			0.09	0.01	-0.73			-0.04	12.58

Notes

Started purging at 0951

Stopped purging and began sampling at 1015

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 13:46:23

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	48 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	48 ft

Well Information:		Pumping Information:	
Well ID	DGWC-42	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4292443 L
Well Total Depth	52.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	14.28 in
Depth to Water	30.91 ft	Total Volume Pumped	9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	13:24:41	1509.00	22.47	5.24	804.61	4.50	32.03	1.03	128.16
Last 5	13:29:41	1809.00	22.17	5.21	803.88	4.04	32.05	0.81	127.15
Last 5	13:34:44	2111.99	22.21	5.20	801.09	3.77	32.05	0.67	126.59
Last 5	13:39:45	2412.98	21.87	5.19	803.83	2.91	32.10	0.56	125.83
Last 5	13:44:49	2716.97	22.40	5.19	803.52	3.13	32.10	0.49	124.86
Variance 0			0.04	-0.01	-2.79			-0.14	-0.56
Variance 1			-0.33	-0.01	2.74			-0.11	-0.76
Variance 2			0.52	0.00	-0.31			-0.07	-0.97

Notes

Sampled DGWC-42 at 1345

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-12 08:48:50

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	27 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	27 ft

Well Information:		Pumping Information:	
Well ID	DGWC-47	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2105124 L
Well Total Depth	31.93 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	23.28 in
Depth to Water	16.91 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	08:27:02	600.03	23.36	4.31	518.95	1.12	17.99	0.58	112.42
Last 5	08:32:02	900.03	23.23	4.33	513.74	1.03	18.40	0.42	111.42
Last 5	08:37:02	1200.02	23.35	4.35	511.79	0.86	18.58	0.35	110.67
Last 5	08:42:02	1500.02	23.56	4.35	511.40	0.74	18.78	0.32	111.29
Last 5	08:47:07	1805.01	23.88	4.33	511.09	0.65	18.85	0.29	108.09
Variance 0			0.12	0.01	-1.95			-0.07	-0.74
Variance 1			0.21	-0.00	-0.39			-0.03	0.61
Variance 2			0.33	-0.02	-0.31			-0.03	-3.20

Notes

Sampled DGWC-47 at 0845

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-12 10:55:45

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.17 in
Site Name	Plant McDonough	Tubing Length	28 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	497259		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	DGWC-48	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2149758 L
Well Total Depth	33.49 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	7.2 in
Depth to Water	15.53 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:34:01	600.03	25.24	4.40	878.84	2.71	16.09	0.45	134.10
Last 5	10:39:02	901.02	25.28	4.41	878.19	1.10	16.11	0.37	133.62
Last 5	10:44:06	1205.03	25.23	4.39	872.46	2.50	16.13	0.30	133.18
Last 5	10:49:06	1505.00	25.06	4.38	871.83	1.95	16.13	0.28	133.10
Last 5	10:54:06	1805.01	25.22	4.36	866.05	1.73	16.13	0.25	132.47
Variance 0			-0.05	-0.02	-5.73			-0.07	-0.44
Variance 1			-0.17	-0.02	-0.63			-0.03	-0.09
Variance 2			0.16	-0.01	-5.78			-0.03	-0.63

Notes

Sampled DGWC-48 at 1055

Grab Samples

FIELD DATA FORMS

November 2018

Product Name: Low-Flow System

Date: 2018-11-06 15:07:58

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	47 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	47 ft

Well Information:		Pumping Information:	
Well ID	DGWC-2	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4247809 L
Well Total Depth	52.42 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.96 in
Depth to Water	31.85 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:55:23	300.09	20.12	5.89	465.83	6.25	32.15	0.61	73.23
Last 5	15:00:24	600.95	19.52	5.88	471.82	2.82	32.18	0.28	74.07
Last 5	15:05:24	900.95	19.50	5.88	472.48	3.22	32.18	0.28	74.63
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.60	-0.01	5.98			-0.33	0.84
Variance 2			-0.02	-0.00	0.66			-0.00	0.57

Notes

Sampled DGWC-2 at 1505

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-06 15:27:26

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.170 in
Site Name	McDonough	Tubing Length	46 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte	Pump placement from TOC	46 ft

Well Information:		Pumping Information:	
Well ID	DGWC-8	Final Pumping Rate	125 mL/min
Well diameter	2 in	Total System Volume	0.2953174 L
Well Total Depth	51.33 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.6 in
Depth to Water	31.35 ft	Total Volume Pumped	4.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:04:05	600.02	20.84	5.17	588.21	10.80	31.39	0.59	239.82
Last 5	15:09:05	900.01	20.86	5.15	584.84	9.29	31.40	0.51	249.58
Last 5	15:14:05	1200.00	20.77	5.15	588.79	7.83	31.40	0.42	226.01
Last 5	15:19:05	1499.99	20.83	5.14	593.19	5.67	31.40	0.56	207.26
Last 5	15:24:05	1799.98	20.23	5.13	599.61	2.45	31.40	0.56	191.19
Variance 0			-0.09	-0.01	3.95			-0.09	-23.57
Variance 1			0.06	-0.01	4.40			0.13	-18.75
Variance 2			-0.59	-0.00	6.42			0.00	-16.07

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-06 11:02:27

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.170 in
Site Name	Default Site	Tubing Length	29 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	597519		
Turbidity Make/Model		Pump placement from TOC	29 ft

Well Information:		Pumping Information:	
Well ID	DGWC-9	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.2194393 L
Well Total Depth	33.72 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	24.80 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:37:07	300.10	19.26	4.00	715.17	1.68	25.10	0.37	128.07
Last 5	10:42:07	600.03	19.19	4.00	715.43	1.25	25.10	0.30	124.32
Last 5	10:47:07	900.03	19.15	4.00	713.81	1.47	25.10	0.26	122.10
Last 5	10:52:09	1202.03	19.06	4.00	713.49	1.72	25.10	0.28	120.56
Last 5	10:57:09	1502.02	19.06	4.00	712.92	1.80	25.10	0.26	119.40
Variance 0			-0.05	-0.00	-1.63			-0.04	-2.22
Variance 1			-0.08	-0.00	-0.32			0.01	-1.54
Variance 2			-0.00	0.00	-0.57			-0.02	-1.17

Notes

Started purging at 1032

Stopped purging and began sampling at 1100

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-07 08:51:53

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	30 ft

Well Information:		Pumping Information:	
Well ID	DGWA-53	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2239027 L
Well Total Depth	35.78 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	35.28 in
Depth to Water	14.91 ft	Total Volume Pumped	3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	08:29:23	1200.02	17.21	6.18	353.43	13.53	17.29	0.27	39.02
Last 5	08:34:25	1502.02	17.63	6.19	351.10	15.68	17.49	0.29	35.42
Last 5	08:39:25	1802.02	17.78	6.21	340.64	15.40	17.73	0.50	33.42
Last 5	08:44:25	2102.02	17.73	6.22	333.10	15.70	18.02	0.59	32.04
Last 5	08:49:25	2402.02	17.81	6.22	334.24	17.90	18.15	0.61	30.57
Variance 0			0.16	0.02	-10.46			0.21	-2.00
Variance 1			-0.06	0.01	-7.54			0.09	-1.37
Variance 2			0.08	0.00	1.14			0.02	-1.47

Notes

Sampled DGWA-53 at 0850. Final readings. Sampled for dissolved metals per Joju Abraham.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-06 12:33:10

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	57 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	57 ft

Well Information:		Pumping Information:	
Well ID	DGWA-70A	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4694151 L
Well Total Depth	62.54 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	8.4 in
Depth to Water	40.89 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:15:12	300.95	17.99	5.96	67.11	10.03	41.45	4.78	16.62
Last 5	12:20:12	600.94	17.67	5.80	67.31	5.25	41.48	4.71	27.32
Last 5	12:25:12	900.94	17.59	5.75	67.09	4.49	41.57	4.55	33.02
Last 5	12:30:12	1200.94	17.53	5.71	67.17	3.17	41.59	4.40	38.78
Last 5									
Variance 0			-0.32	-0.16	0.20			-0.07	10.69
Variance 1			-0.08	-0.05	-0.22			-0.16	5.70
Variance 2			-0.06	-0.03	0.08			-0.14	5.76

Notes

Sampled DGWA-70A at 1230

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-06 13:48:00

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	43 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	DGWA-71	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4069272 L
Well Total Depth	47.79 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.32 in
Depth to Water	29.17 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:31:16	300.02	18.57	5.83	78.25	8.28	29.51	0.84	42.62
Last 5	13:36:16	600.02	18.35	5.81	78.21	5.30	29.53	0.63	38.17
Last 5	13:41:16	900.02	18.38	5.79	78.48	3.03	29.53	0.55	37.25
Last 5	13:46:17	1201.02	18.44	5.79	78.77	2.38	29.53	0.59	36.17
Last 5									
Variance 0			-0.23	-0.02	-0.04			-0.22	-4.45
Variance 1			0.03	-0.02	0.27			-0.08	-0.92
Variance 2			0.06	-0.01	0.30			0.05	-1.07

Notes

Sampled DGWA-71 at 1345

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-06 11:21:41

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.170 in
Site Name	McDonough	Tubing Length	41 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	DGWC-4	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.2730004 L
Well Total Depth	46.71 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.8 in
Depth to Water	21.81 ft	Total Volume Pumped	4.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:56:07	1200.00	18.61	6.06	1562.14	3.76	21.96	3.12	102.31
Last 5	11:01:07	1499.99	18.60	6.05	1573.02	3.55	21.95	3.00	104.53
Last 5	11:06:07	1799.98	18.57	6.01	1598.41	2.56	21.95	2.53	106.86
Last 5	11:11:07	2099.98	18.52	5.99	1613.97	3.50	21.96	2.50	108.94
Last 5	11:16:07	2399.96	18.59	5.97	1630.71	1.22	21.95	2.33	111.03
Variance 0			-0.03	-0.04	25.39			-0.47	2.33
Variance 1			-0.04	-0.02	15.56			-0.02	2.08
Variance 2			0.06	-0.02	16.74			-0.17	2.09

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-06 13:01:24

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.170 in
Site Name	McDonough	Tubing Length	28 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	DGWC-5	Final Pumping Rate	125 mL/min
Well diameter	2 in	Total System Volume	0.2149758 L
Well Total Depth	33.25 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.92 in
Depth to Water	7.78 ft	Total Volume Pumped	3.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:38:04	300.04	20.83	4.92	970.79	2.04	7.94	0.24	114.10
Last 5	12:43:04	600.02	20.70	4.89	967.50	1.81	7.95	0.22	226.49
Last 5	12:48:04	900.02	20.62	4.89	966.55	2.03	7.94	0.21	360.34
Last 5	12:53:04	1200.00	20.57	4.89	965.02	1.67	7.94	0.20	434.16
Last 5	12:58:04	1500.00	20.53	4.89	966.05	1.84	7.94	0.19	471.96
Variance 0			-0.08	-0.00	-0.95			-0.01	133.85
Variance 1			-0.05	-0.00	-1.53			-0.02	73.81
Variance 2			-0.04	0.00	1.03			-0.00	37.81

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-06 12:53:57

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.170 in
Site Name	Default Site	Tubing Length	43 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	597519		
Turbidity Make/Model		Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	DGWC-10	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2819272 L
Well Total Depth	47.80 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.2 in
Depth to Water	28.90 ft	Total Volume Pumped	3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:36:04	600.04	19.50	5.33	669.10	29.25	1.62	2.59	109.76
Last 5	12:41:04	900.03	19.42	5.33	671.36	29.25	1.69	2.55	108.35
Last 5	12:46:04	1200.03	19.36	5.32	673.79	29.25	1.59	2.45	107.21
Last 5	12:51:04	1500.03	19.33	5.30	679.57	29.25	1.52	2.37	106.48
Last 5									
Variance 0			-0.09	-0.00	2.26			-0.04	-1.41
Variance 1			-0.05	-0.01	2.42			-0.10	-1.14
Variance 2			-0.04	-0.02	5.78			-0.08	-0.73

Notes

Began purging at 1226

First reading not recorded and stopped purging and began sampling at 1255.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-06 14:19:13

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.170 in
Site Name	McDonough	Tubing Length	47 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	597519		
Turbidity Make/Model		Pump placement from TOC	47 ft

Well Information:		Pumping Information:	
Well ID	DGWC-11	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2997809 L
Well Total Depth	51.72 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6 in
Depth to Water	12.25 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:01:45	300.04	20.48	5.70	589.91	2.55	12.70	0.50	101.51
Last 5	14:06:45	600.04	20.26	5.70	592.55	1.69	12.75	0.35	99.69
Last 5	14:11:45	900.02	20.26	5.69	593.27	1.67	12.75	0.28	98.20
Last 5	14:16:45	1200.03	20.19	5.69	593.25	1.60	12.75	0.25	96.77
Last 5 Variance 0			-0.23	-0.01	2.64			-0.15	-1.82
Variance 1			0.00	-0.00	0.72			-0.07	-1.49
Variance 2			-0.07	-0.00	-0.02			-0.03	-1.43

Notes

Started purging at 1356

Stopped purging and began sampling at 1420

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-07 09:25:41

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.170 in
Site Name	Default Site	Tubing Length	23 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	597519		
Turbidity Make/Model		Pump placement from TOC	23 ft

Well Information:		Pumping Information:	
Well ID	DGWC-12	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.1926587 L
Well Total Depth	28.24 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.8 in
Depth to Water	8.60 ft	Total Volume Pumped	10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:02:14	1800.02	17.24	5.66	746.65	13.13	8.75	0.21	107.83
Last 5	09:07:14	2100.02	17.22	5.79	704.90	11.75	8.75	0.21	95.47
Last 5	09:12:14	2400.02	17.31	5.87	668.19	8.89	8.75	0.20	86.40
Last 5	09:17:14	2700.02	17.36	5.86	680.98	6.77	8.75	0.20	84.44
Last 5	09:22:14	3000.05	17.43	5.85	684.09	4.82	8.75	0.20	83.58
Variance 0			0.09	0.08	-36.72			-0.00	-9.07
Variance 1			0.05	-0.00	12.80			-0.00	-1.96
Variance 2			0.06	-0.02	3.10			-0.01	-0.86

Notes

Began purging at 0832

Stopped purging and began sampling at 0925

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-07 10:44:12

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	41 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	DGWC-13	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3980004 L
Well Total Depth	46.66 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.16 in
Depth to Water	34.24 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:26:52	300.12	20.21	6.19	458.03	3.84	34.41	3.80	44.10
Last 5	10:31:53	600.62	18.43	5.92	467.67	1.36	34.41	3.28	47.69
Last 5	10:36:53	900.62	18.31	5.88	468.09	2.58	34.42	3.25	51.41
Last 5	10:41:53	1200.62	18.30	5.87	468.30	1.09	34.42	3.23	55.06
Last 5 Variance 0			-1.78	-0.27	9.63			-0.52	3.59
Variance 1			-0.12	-0.03	0.42			-0.03	3.72
Variance 2			-0.02	-0.02	0.20			-0.02	3.65

Notes

Sampled DGWC-13 at 1040

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-07 08:36:07

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.170 in
Site Name	McDonough	Tubing Length	33 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte	Pump placement from TOC	33 ft

Well Information:		Pumping Information:	
Well ID	DGWC-14	Final Pumping Rate	125 mL/min
Well diameter	2 in	Total System Volume	0.237293 L
Well Total Depth	37.95 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.92 in
Depth to Water	20.94 ft	Total Volume Pumped	4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	08:12:09	300.04	17.72	6.09	178.05	3.49	21.00	2.22	94.44
Last 5	08:17:09	600.02	17.86	5.75	156.63	1.76	21.05	3.54	93.82
Last 5	08:22:09	900.01	17.89	5.63	145.20	0.62	21.10	4.10	92.50
Last 5	08:27:09	1200.00	18.05	5.60	141.49	0.36	21.00	4.26	91.05
Last 5	08:32:09	1499.99	18.19	5.58	141.23	0.33	21.00	4.30	89.66
Variance 0			0.04	-0.12	-11.43			0.56	-1.32
Variance 1			0.15	-0.03	-3.71			0.15	-1.45
Variance 2			0.14	-0.02	-0.26			0.04	-1.39

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-07 11:42:37

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	65 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	65 ft

Well Information:		Pumping Information:	
Well ID	DGWC-15	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5051225 L
Well Total Depth	70.83 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	20.52 in
Depth to Water	39.16 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:20:05	300.09	21.24	6.02	467.54	12.90	40.02	1.30	50.50
Last 5	11:25:05	600.02	20.30	5.91	471.07	5.88	40.43	0.30	53.75
Last 5	11:30:05	900.02	20.06	5.88	471.15	3.72	40.69	0.21	56.28
Last 5	11:35:05	1200.02	20.09	5.88	470.65	2.55	40.81	0.15	58.72
Last 5	11:40:05	1500.02	20.04	5.90	471.08	1.72	40.87	0.12	60.77
Variance 0			-0.24	-0.03	0.08			-0.08	2.53
Variance 1			0.02	0.00	-0.50			-0.06	2.44
Variance 2			-0.05	0.01	0.43			-0.03	2.05

Notes

Sampled DGWC-15 at 1140

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-07 11:24:57

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.170 in
Site Name	McDonough	Tubing Length	43 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	597519		
Turbidity Make/Model		Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	DGWC-17	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.2819272 L
Well Total Depth	47.95 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.04 in
Depth to Water	29.53 ft	Total Volume Pumped	4.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:01:49	900.03	21.15	5.08	574.02	4.45	29.70	0.54	97.47
Last 5	11:06:49	1200.03	21.38	5.08	573.34	3.04	29.70	0.73	98.96
Last 5	11:11:50	1501.03	21.38	5.08	572.84	2.25	29.70	0.74	99.73
Last 5	11:16:50	1801.02	21.29	5.08	573.85	1.79	29.70	0.53	100.33
Last 5	11:21:50	2101.02	22.31	5.09	581.38	0.00	--	0.77	99.63
Variance 0			0.00	0.00	-0.50			0.01	0.77
Variance 1			-0.09	-0.00	1.00			-0.21	0.59
Variance 2			1.03	0.01	7.53			0.23	-0.70

Notes

Started purging at 1046

Stopped purging and began sampling @ 1125.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-07 09:49:40

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.170 in
Site Name	McDonough	Tubing Length	38 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	DGWC-19	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2596101 L
Well Total Depth	43.25 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.04 in
Depth to Water	21.42 ft	Total Volume Pumped	4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:27:58	300.03	19.15	4.61	664.16	3.56	21.57	0.31	231.36
Last 5	09:32:58	600.02	19.24	4.67	661.26	18.30	21.55	0.22	231.00
Last 5	09:37:58	900.01	19.37	4.71	651.34	3.59	21.55	0.21	261.98
Last 5	09:42:58	1200.00	19.52	4.70	640.81	5.99	21.56	0.19	295.19
Last 5	09:47:58	1499.98	19.52	4.69	648.16	4.57	21.56	0.17	312.45
Variance 0			0.12	0.04	-9.92			-0.02	30.98
Variance 1			0.16	-0.01	-10.53			-0.01	33.21
Variance 2			-0.01	-0.01	7.35			-0.02	17.26

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-07 10:59:50

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.170 in
Site Name	McDonough	Tubing Length	38 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	DGWC-20	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.2596101 L
Well Total Depth	43.30 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6.1 in
Depth to Water	22.02 ft	Total Volume Pumped	3.7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:34:58	300.03	20.08	4.67	1222.86	34.40	22.42	0.48	162.52
Last 5	10:39:58	600.02	20.13	4.64	1079.40	9.24	22.51	0.30	160.75
Last 5	10:44:58	900.01	20.32	4.64	1043.66	6.72	22.54	0.26	159.46
Last 5	10:49:58	1200.01	19.86	4.64	1024.69	9.15	22.57	0.23	155.09
Last 5	10:54:58	1499.99	20.03	4.64	1008.42	4.08	22.56	0.22	149.38
Variance 0			0.19	-0.01	-35.75			-0.04	-1.29
Variance 1			-0.46	0.00	-18.97			-0.03	-4.37
Variance 2			0.17	-0.00	-16.27			-0.01	-5.71

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-07 12:25:40

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.170 in
Site Name	McDonough	Tubing Length	68 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte	Pump placement from TOC	68 ft

Well Information:		Pumping Information:	
Well ID	DGWC-21	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.3935128 L
Well Total Depth	72.60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.12 in
Depth to Water	17.85 ft	Total Volume Pumped	4.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:03:58	300.05	21.73	5.63	668.15	1.27	18.08	0.45	157.11
Last 5	12:08:58	600.02	21.29	5.62	671.19	1.61	18.10	0.32	212.96
Last 5	12:13:58	900.01	21.33	5.61	666.54	0.76	18.10	0.27	283.39
Last 5	12:18:58	1200.00	20.85	5.61	667.63	0.97	18.10	0.22	325.80
Last 5	12:23:58	1500.00	21.51	5.61	665.92	2.19	18.11	0.19	378.99
Variance 0			0.04	-0.01	-4.65			-0.05	70.43
Variance 1			-0.48	-0.00	1.09			-0.05	42.42
Variance 2			0.66	-0.00	-1.71			-0.03	53.18

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-07 13:51:36

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.170 in
Site Name	Default Site	Tubing Length	58 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	597519		
Turbidity Make/Model		Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWC-22	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.3488785 L
Well Total Depth	45.05 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.48 in
Depth to Water	18.40 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:28:47	300.04	21.58	5.74	673.07	1.68	18.64	0.49	134.20
Last 5	13:33:47	600.03	21.25	5.73	673.71	1.68	18.65	0.52	134.30
Last 5	13:38:47	900.03	21.15	5.71	673.31	1.60	18.67	0.55	132.81
Last 5	13:43:47	1200.03	20.96	5.71	673.16	1.57	18.68	0.52	133.87
Last 5	13:48:47	1500.03	20.93	5.71	672.72	1.50	18.69	0.55	135.38
Variance 0			-0.10	-0.02	-0.40			0.03	-1.49
Variance 1			-0.19	-0.01	-0.15			-0.03	1.06
Variance 2			-0.03	0.00	-0.44			0.03	1.51

Notes

Began purging at 1323

Stopped purging and began sampling at 1350

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-08 08:10:53

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.170 in
Site Name	Default Site	Tubing Length	58 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	597519		
Turbidity Make/Model		Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWC-23	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.3488785 L
Well Total Depth	63.20 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	26.28 in
Depth to Water	17.15 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	07:51:17	300.04	17.35	5.95	615.99	1.54	18.56	0.38	222.82
Last 5	07:56:17	600.04	17.37	5.95	615.07	1.55	18.88	0.31	284.06
Last 5	08:01:17	900.03	17.36	5.96	613.50	1.50	19.09	0.27	303.33
Last 5	08:06:18	1201.03	17.32	5.96	612.93	1.39	19.34	0.25	322.16
Last 5 Variance 0			0.01	-0.00	-0.92			-0.08	61.24
Variance 1			-0.01	0.01	-1.57			-0.03	19.27
Variance 2			-0.04	0.00	-0.57			-0.02	18.84

Notes

Started purging at 0746

Stopped purging and began sampling at 0810

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-07 12:46:52

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	SamplePro
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	47 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	47 ft

Well Information:		Pumping Information:	
Well ID	DGWC-42	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4247809 L
Well Total Depth	52.70 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	13.32 in
Depth to Water	31.43 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:25:29	300.03	21.26	5.31	857.94	14.30	32.33	0.47	79.78
Last 5	12:30:29	600.16	20.72	5.26	860.87	11.60	32.45	0.29	84.36
Last 5	12:35:29	900.16	20.67	5.23	863.30	10.06	32.51	0.24	86.59
Last 5	12:40:29	1200.15	20.48	5.21	863.37	5.54	32.53	0.19	87.47
Last 5	12:45:29	1500.15	20.26	5.18	864.72	3.77	32.54	0.15	87.76
Variance 0			-0.06	-0.03	2.43			-0.05	2.23
Variance 1			-0.19	-0.02	0.07			-0.05	0.89
Variance 2			-0.22	-0.03	1.35			-0.04	0.29

Notes

Sampled DGWC-42 at 1245

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-07 14:36:44

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder Associates	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	27 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte	Pump placement from TOC	27 ft

Well Information:		Pumping Information:	
Well ID	DGWC-47	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2105124 L
Well Total Depth	31.93 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	19.32 in
Depth to Water	19.11 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:14:57	600.02	22.35	4.49	507.07	2.59	19.97	0.46	77.90
Last 5	14:19:57	900.02	22.00	4.51	507.87	3.01	20.30	0.37	79.69
Last 5	14:24:58	1201.02	21.49	4.50	506.84	3.79	20.52	0.32	81.28
Last 5	14:29:58	1501.02	21.37	4.49	508.75	4.41	20.68	0.28	82.11
Last 5	14:34:58	1801.02	21.31	4.48	508.82	4.39	20.72	0.28	82.90
Variance 0			-0.51	-0.01	-1.03			-0.05	1.59
Variance 1			-0.12	-0.01	1.91			-0.03	0.83
Variance 2			-0.07	-0.01	0.06			-0.01	0.80

Notes

Sampled DGWC-47 at 1435

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-07 14:33:16

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	.170 in
Site Name	McDonough	Tubing Length	28 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	DGWC-48	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2149758 L
Well Total Depth	33.49 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	7.56 in
Depth to Water	16.60 ft	Total Volume Pumped	4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:10:18	300.04	21.18	4.34	870.40	2.25	17.05	0.39	235.79
Last 5	14:15:18	600.02	20.71	4.33	878.37	3.04	17.22	0.25	242.54
Last 5	14:20:18	900.01	20.69	4.28	871.26	4.87	17.24	0.24	247.32
Last 5	14:25:18	1200.00	20.44	4.27	866.95	4.93	17.23	0.21	247.00
Last 5	14:30:18	1500.00	20.35	4.23	860.03	4.56	17.23	0.22	246.60
Variance 0			-0.02	-0.05	-7.12			-0.01	4.78
Variance 1			-0.25	-0.01	-4.31			-0.02	-0.32
Variance 2			-0.09	-0.04	-6.92			0.00	-0.40

Notes

Grab Samples

FIELD DATA FORMS

March 2019

Product Name: Low-Flow System

Date: 2019-03-12 15:57:52

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	SamplePro
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	47 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte	Pump placement from TOC	47 ft

Well Information:		Pumping Information:	
Well ID	DGWC-2	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4247809 L
Well Total Depth	53.42 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.8 in
Depth to Water	28.76 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:45:02	300.03	19.79	5.90	427.46	3.98	29.11	0.22	114.86
Last 5	15:50:02	600.02	19.62	5.92	426.26	2.35	29.16	0.16	108.55
Last 5	15:55:02	900.02	19.58	5.94	427.70	1.57	29.16	0.13	104.97
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.17	0.03	-1.20			-0.05	-6.31
Variance 2			-0.04	0.02	1.44			-0.03	-3.58

Notes

Started purging at 1540

Stopped purging and began sampling @ 1555

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-12 14:28:35

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	46 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	613229		
Turbidity Make/Model	LaMotte	Pump placement from TOC	46 ft

Well Information:		Pumping Information:	
Well ID	DGWC-8	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2953174 L
Well Total Depth	51.30 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.5 in
Depth to Water	28.18 ft	Total Volume Pumped	6.0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:04:56	600.02	20.57	5.07	593.99	3.18	28.22	0.34	109.83
Last 5	14:09:56	900.13	20.61	5.07	597.38	4.33	28.22	0.61	106.15
Last 5	14:14:56	1200.13	20.79	5.07	601.54	3.80	28.22	0.43	103.89
Last 5	14:19:56	1500.13	20.97	5.06	600.69	4.08	28.22	0.45	101.40
Last 5	14:24:56	1800.13	20.93	5.07	598.88	4.11	28.22	0.51	99.32
Variance 0			0.18	-0.00	4.16			-0.18	-2.26
Variance 1			0.17	-0.01	-0.85			0.01	-2.49
Variance 2			-0.04	0.01	-1.81			0.07	-2.08

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-12 15:26:38

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	28 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	613229		
Turbidity Make/Model	LaMotte	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	DGWC-9	Final Pumping Rate	190 mL/min
Well diameter	2 in	Total System Volume	0.2149758 L
Well Total Depth	33.73 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	7 in
Depth to Water	21.52 ft	Total Volume Pumped	5.7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:03:08	600.02	20.97	3.97	706.68	3.81	22.03	1.04	153.78
Last 5	15:08:08	899.93	20.62	3.96	712.46	5.11	22.04	1.05	152.30
Last 5	15:13:08	1199.93	20.26	3.96	716.75	5.63	22.04	1.07	150.79
Last 5	15:18:08	1499.93	20.21	3.96	709.96	5.76	22.04	1.12	149.39
Last 5	15:23:08	1799.93	20.44	3.98	712.89	4.85	22.06	1.13	149.78
Variance 0			-0.36	-0.00	4.30			0.01	-1.50
Variance 1			-0.04	0.00	-6.79			0.06	-1.41
Variance 2			0.22	0.02	2.93			0.00	0.40

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-13 09:38:26

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte	Pump placement from TOC	30 ft

Well Information:		Pumping Information:	
Well ID	DGWA-53	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.2239027 L
Well Total Depth	35.71 ft	Calculated Sample Rate	30 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	12.63 ft	Total Volume Pumped	0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:36:50	30.11	15.03	6.00	374.13	9.91	12.63	0.55	89.23
Last 5	09:37:20	60.03	15.03	6.02	374.88	--	--	0.49	86.16
Last 5									
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.00	0.02	0.75			-0.06	-3.07
Variance 2			0.00	0.00	0.00			0.00	0.00

Notes

Purged dry 3-12-19. Sampled at 0935

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-12 11:30:02

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	SamplePro
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	57 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte	Pump placement from TOC	57 ft

Well Information:		Pumping Information:	
Well ID	DGWA-70A	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4694151 L
Well Total Depth	62.54 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.2 in
Depth to Water	36.62 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:15:46	300.08	18.11	5.51	61.85	2.85	37.20	5.12	130.22
Last 5	11:20:46	600.03	18.07	5.50	62.55	2.51	37.21	5.22	126.90
Last 5	11:25:46	900.02	18.11	5.52	63.30	1.93	37.21	5.31	127.83
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.04	-0.01	0.70			0.09	-3.33
Variance 2			0.04	0.02	0.75			0.10	0.94

Notes

Started purging at DGWA-70A
Sampled at 1125

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-12 12:57:11

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	SamplePro
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	43 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	DGWA-71	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4069272 L
Well Total Depth	47.79 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.8 in
Depth to Water	26.20 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:43:26	300.04	18.07	5.76	78.38	3.17	26.60	0.51	91.64
Last 5	12:48:26	600.02	17.98	5.78	78.35	2.86	26.62	0.42	90.69
Last 5	12:53:26	900.03	17.96	5.74	78.40	2.71	26.60	0.39	92.63
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.09	0.02	-0.03			-0.09	-0.94
Variance 2			-0.02	-0.04	0.05			-0.04	1.93

Notes

Started purging at 1238

Stopped purging and began sampling

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-12 10:56:19

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	42 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	613229		
Turbidity Make/Model	LaMotte	Pump placement from TOC	42 ft

Well Information:		Pumping Information:	
Well ID	DGWC-4	Final Pumping Rate	190 mL/min
Well diameter	in	Total System Volume	0.2774638 L
Well Total Depth	46.71 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.4 in
Depth to Water	20.08 ft	Total Volume Pumped	5.7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:34:24	600.02	17.05	5.81	1830.33	19.40	20.29	0.51	87.94
Last 5	10:39:24	900.02	17.44	5.82	1818.51	8.83	20.29	0.41	81.78
Last 5	10:44:24	1200.02	17.50	5.83	1811.40	8.47	20.29	0.47	79.07
Last 5	10:49:24	1500.02	17.68	5.85	1798.57	5.24	20.29	0.49	77.06
Last 5	10:54:23	1799.94	17.59	5.85	1791.51	4.82	20.29	0.40	75.94
Variance 0			0.06	0.01	-7.11			0.06	-2.70
Variance 1			0.19	0.01	-12.83			0.02	-2.01
Variance 2			-0.10	0.00	-7.05			-0.09	-1.13

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-12 12:01:10

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	28 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	613229		
Turbidity Make/Model	LaMotte	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	DGWC-5	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2149758 L
Well Total Depth	33.25 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.4 in
Depth to Water	6.99 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:39:10	300.03	17.27	4.43	596.11	0.50	7.18	2.71	238.14
Last 5	11:44:10	600.02	17.32	4.42	597.65	0.24	7.19	2.68	279.20
Last 5	11:49:10	900.02	17.40	4.42	598.10	0.16	7.19	2.66	305.22
Last 5	11:54:10	1200.02	17.36	4.42	596.75	0.13	7.19	2.64	321.88
Last 5	11:59:10	1500.02	17.54	4.42	599.86	--	--	2.62	332.92
Variance 0			0.08	0.00	0.45			-0.01	26.02
Variance 1			-0.04	-0.00	-1.35			-0.02	16.66
Variance 2			0.17	0.00	3.11			-0.02	11.04

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-12 12:52:23

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	44 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte	Pump placement from TOC	44 ft

Well Information:		Pumping Information:	
Well ID	DGWC-10	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2863906 L
Well Total Depth	47.85 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.88 in
Depth to Water	27.13 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:35:33	300.08	20.42	5.32	609.99	1.76	27.37	4.48	58.87
Last 5	12:40:33	600.02	19.94	5.30	617.61	1.36	27.37	4.41	62.06
Last 5	12:45:33	900.02	19.94	5.29	614.81	4.55	27.37	4.36	65.15
Last 5	12:50:33	1200.02	20.43	5.26	608.43	4.71	27.37	4.27	67.55
Last 5									
Variance 0			-0.48	-0.02	7.62			-0.07	3.19
Variance 1			0.00	-0.01	-2.80			-0.05	3.09
Variance 2			0.49	-0.02	-6.38			-0.09	2.39

Notes

Sampled DGWC-10 at 1250

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-12 14:29:32

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	DGWC-11	Final Pumping Rate	300 mL/min
Well diameter	2 in	Total System Volume	0.290854 L
Well Total Depth	51.70 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	14.04 in
Depth to Water	10.88 ft	Total Volume Pumped	13.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:07:25	2400.02	19.52	5.69	576.41	7.23	12.00	0.11	64.82
Last 5	14:12:25	2700.02	19.61	5.70	570.51	6.48	12.02	0.10	65.23
Last 5	14:17:25	3000.02	19.85	5.70	575.90	5.23	12.04	0.09	65.84
Last 5	14:22:25	3300.02	19.94	5.69	571.86	5.12	12.05	0.08	67.02
Last 5	14:27:25	3600.49	19.85	5.70	573.35	4.88	12.05	0.08	67.55
Variance 0			0.24	-0.00	5.39			-0.01	0.61
Variance 1			0.09	-0.00	-4.04			-0.01	1.18
Variance 2			-0.09	0.01	1.50			-0.00	0.53

Notes

Changed purge rate from 150 to 300 @ 1355. Sampled DGWC-11 at 1425

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-12 16:07:17

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	22 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	DGWC-12	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.1881953 L
Well Total Depth	28.28 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.72 in
Depth to Water	7.50 ft	Total Volume Pumped	14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:45:37	3004.02	18.98	5.97	608.28	6.35	7.81	0.06	61.02
Last 5	15:50:38	3304.33	19.05	5.97	608.07	5.43	7.81	0.06	59.64
Last 5	15:55:38	3604.33	19.11	5.98	605.89	5.22	7.81	0.05	58.19
Last 5	16:00:38	3904.33	19.19	5.98	609.38	5.08	7.81	0.05	56.88
Last 5	16:05:38	4204.33	19.32	5.98	605.44	4.96	7.81	0.05	55.69
Variance 0			0.06	0.00	-2.19			-0.00	-1.45
Variance 1			0.07	0.00	3.50			-0.00	-1.31
Variance 2			0.13	0.00	-3.95			-0.00	-1.18

Notes

Orange particulates observed. Sampled DGWC-12 at 1605

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-13 15:55:09

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	SamplePro
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	41 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	DGWC-13	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3980004 L
Well Total Depth	46.66 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.2 in
Depth to Water	33.00 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:43:47	300.03	19.13	5.75	446.51	0.37	33.10	3.67	131.88
Last 5	15:48:47	600.03	18.94	5.76	448.13	0.80	33.10	3.61	129.51
Last 5	15:53:47	900.02	18.87	5.79	448.66	0.53	33.10	3.59	127.98
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.19	0.01	1.62			-0.06	-2.37
Variance 2			-0.07	0.03	0.54			-0.02	-1.53

Notes

Started purging at 1538

Stopped purging and began sampling at 1555

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-13 14:03:51

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	33 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	613229		
Turbidity Make/Model	LaMotte	Pump placement from TOC	33 ft

Well Information:		Pumping Information:	
Well ID	DGWC-14	Final Pumping Rate	195 mL/min
Well diameter	2 in	Total System Volume	0.237293 L
Well Total Depth	37.95 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.5 in
Depth to Water	18.42 ft	Total Volume Pumped	5.9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:40:58	600.02	20.21	5.63	132.44	0.77	18.48	5.03	79.37
Last 5	13:45:58	900.02	20.16	5.61	133.83	0.12	18.48	4.97	79.73
Last 5	13:50:58	1200.02	20.17	5.61	135.21	0.33	18.48	4.93	79.75
Last 5	13:55:58	1500.02	20.13	5.61	135.09	0.49	18.48	4.89	80.26
Last 5	14:00:58	1800.02	20.08	5.61	135.03	0.44	18.48	4.91	80.51
Variance 0			0.01	-0.00	1.38			-0.05	0.02
Variance 1			-0.04	-0.01	-0.12			-0.04	0.51
Variance 2			-0.05	0.01	-0.05			0.02	0.25

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-14 10:52:05

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	SamplePro
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	65 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte	Pump placement from TOC	65 ft

Well Information:		Pumping Information:	
Well ID	DGWC-15	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5051225 L
Well Total Depth	70.83 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	21 in
Depth to Water	37.65 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:30:03	300.03	18.60	5.78	456.94	2.06	39.00	0.22	93.76
Last 5	10:35:03	600.02	18.55	5.76	458.04	1.02	39.24	0.15	95.30
Last 5	10:40:03	900.02	18.52	5.76	458.11	1.17	39.40	0.11	95.47
Last 5	10:45:03	1200.02	18.52	5.76	458.33	0.97	39.40	0.09	96.15
Last 5	10:50:03	1500.02	18.56	5.77	458.16	0.78	39.40	0.08	96.63
Variance 0			-0.04	0.00	0.06			-0.04	0.17
Variance 1			0.00	0.00	0.22			-0.02	0.68
Variance 2			0.04	0.01	-0.16			-0.01	0.48

Notes

Started purging at 1025

Stopped purging and began sampling at 1050

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-13 15:19:43

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	44 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte	Pump placement from TOC	44 ft

Well Information:		Pumping Information:	
Well ID	DGWC-17	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2863906 L
Well Total Depth	47.95 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.16 in
Depth to Water	28.06 ft	Total Volume Pumped	5.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:56:43	900.02	20.21	5.13	571.73	11.50	28.24	0.22	104.63
Last 5	15:01:43	1200.02	20.48	5.11	570.66	9.55	28.24	0.22	108.11
Last 5	15:06:43	1500.02	20.30	5.09	568.23	6.90	28.24	0.22	111.00
Last 5	15:11:44	1801.02	20.21	5.08	567.02	5.21	28.24	0.19	113.12
Last 5	15:16:44	2101.02	20.21	5.07	566.20	3.37	28.24	0.19	114.68
Variance 0			-0.17	-0.02	-2.43			0.00	2.89
Variance 1			-0.09	-0.01	-1.21			-0.03	2.12
Variance 2			0.00	-0.01	-0.82			-0.01	1.56

Notes

Sampled DGWC-17 at 1515

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-13 15:11:34

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	38 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	613229		
Turbidity Make/Model	LaMotte	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	DGWC-19	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2596101 L
Well Total Depth	43.25 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.2 in
Depth to Water	20.53 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:49:44	600.02	20.96	4.77	673.86	3.86	20.63	0.28	310.23
Last 5	14:54:44	900.02	20.86	4.78	673.96	2.27	20.64	0.22	351.84
Last 5	14:59:44	1200.02	21.04	4.76	674.71	2.87	20.63	0.20	377.35
Last 5	15:04:44	1500.02	20.93	4.76	675.57	2.50	20.63	0.18	398.85
Last 5	15:09:44	1800.02	21.00	4.76	673.12	3.14	20.63	0.16	412.19
Variance 0			0.17	-0.01	0.75			-0.02	25.51
Variance 1			-0.11	0.00	0.86			-0.02	21.51
Variance 2			0.07	-0.00	-2.45			-0.02	13.34

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-13 16:25:49

Project Information:		Pump Information:	
Operator Name	C. Tidwell	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	38 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	613229		
Turbidity Make/Model	LaMotte	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	DGWC-20	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2596101 L
Well Total Depth	43.30 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6 in
Depth to Water	20.55 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:03:38	600.02	19.93	4.68	1006.96	7.21	21.00	0.32	160.63
Last 5	16:08:38	900.02	19.82	4.67	1008.80	5.82	21.02	0.25	153.05
Last 5	16:13:38	1200.22	19.77	4.67	1007.19	6.29	21.05	0.22	148.01
Last 5	16:18:38	1500.22	19.85	4.65	1003.60	3.76	21.06	0.20	144.37
Last 5	16:23:38	1800.22	19.85	4.65	1001.12	2.38	21.05	0.16	140.66
Variance 0			-0.05	-0.01	-1.61			-0.03	-5.04
Variance 1			0.08	-0.02	-3.59			-0.02	-3.63
Variance 2			0.00	0.00	-2.48			-0.04	-3.72

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-13 16:16:45

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	66 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte	Pump placement from TOC	66 ft

Well Information:		Pumping Information:	
Well ID	DGWC-21	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3845859 L
Well Total Depth	72.60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.88 in
Depth to Water	17.26 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:05:05	300.02	20.44	5.63	683.32	0.54	17.56	0.61	133.80
Last 5	16:10:06	600.71	19.72	5.62	700.53	0.76	17.59	0.28	133.73
Last 5	16:15:06	900.71	19.59	5.62	701.94	0.50	17.60	0.22	133.90
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.72	-0.01	17.21			-0.33	-0.07
Variance 2			-0.13	-0.00	1.40			-0.06	0.17

Notes

Sampled DGWC-21 at 1615

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-14 13:21:19

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	58 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWC-22	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.3488785 L
Well Total Depth	63.45 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.4 in
Depth to Water	16.02 ft	Total Volume Pumped	3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:03:14	300.03	19.78	5.64	680.42	0.35	16.18	0.44	123.75
Last 5	13:08:14	600.03	19.90	5.64	675.70	0.24	16.20	0.32	124.23
Last 5	13:13:14	900.03	20.03	5.67	673.81	0.21	16.22	0.28	124.19
Last 5	13:18:14	1200.02	20.11	5.67	670.72	0.25	16.22	0.25	124.23
Last 5									
Variance 0			0.12	-0.01	-4.72			-0.12	0.49
Variance 1			0.13	0.03	-1.89			-0.04	-0.05
Variance 2			0.09	-0.00	-3.09			-0.02	0.05

Notes

Started purging at 1258

Stopped purging and began sampling at 1320

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-14 10:52:40

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	58 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	DGWC-23	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3488785 L
Well Total Depth	63.26 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	46.44 in
Depth to Water	14.99 ft	Total Volume Pumped	9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:30:18	1500.27	17.15	6.01	648.37	0.25	18.22	0.81	140.32
Last 5	10:35:21	1803.27	17.14	6.00	646.87	0.60	18.48	0.76	148.01
Last 5	10:40:24	2106.27	17.18	6.00	646.16	0.34	18.65	0.69	159.55
Last 5	10:45:24	2406.27	17.22	6.00	644.59	0.52	18.76	0.70	172.27
Last 5	10:50:25	2707.27	17.27	5.99	642.85	0.50	18.86	0.62	193.50
Variance 0			0.05	-0.00	-0.71			-0.07	11.54
Variance 1			0.04	0.00	-1.57			0.01	12.72
Variance 2			0.05	-0.01	-1.74			-0.08	21.23

Notes

Sampled DGWC-23 at 1050

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-14 09:45:15

Project Information:		Pump Information:	
Operator Name	D. Thomas	Pump Model/Type	SamplePro
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	48 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte	Pump placement from TOC	48 ft

Well Information:		Pumping Information:	
Well ID	DGWC-42	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4292443 L
Well Total Depth	52.70 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	15.12 in
Depth to Water	29.94 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:20:07	300.06	18.29	5.13	828.95	5.57	30.50	0.23	124.13
Last 5	09:25:07	600.02	18.29	5.09	828.02	4.50	31.06	0.15	123.57
Last 5	09:30:07	900.02	18.25	5.09	828.21	4.29	31.20	0.11	123.06
Last 5	09:35:07	1200.02	18.28	5.09	827.95	2.95	31.20	0.10	122.74
Last 5	09:40:07	1500.02	18.34	5.10	828.23	2.12	31.20	0.09	122.73
Variance 0			-0.05	-0.00	0.19			-0.04	-0.51
Variance 1			0.04	0.01	-0.26			-0.01	-0.33
Variance 2			0.06	0.01	0.28			-0.01	-0.01

Notes

Started purging at 0915

Stopped purging and began sampling at 0940

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-14 12:58:20

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	27 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte	Pump placement from TOC	27 ft

Well Information:		Pumping Information:	
Well ID	DGWC-47	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2105124 L
Well Total Depth	31.95 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	25.68 in
Depth to Water	15.49 ft	Total Volume Pumped	3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:35:07	900.36	18.45	3.87	520.28	1.40	16.89	0.29	393.89
Last 5	12:40:07	1200.36	19.01	3.88	518.51	1.33	17.16	0.23	407.45
Last 5	12:45:07	1500.36	19.18	3.87	517.85	1.76	17.41	0.21	415.57
Last 5	12:50:07	1800.36	19.59	3.87	516.67	1.67	17.55	0.18	414.12
Last 5	12:55:11	2104.36	19.72	3.88	516.54	0.76	17.63	0.18	411.65
Variance 0			0.17	-0.01	-0.66			-0.01	8.12
Variance 1			0.41	0.01	-1.18			-0.03	-1.46
Variance 2			0.13	0.01	-0.13			0.00	-2.47

Notes

Sampled DGWC-47 at 1255

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-14 13:52:44

Project Information:		Pump Information:	
Operator Name	K. Minkara	Pump Model/Type	Alexis
Company Name	Golder	Tubing Type	polyethylene
Project Name	166849618	Tubing Diameter	0.170 in
Site Name	Plant McDonough	Tubing Length	27 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte	Pump placement from TOC	27 ft

Well Information:		Pumping Information:	
Well ID	DGWC-48	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2105124 L
Well Total Depth	33.49 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	23.64 in
Depth to Water	13.48 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:35:07	300.08	20.70	4.12	818.14	2.17	14.42	0.43	332.45
Last 5	13:40:07	600.02	20.40	4.12	823.58	2.86	14.80	0.34	331.48
Last 5	13:45:11	904.02	20.58	4.13	822.59	1.04	14.97	0.35	329.51
Last 5	13:50:15	1208.02	20.91	4.12	824.15	2.62	15.05	0.29	329.29
Last 5									
Variance 0			-0.30	-0.01	5.44			-0.09	-0.97
Variance 1			0.19	0.01	-0.99			0.01	-1.97
Variance 2			0.33	-0.01	1.56			-0.06	-0.22

Notes

Sampled DGWC-48 at 1350

Grab Samples

LEVEL 2A LABORATORY DATA VALIDATIONS

August 2016 – November 2018

ENVIRONMENTAL® STANDARDS

Setting the Standards for Innovative Environmental Solutions

Stage 2A Data Verification Report
Georgia Power
McDonough Fossil Plant
Site Ash Pond
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 239 groundwater samples collected as part of the eight rounds of 2016-2018 baseline monitoring, at the Georgia Power McDonough Fossil Plant facility. These samples were collectively analyzed by Pace Analytical Services, Inc. (Pace), of Peachtree Corners, Georgia, or Asheville, North Carolina, for total metals by SW-846 Method 6020B; 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, 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.

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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 4/12/2017; Event 2, collected 12/6/2016 through 12/8/2016; Event 3, collected 3/28/2017 through 7/13/2017; Event 4, collected 7/11/2017 through 7/13/2017; Event 5, collected 10/24/2017 through 11/15/2017; Event 6, collected 2/28/2018 through 3/8/2018; Event 7, collected 7/10/2018 through 7/13/2018; Event 8, collected 11/6/2018 through 11/8/2018; a catch-up event, collected 5/11/2017, 5/12/2017, 5/15/2017, 6/15/2017, 6/16/2017, and 8/8/2017.

The following samples were evaluated as part of this QA review: DGWA-2, DGWA-53, DGWA-53 Filtered, DGWA-71, DGWC-4, DGWC-23, DGWC-67, DGWC-68A, DGWC-69, DGWA-70A, DGWA-9, DGWA-8, DGWC-5, DGWC-10, DGWC-11, DGWC-14, DGWC-12, DGWC-48, DGWC-19, DGWC-47, DGWC-20, DGWC-21, DGWC-22, DGWC-40, DGWC-13, DGWC-15, DGWC-17, DGWC-42, DGWC-37, DGWC-38, DGWC-39, DGWC-68, and DGWA-70.

The following Pace inorganic SDGs were evaluated as part of this QA review: AAE0439, AAE0482, AAE0498, AAF0649, AAH0318, AZH0942, AZI0006, AZI0051, AZI0088, AZI0168, AZI0192, AZI0227, AZL0284, AZL0383, AZL0437, AAC0995, AAC1051, AAC1096, AAC1126, AAD0425, AAG0277, AAG0338, AAG0388, AAJ0865, AAJ0905, AAJ0956, AAK0586, 262357, 262423, 262659, 266979, 267056, 267122, 267125, 2611269, 2611272, 2611388, 2611389, 2611391, and 2611393.

The following Pace radiological SDGs were evaluated as part of this QA review: 30218862, 30218988, 30219104, 30222152, 30226784, 30194832, 30195003, 30195126, 30195121, 30195376, 30195375, 30195546, 30204841, 30205162, 30205165, 30214647, 30214947, 30214952, 30215074, 30224002, 30224181, 30224380, 30234155, 30234319, 30234467, 30236435, 262357, 262423, 262659, 266980, 267057, 267124, 267126, 2611270, 2611273, 2611390, 2611392, and 2611395.

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 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 results < the MDC as "not-detected" in the data package provided. The data validator qualified these samples as "U" on the data tables.

8. In the majority of SDGs, the laboratory did not provide a Case Narrative associated with the metals and general chemistry or radium analyses. As this item was not needed to complete the data validation, the laboratory had not been requested to provide this information. Qualification of data due to this issue was not warranted.

9. In SDG 30195375, the laboratory indicated that sample containers did not include the collection time for sample DGWC-17, the laboratory logged in the collection time based on the COC record. Qualification of data due to this issue was not warranted.

10. In SDG AZL0383, the COC record indicated that sample DGWC-14, sampled on 12/7/2016, had not been received. Per communication with the consultant, the laboratory determined this sample had been sampled on 12/6/2016, was received by the laboratory on 12/7/2016 and had been included in SDG AZL0284. Qualification of data due to this issue was not warranted.

11. The sample IDs DGWA-8 and DGWA-9 in sampling Events 1 and 2 had changed to DGWC-8 and DGWC-9 in the remaining sampling events. Notification of prior knowledge of this sample ID change had not been provided to Environmental Standards; therefore, the Southern Company point of contact had been notified of this sample ID change on 1/31/2019. Qualification of data due to this issue was not warranted.

12. In SDGs 30194832, 30195003, 30195126, 30195121, 30195376, 30195375, and 30195546, 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.

13. In SDGs 262357, 262423, and 262659, the laboratory did not provide the subcontracted COC record or Sample Login Receipt Checklist for transfer of the samples from Pace Atlanta to Pace Asheville. 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 SDGs 262357, 262423, 262659, 266980, 267057, 267124, 267126, 2611270, 2611273, 2611390, 2611392, and 2611395, the laboratory did not provide the

subcontracted COC record or Sample Login Receipt Checklist 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.

15. In SDGs 30234155, 30234319, 30234467, and 30236435, the laboratory did not provide the COC record associated 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.

16. In SDGs 30218862, 30218988, 30219104, 30222152, 30194832, 30195003, 30195126, 30195121, 30195376, 30195375, 30195546, 30204841, 30205162, 30205165, 30214647, 30214947, 30214952, 30215074, and 30224002, the laboratory did not provide the Sample Login Receipt Checklist from Pace Atlanta. 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.

17. In SDGs 30204841, 30205162, and 30205165, Pace Atlanta did not relinquish the samples to Pace Pittsburgh on the subcontracted COC record. 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.

18. In SDG 267057, the Sample Login Receipt Checklist indicated that two radium sample containers labeled DGWC-18 were logged in with sample ID DGWC-15, based upon the laboratory's comparison of collection date and time between the bottle labels and the COC record and the inorganic containers in the same shipment having identical collection dates and times with the sample ID DGWC-15. Qualification of data due to this issue as not warranted.

19. In SDG AAE0498, the Login Sample Receipt Checklist indicated that the samples were received at temperatures > 6°C. Samples to be analyzed for anions and TDS require thermal preservation at a temperature ≤ 6°C; however, the samples that were received at a temperature > 6°C had been received at the laboratory within 8 hours of sample collection while the cooling process had already begun. Qualification of data due to this issue was not warranted.

20. In the anion fraction of SDG AZL0437, 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 analyses performed on the equipment blank, applying the evaluation technique and acceptance criteria established for LCS/LCSD analyses.

21. The data package for the radium analyses in SDG 30195003 did not include Quality Control Sample Performance Assessment summaries for the analytical batches associated with sample DGWC-14. The summaries had been requested from the laboratory but had not been received at the time of report finalization. Laboratory analytical accuracy and precision could not be evaluated for radium-226 and radium-228 in the associated sample.

22. 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 ≤ 20% when both results were ≥ 5× the reporting limit [RL], the difference between results was ≤ the RL when at least one result was < 5× 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.

Laboratory SDG(s)	Sample	Field Duplicate
AAF0649 30222152	DGWA-2	FD-1
AAE0482 30218988	DGWA-71	FD-1
AAH0318 30226784	DGWA-70A	FD-1
AZI0006 30195003	DGWC-14	FD-1
AZI0051 30195126	DGWC-48	FD-2
AZI0227 30195546	DGWC-38	FD-3
AZL0383 30205162	DGWC-12	FD-1
AZL0383 30205162	DGWC-19	FD-2
AZL0437 30205165	DGWC-21	FD-3
AAC1051 30214947	DGWC-10	FD-1
AAC1096 30214952	DGWC-40	FD-3
AAC1126 30215074	DGWC-47	FD-3
AAG0277 30224002	DGWA-70A	FD-1
AAG0338 30224181	DGWC-14	FD-2
AAG0388 30224380	DGWC-42	FD-3
AAJ0865 30234155	DGWC-8	FD-1

Laboratory SDG(s)	Sample	Field Duplicate
AAJ0905 30234319	DGWC-12	FD-2
AAJ0956 30234467	DGWC-67	FD-3
262357	DGWC-17	FD-2
262423	DGWC-37	FD-3
266979 266980	DGWC-11	FD-1
267056 267057	DGWC-9	FD-2
267122 267124	DGWC-38	FD-3
2611269 2611270	DGWC-9	FD-1
2611389 2611390	DGWC-17	FD-2
2611393 2611395	DGWC-69	FD-3

Overall Assessment of Data

Based on a review of the data, qualification of data was warranted as noted below.

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
AAE0439	catch up	DGWA-2	mercury	U*	BL – Method blank contamination BE – Equipment blank contamination
AAE0482	catch up	DGWA-71, DGWC-4, and DGWC-23	mercury	U*	BL – Method blank contamination BE – Equipment blank contamination
AAF0649	catch up	DGWA-2, DGWA-53, DGWC-4, DGWC-23, DGWC-67, DGWC-68A, DGWA-71, and DGWC-69	antimony and mercury	U*	BL – Method blank contamination BF – Field blank contamination BE – Equipment blank contamination
AAF0649	catch up	DGWA-70A	mercury	U*	BL – Method blank contamination BF – Field blank contamination BE – Equipment blank contamination
30226784	catch up	DGWA-70A	combined radium-226+228	U*	BL – Method blank contamination BF – Field blank contamination
AAE0439	catch up	DGWA-2	chromium	U*	BF – Field blank contamination BE – Equipment blank contamination
AAE0482	catch up	DGWA-71, DGWC-23, and DGWC-67	chromium	U*	BF – Field blank contamination BE – Equipment blank contamination
AAE0498	catch up	DGWA-70A	chromium	U*	BF – Field blank contamination BE – Equipment blank contamination
AAE0439	catch up	DGWA-2	lead	U*	BE – Equipment blank contamination
AAE0482	catch up	DGWA-71, DGWC-67, and DGWC-69	lead	U*	BE – Equipment blank contamination

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
AAE0498	catch up	DGWA-70A	lead	U*	BE – Equipment blank contamination
AAH0318	catch up	DGWA-70A	lead	U*	BE – Equipment blank contamination
AZI0006	1	all samples	mercury	U*	BF – Field blank contamination BL – Method blank contamination
30195126	1	DGWC-12	combined radium-226+228	U*	BL – Method blank contamination
AZH0942	1	DGWA-8	mercury	U*	BF – Field blank contamination
AZI0051	1	DGWC-12 and DGWC-19	mercury	U*	BF – Field blank contamination
AZI0088	1	DGWC-21, DGWC-22, and DGWC-40	mercury	U*	BF – Field blank contamination
30195375	1	DGWC-17	combined radium-226+228	U*	BF – Field blank contamination
AZL0284	2	all samples	mercury	U*	BF – Field blank contamination BE – Equipment blank contamination
30205165	2	DGWC-17	combined radium-226+228	U*	BF – Field blank contamination
AZL0437	2	DGWC-21, DGWC-22, and DGWC-42	fluoride	U*	BE – Equipment blank contamination
30205162	2	DGWC-15	combined radium-226+228	U*	BE – Equipment blank contamination
30205165	2	DGWC-17 and DGWC-40	combined radium-226+228	U*	BE – Equipment blank contamination
AAC0995	3	DGWC-5	mercury	U*	BF – Field blank contamination BE – Equipment blank contamination
AAC1051	3	all samples	mercury	U*	BF – Field blank contamination BE – Equipment blank contamination BL – Method blank contamination

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
AAC1096	3	all samples	mercury	U*	BF – Field blank contamination BE – Equipment blank contamination BL – Method blank contamination
AAC1126	3	DGWC-42	mercury	U*	BF – Field blank contamination BE – Equipment blank contamination
AAC0995	3	DGWA-70, DGWC-4, and DGWC-9	chromium	U*	BF – Field blank contamination
AAC1051	3	DGWC-10 and DGWC-8	chromium	U*	BF – Field blank contamination
AAC1096	3	DGWA-2, DGWC-13, DGWC-15, DGWC-21, DGWC-40, and DGWC-23	chromium	U*	BF – Field blank contamination
AAC1126	3	DGWC-67, DGWC-42, and DGWC-47	chromium	U*	BF – Field blank contamination
30224380	4	DGWC-38	combined radium-226+228	U*	BF – Field blank contamination
30234155	5	DGWA-2 and DGWC-9	combined radium-226+228	U*	BL – Method blank contamination
AAJ0865	5	DGWA-70A and DGWA-71	boron	U*	BF – Field blank contamination
AAJ0905	5	DGWC-14	boron	U*	BF – Field blank contamination BE – Equipment blank contamination
262357	6	DGWC-17, DGWC-19, DGWC-42, and DGWC-22	arsenic	U*	BF – Field blank contamination BE – Equipment blank contamination
262423	6	DGWC-39	combined radium-226+228	U*	BF – Field blank contamination
262357	6	DGWC-13	boron	U*	BE – Equipment blank contamination

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
266979	7	all samples	mercury	U*	BF – Field blank contamination BE – Equipment blank contamination BL – Method blank contamination
266979	7	DGWA-70A and DGWA-71	boron	U*	BF – Field blank contamination
267122	7	DGWA-53, DGWC-38, and DGWC-23	cadmium	U*	BF – Field blank contamination
267125	7	DGWC-68A	cadmium	U*	BF – Field blank contamination
266979	7	DGWA-70A	sulfate	U*	BE – Equipment blank contamination
266980	7	DGWC-4	combined radium-226+228	U*	BE – Equipment blank contamination
2611269	8	all samples, except DGWC-2	mercury	U*	BL – Method blank contamination
2611269	8	DGWC-4 and DGWC-11	beryllium	U*	BL – Method blank contamination
2611270	8	DGWC-2, DGWC-4, DGWC-9, DGWC-10, and DGWC-11	combined radium-226+228	U*	BL – Method blank contamination BF – Field blank contamination BE – Equipment blank contamination
2611269	8	all samples	mercury	U*	BF – Field blank contamination BE – Equipment blank contamination
2611272	8	DGWA-71	mercury	U*	BF – Field blank contamination BE – Equipment blank contamination
2611270	8	DGWC-5	combined radium-226+228	U*	BE – Equipment blank contamination
2611272	8	DGWA-70A and DGWA-71	boron	U*	BE – Equipment blank contamination
2611390	8	DGWC-19	combined radium-226+228	U*	BE – Equipment blank contamination BL – Method blank contamination

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
2611389	8	DGWC-19 and DGWC-47	arsenic	U*	BE – Equipment blank contamination
2611389	8	DGWC-12, DGWC-13, DGWC-15, DGWC-21, and DGWC-22	beryllium	U*	BE – Equipment blank contamination
2611389	8	DGWC-12, DGWC-15, DGWC-19, DGWC-21, DGWC-22, DGWC-42, and DGWC-47	cadmium	U*	BE – Equipment blank contamination
2611389	8	DGWC-17	cobalt	U*	BE – Equipment blank contamination
2611389	8	DGWC-15, DGWC-19, DGWC-20, and DGWC-47	thallium	U*	BE – Equipment blank contamination
2611391	8	DGWA-53	arsenic	U*	BE – Equipment blank contamination
30195121	1	DGWC-22	combined radium-226+228	J	BL – Method blank contamination
30195376	1	DGWC-13	combined radium-226+228	J	BF – Field blank contamination
30205162	2	DGWC-13	combined radium-226+228	J	BE – Equipment blank contamination
30205165	2	DGWC-47 and DGWC-48	combined radium-226+228	J	BE – Equipment blank contamination
30224002	4	DGWC-4 and DGWC-5	combined radium-226+228	J	BF – Field blank contamination
30224181	4	DGWC-10	combined radium-226+228	J	BF – Field blank contamination BE – Equipment blank contamination
30224380	4	DGWC-48	combined radium-226+228	J	BF – Field blank contamination
30224002	4	DGWC-5	combined radium-226+228	J	BE – Equipment blank contamination
30234319	5	DGWC-22 and DGWC-42	combined radium-226+228	J	BE – Equipment blank contamination
30234467	5	DGWC-47 and DGWC-48	combined radium-226+228	J	BE – Equipment blank contamination
262659	6	DGWA-53	combined radium-226+228	J	BL – Method blank contamination

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
262423	6	DGWC-47, DGWC-68A, and DGWC-48	combined radium-226+228	J	BF – Field blank contamination
262357	6	DGWC-15	combined radium-226+228	J	BE – Equipment blank contamination
267124	7	DGWC-47 and DGWC-48	combined radium-226+228	J	BL – Method blank contamination
266980	7	DGWC-10	combined radium-226+228	J	BE – Equipment blank contamination
2611390	8	DGWC-21	combined radium-226+228	J	BE – Equipment blank contamination BL – Method blank contamination
2611390	8	DGWC-23	combined radium-226+228	J	BF – Field blank contamination BE – Equipment blank contamination
30195003	1	DGWC-5, DGWC-10, and DGWC-11	combined radium-226+228	J	L+ – High LCS recovery
262423	6	DGWC-47, DGWC-39, and DGWC-68A	combined radium-226+228	J (unless previously flagged “U*”)	L+ – High LCS recovery LP – LCS/LCSD imprecision
266980	7	DGWC-4 and DGWC-10	combined radium-226+228	J (unless previously flagged “U*”)	L+ – High LCS recovery
30194832	1	all samples	combined radium-226+228	J/UJ	L- – Low LCS recovery
30204841	2	DGWA-8	combined radium-226+228	UJ	L- – Low LCS recovery
30205162	2	DGWC-12, DGWC-13, DGWC-15, DGWC-19, DGWC-20, and DGWC-37	combined radium-226+228	J/UJ	L- – Low LCS recovery
30224002	4	DGWC-9	combined radium-226+228	UJ	L- – Low LCS/LCSD recoveries
30224181	4	DGWC-13, DGWC-14, DGWC-15, DGWC-17, DGWC-19, DGWC-20, DGWC-21, and DGWC-23	combined radium-226+228	J/UJ	L- – Low LCS recovery

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
30224380	4	DGWC-22, DGWC-37, DGWC-38, DGWC-39, DGWC-40, DGWC-42, DGWC-47, DGWC-48, and DGWC-67	combined radium-226+228	J/UJ (unless previously flagged "U*")	L- – Low LCS recovery
30234155	5	all samples	combined radium-226+228	J/UJ (unless previously flagged "U*")	L- – Low LCSD recovery
30234319	5	DGWC-5, DGWC-12, DGWC-14, DGWC-15, DGWC-17, DGWC-19, and DGWC-20	combined radium-226+228	J/UJ	L- – Low LCSD recovery
262357	6	DGWC-13, DGWC-15, DGWC-17, DGWC-19, DGWC-20, and DGWC-21	combined radium-226+228	J/UJ	L- – Low LCSD recovery
267124	7	all samples	combined radium-226+228	J/UJ	L- – Low LCSD recovery
267126	7	all samples	combined radium-226+228	UJ	L- – Low LCSD recovery
2611270	8	all samples	combined radium-226+228	J/UJ (unless previously flagged "U*")	L- – Low LCS/LCSD recoveries
2611273	8	all samples	combined radium-226+228	UJ	L- – Low LCS/LCSD recoveries
2611390	8	all samples	combined radium-226+228	J/UJ (unless previously flagged "U*")	L- – Low LCSD recoveries
2611392	8	DGWA-53	combined radium-226+228	J	L- – Low LCSD recovery LP – LCS/LCSD imprecision
2611395	8	all samples	combined radium-226+228	UJ	L- – Low LCSD recovery
2611390	8	DGWC-48 and DGWC-23	combined radium-226+228	J	LP – LCS/LCSD imprecision
AZH0942	1	all samples	fluoride	J	M+ – High MS/MSD recoveries

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
AZI0168	1	all samples	fluoride	J	M+ – High MS/MSD recoveries
AZI0192	1	all samples	fluoride	J	M+ – High MS recovery
AZL0437	2	all samples	fluoride	J (unless previously flagged "U*")	M+ – High MS recovery
AAC0995	3	all samples	fluoride	J	M+ – High MS recovery
AAC1126	3	all samples	boron	J	M+ – High MS/MSD recoveries
AAG0277	4	all samples	fluoride	J	M+ – High MS recovery
AAG0388	4	all samples, except DGWC-42, DGWC-68A, and DGWC-69	fluoride	J	M+ – High MS recovery
AAJ0865	5	DGWA-2, DGWA-53, DGWC-8, DGWC-9, and DGWC-10	fluoride	J	M+ – High MS recovery
AAJ0905	5	DGWC-5, DGWC-12, DGWC-15, DGWC-17, DGWC-19, DGWC-20, DGWC-21, and DGWC-22	fluoride	J	M+ – High MS/MSD recoveries
AAJ0956	5	all samples, except DGWC-37 and DGWC-67	fluoride	J	M+ – High MS recovery
262357	6	DGWC-42 and DGWC-22	boron	J	M+ – High MS/MSD recoveries
2611388	8	DGWA-53 Filtered	dissolved barium	J	M+ – High MS/MSD recoveries
AAE0482	catch up	all samples	chloride	J	M- – Low MS/MSD recoveries
AAF0649	catch up	all samples	chloride	J	M- – Low MS recovery
AZL0383	2	all samples	chloride	J	M- – Low MS recovery
AZL0437	2	all samples	chloride	J	M- – Low MS recovery

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
AAC0995	3	all samples	chloride	J	M- – Low MS recovery
AAC1096	3	all samples	chloride	J	M- – Low MS/MSD recoveries
AAC1096	3	all samples	boron	J	M- – Low MSD recovery
AAC1126	3	all samples	chloride	J	M- – Low MS/MSD recoveries
AAG0338	4	all samples, except DGWC-23	chloride	J	M- – Low MS/MSD recoveries
AAG0388	4	all samples, except DGWC-68A and DGWC-69	chloride	J	M- – Low MS recovery
AAJ0865	5	all samples, except DGWC-10	chloride	J	M- – Low MS/MSD recoveries
262357	6	DGWC-42 and DGWC-22	chloride	J	M- – Low MS/MSD recoveries
2611389	8	DGWC-12, DGWC-13, DGWC-14, DGWC-15, DGWC-17, DGWC-19, DGWC-20, DGWC-21, DGWC-22, and DGWC-42	boron	J	M- – Low MS/MSD recoveries
2611389	8	DGWC-47, DGWC-48, and DGWC-23	cobalt	J	M- – Low MSD recovery
2611389	8	DGWC-22, DGWC-42, DGWC-47, DGWC-48, and DGWC-23	chloride	J	M- – Low MS/MSD recoveries
AAE0482	catch up	all samples	TDS	J	LD – Laboratory duplicate imprecision
30222152	catch up	all samples	combined radium-226+228	J/UJ	LD – Laboratory duplicate imprecision
AAE0482	catch up	DGWA-71	TDS	J	FD – Field duplicate imprecision
AZL0383	2	DGWC-12	chloride and calcium	J	FD – Field duplicate imprecision
AZL0383	2	DGWC-19	calcium	J	FD – Field duplicate imprecision
AAC1126	3	DGWC-47	sulfate	J	FD – Field duplicate imprecision

Laboratory SDG(s)	Event	Sample(s)	Analyte(s)	Qualifier(s)	Reason(s) for Qualification
30224002	4	DGWA-70A	combined radium-226+228	UJ	FD – Field duplicate imprecision
AAJ0865	5	DGWC-8	TDS	J	FD – Field duplicate imprecision
AAJ0905	5	DGWC-12	fluoride	J	FD – Field duplicate imprecision
262357	6	DGWC-17	fluoride	J	FD – Field duplicate imprecision
262423	6	DGWC-37	fluoride	J	FD – Field duplicate imprecision
2611389	8	DGWC-17	boron, calcium and cobalt	J (unless previously flagged "U*")	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."

Report prepared by: Jessica T. Coello, Quality Assurance Chemist
Report reviewed by: Alyssa M. Reed, Senior Quality Assurance Chemist/Project Manager
Report approved by: David I. Thal, CEAC, CQA, Principal Chemist
Date: 2/22/2019

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

LEVEL 2A LABORATORY DATA VALIDATIONS

February - March 2018 (Revised)

Georgia Power Company - Plant McDonough
Quality Control Review of Analytical Data – February - March 2018

This narrative presents results of the Quality Control (QC) data review performed on analytical data submitted by Pace Analytical Services, LLC for groundwater samples collected at Plant McDonough between February 27, 2018 and March 8, 2018. The chemical data were reviewed to identify quality issues which could affect the use of the data for decision making purposes.

Information regarding the primary sample locations, analytical parameters, QC samples, sampling dates, and laboratory sample delivery group (SDG) designations is summarized in Table 1. All SDGs associated with these samples were revised due to a laboratory reporting error where certain detections below the reporting limit (RL) but above the method detection limit (MDL) were initially reported as non-detect.

According to groundwater monitoring and corrective action procedures discussed in Title 40 CFR, Subpart D - Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, the samples were analyzed for detection monitoring constituents listed in 40 CFR, Part 257 Appendix III and assessment monitoring constituents listed in 40 CFR, Part 257, Appendix IV. Test methods included Inductively Coupled Plasma- Mass Spectrometry (USEPA Method 6020B), Mercury in Liquid Wastes (USEPA Method 7470A), Determination of Inorganic Anions (USEPA Method 300.0), Solids in Water (Standard Methods 2540C), Radium-226 (USEPA Method 9315) and Radium-228 (USEPA Method 9320).

Data were reviewed in accordance with the US EPA Region IV Data Validation Standard Operating Procedures (for Contract Laboratory Program Inorganic Data by Inductively Coupled Plasma – Atomic Emission Spectroscopy and Inductively Coupled Plasma – Mass Spectroscopy (September 2011, Rev. 2.0)[1] and the National Functional Guidelines for Inorganic Superfund Methods Data Review[2]. In addition, Southern Company Services, Inc. provided data validation guidance. The review included an assessment of the results for completeness, precision (laboratory duplicates, matrix spike/matrix spike duplicates), accuracy (laboratory control samples and matrix spike samples), and blank contamination (including laboratory blanks). Additionally, sample procedures, holding times and chains-of-custody were reviewed. Where there was a discrepancy between the QC criteria in the guidelines and the QC criterion established in the analytic methodology, method-specific criteria or professional judgment was used.

DATA QUALITY OBJECTIVES

Laboratory Precision: Laboratory goals for precision were met.

Field Precision: Field goals for precision were met with the exception of FD-2 (SDG 262357) as described in the qualifications sections below.

Accuracy: Laboratory goals for accuracy were met, with the exception of barium, boron and chloride as described in the qualifications sections below.

Detection Limits: Project goals for detection limits were met. Certain samples were diluted due to the concentration of the target analytes. Dilutions do not require qualifications based on USEPA guidelines. Detection and reporting limits of non-detect compounds are elevated proportional to the dilution when undiluted sample results are not provided by the laboratory. The data usability of diluted results was evaluated by the data user in the context of site-wide characterization.

Completeness: There were no rejected analytical results for this event, resulting in a completion of 100%.

Holding Times: All holding time requirements were met.

QUALIFICATIONS

In general, chemical results for the samples collected at the site were qualified on the basis of low precision or accuracy, or on the basis of professional judgment. The following definitions provide brief explanations of the qualifiers which may have been assigned to data by the laboratory during the data validation process.

J	The analyte was positively identified above the method detection limit; however, the associated numerical value is the approximate concentration of the analyte in the sample
J+	The analyte was positively identified above the method detection limit; however, the concentration reported is an estimated value that may be biased high.
J-	The analyte was reported above the method detection limit; however, the concentration reported is an estimated value that may be biased low.
U	The analyte was not detected above the method detection limit.

The data generated as part of this sampling event met the QC criteria established in the respective analytical methods and data validation guidelines. Although these qualifications were applied to some data from of the samples collected at the site, the qualifications may not have been required or applied to all samples collected. A summary of sample qualifications can be found in Table 2.

- Fluoride results in FD-2 and DGWC-17 (SDG 262357) were qualified as estimated (J) as the field duplicate RPD exceeded QC criteria.
- Certain barium and boron results in SDGs 262329 and 262357 were qualified as estimated biased high (J+) as the associated matrix spike/matrix spike duplicate (MS/MSD) recoveries exceeded QC criteria.
- Certain chloride results in SDG 262357 and 262423 were qualified as estimated biased low (J-) as the associated MS/MSD recoveries were below the QC criteria and above 10%.
- Certain boron, mercury, cobalt, and arsenic, results in SDGs 262329, and 262357were qualified as non-detect (U) when the analyte was detected at a similar concentration in an associated blank sample. As shown in Table 2, when the original sample result was below the RL, the method detection limit was raised to the sample result as part of the qualification process. When the original sample result was above the RL, both the MDL and the RL were raised to the sample result as part of the qualification process.
- Certain radium-228, radium-226, and total radium results in SDGs 262329, 262357, 262659, and 262423 were qualified as non-detect (U) when either radium-226 or radium-228 was detected at a similar concentration in an associated blank sample. As shown in Table 2, the minimum detectable concentration (MDC) was raised to the sample result as part of the (U) qualification process.

- Certain total radium results in SDGs 262329, 262423 and 262659 were qualified estimated biased high (J+) for associated blank contaminations.

Golder reviewed the data from the at the Plant McDonough Ash Ponds between February 27, 2018 and March 8, 2018 in accordance with the analytical methods, the laboratory specific QC criteria, and the guidelines. As described above, the results were acceptable for project use.

REFERENCE

USEPA, September 2011, Region 4, Science and Ecosystem Support Division, Quality Assurance Section, MTSB, *Data Validation Standard Operating Procedures for Contract Laboratory Program Inorganic Data by Inductively Coupled Plasma – Atomic Emission Spectroscopy and Inductively Coupled Plasma – Mass Spectroscopy,* Revision 2.0.

USEPA, January 2017, National, Office of Superfund Remediation and Technology Innovation, *National Functional Guidelines for Inorganic Superfund Methods Data Review,* Revision 0.0.

TABLE 1
Georgia Power Company - Plant McDonough
Sample Summary Table - February-March 2018

						Analyses			
SDGs	*Field Identification*	*Collection Date*	*Lab Identification Number*	*Matrix*	*QC Samples*	*TAL Metals + Hg (6020B, 7470A)*	*Anions (300.0)*	*TDS (2540C)*	*Radium 226, Radium 228 (9315, 9320)*
262329	DGWA-70A	2/27/2018	262329001/262329002	GW	-	X	X	X	X
262329	DGWA-71	2/27/2018	262329003/262329004	GW	-	X	X	X	X
262329	DGWC-2	2/27/2018	262329005/262329006	GW	-	X	X	X	X
262329	DGWC-4	2/27/2018	262329007/262329008	GW	-	X	X	X	X
262329	DGWC-5	2/27/2018	262329009/262329010	GW	-	X	X	X	X
262329	DGWC-8	2/27/2018	262329011/262329012	GW	-	X	X	X	X
262329	DGWC-9	2/27/2018	262329013/262329014	GW	-	X	X	X	X
262329	FD-1	2/27/2018	262329015/262329016	GW	FD (DGWC-4)	X	X	X	X
262329	FB-1	2/27/2018	262329017/262329018	WQ	FB	X	X	X	X
262329	EB-1	2/27/2018	262329019/262329020	WQ	EB	X	X	X	X
262329	DGWC-10	2/27/2018	262329021/262329022	GW	-	X	X	X	X
262329	DGWC-11	2/27/2018	262329023/262329024	GW	-	X	X	X	X
262329	DGWC-12	2/27/2018	262329025/262329026	GW	-	X	X	X	X
262329	DGWC-14	2/27/2018	262329027/262329028	GW	-	X	X	X	X
262357	DGWC-13	2/28/2018	262357001, 262357002	GW	-	X	X	X	X
262357	DGWC-15	2/28/2018	262357003, 262357004	GW	-	X	X	X	X
262357	DGWC-17	2/28/2018	262357005, 262357006	GW	-	X	X	X	X
262357	DGWC-19	2/28/2018	262357007, 262357008	GW	-	X	X	X	X
262357	DGWC-20	2/28/2018	262357009, 262357010	GW	-	X	X	X	X
262357	DGWC-21	2/28/2018	262357011, 262357012	GW	-	X	X	X	X
262357	DGWC-42	2/28/2018	262357013, 262357014	GW	-	X	X	X	X
262357	FD-2	2/28/2018	262357015, 262357016	GW	FD (DGWC-17)	X	X	X	X
262357	FB-2	2/28/2018	262357017, 262357018	WQ	FB-2	X	X	X	X
262357	EB-2	2/28/2018	262357019, 262357020	WQ	EB	X	X	X	X
262357	DGWC-22	2/28/2018	262357021, 262357022	GW		X	X	X	X
262423	DGWC-37	3/1/2018	262423001/262423002	GW	-	X	X	X	X
262423	DGWC-23	3/1/2018	262423003/262423004	GW	-	X	X	X	X
262423	DGWC-47	3/1/2018	262423005/262423006	GW	-	X	X	X	X
262423	DGWC-39	3/1/2018	262423007/262423008	GW	-	X	X	X	X
262423	DGWC-38	3/1/2018	262423009/262423010	GW	-	X	X	X	X
262423	FD-3	3/1/2018	262423011/262423012	GW	FD (DGWC-37)	X	X	X	X
262423	FB-3	3/1/2018	262423013/262423014	WQ	FB	X	X	X	X
262423	EB-3	3/1/2018	262423015/262423016	WQ	EB	X	X	X	X
262423	DGWC-67	3/2/2018	262423017/262423018	GW	-	X	X	X	X
262423	DGWC-68A	3/2/2018	262423019/262423020	GW	-	X	X	X	X
262423	DGWC-69	3/2/2018	262423021/262423022	GW	-	X	X	X	X
262423	DGWC-40	3/2/2018	262423023/262423024	GW	-	X	X	X	X
262423	DGWC-48	3/2/2018	262423025/262423026	GW	-	X	X	X	X
262659	DGWA-53	3/8/2018	262659001/262659002	GW	-	X	X	X	X

Abbreviations:
FB - Field blank
FD - Field duplicate
GW - Groundwater
Hg - Mercury
WQ - Water quality control
QC - Quality control
EB - Equipment blank
TAL - Target analyte list
TDS - Total dissolved solids

TABLE 2
Georgia Power Company - Plant McDonough
Qualifier Summary Table - February-March 2018

SDG	Sample Name	Constituent	New RL	New MDL or MDC	Qualifier	Reason
262329	DGWA-70A	Boron	-	0.0062	U	Blank detection
262329	DGWA-71A	Boron	-	0.0069	U	Blank detection
262329	DGWC-14	Boron	0.0540	0.0540	U	Blank detection
262329	DGWC-12	Mercury	-	0.00006	U	Blank detection
262329	DGWC-9	Mercury	-	0.000042	U	Blank detection
262329	DGWC-8	Mercury	-	0.000042	U	Blank detection
262329	DGWC-5	Mercury	-	0.000090	U	Blank detection
262329	DGWA-70A	Radium-228	-	1.080	U	Blank detection
262329	DGWC-4	Radium-228	-	1.120	U	Blank detection
262329	DGWC-5	Radium-228	-	1.330	U	Blank detection
262329	DGWC-9	Radium-228	-	1.180	U	Blank detection
262329	DGWC-10	Radium-228	-	0.942	U	Blank detection
262329	DGWA-70A	Total Radium	-	1.22	U	Blank detection. Total radium is > MDC and non-qualified component is < MDC
262329	DGWC-4	Total Radium	-	-	J+	Blank detection. Total radium is > MDC and non-qualified component is > MDC
262329	DGWC-5	Total Radium	-	-	J+	Blank detection. Total radium is > MDC and non-qualified component is > MDC
262329	DGWC-9	Total Radium	-	-	J+	Blank detection. Total radium is > MDC and non-qualified component is > MDC
262329	DGWC-10	Total Radium	-	-	J+	Blank detection. Total radium is > MDC and non-qualified component is > MDC
262329	DGWA-70A	Barium	-	-	J+	MS and/or MSD recovery above QC criteria
262329	DGWA-71	Barium	-	-	J+	MS and/or MSD recovery above QC criteria
262329	DGWC-2	Barium	-	-	J+	MS and/or MSD recovery above QC criteria
262329	DGWC-4	Barium	-	-	J+	MS and/or MSD recovery above QC criteria
262329	DGWC-5	Barium	-	-	J+	MS and/or MSD recovery above QC criteria
262329	DGWC-8	Barium	-	-	J+	MS and/or MSD recovery above QC criteria
262329	DGWC-9	Barium	-	-	J+	MS and/or MSD recovery above QC criteria
262329	FD-1	Barium	-	-	J+	MS and/or MSD recovery above QC criteria
262329	DGWC-10	Barium	-	-	J+	MS and/or MSD recovery above QC criteria
262329	DGWC-11	Barium	-	-	J+	MS and/or MSD recovery above QC criteria
262329	DGWC-12	Barium	-	-	J+	MS and/or MSD recovery above QC criteria
262329	DGWC-14	Barium	-	-	J+	MS and/or MSD recovery above QC criteria
262357	DGWC-13	Boron	0.11	0.11	U	Blank detection
262357	DGWC-15	Cobalt	-	0.0016	U	Blank detection
262357	DGWC-17	Arsenic	-	0.00073	U	Blank detection
262357	DGWC-17	Cobalt	0.020	0.020	U	Blank detection
262357	DGWC-19	Arsenic	-	0.0028	U	Blank detection
262357	DGWC-21	Cobalt	-	0.0094	U	Blank detection
262357	DGWC-42	Arsenic	-	0.0011	U	Blank detection
262357	DGWC-42	Cobalt	0.017	0.017	U	Blank detection
262357	DGWC-22	Arsenic	-	0.0010	U	Blank detection
262357	GDWC-22	Cobalt	-	0.0098	U	Blank detection
262357	FD-2	Arsenic	-	0.0014	U	Blank detection
262357	FD-2	Cobalt	0.020	0.020	U	Blank detection
262357	DGWC-15	Radium-226	-	0.459	U	Blank detection
262357	DGWC-42	Radium-226	-	0.555	U	Blank detection
262357	DGWC-22	Radium-226	-	0.522	U	Blank detection
262357	DGWC-15	Total Radium	-	1.17	U	Blank detection. Total radium is > MDC and non-qualified component is < MDC
262357	FD-2	Boron	-	-	J+	MS and/or MSD recovery above QC criteria
262357	DGWC-42	Boron	-	-	J+	MS and/or MSD recovery above QC criteria
262357	DGWC-22	Boron	-	-	J+	MS and/or MSD recovery above QC criteria
262357	FD-2	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
262357	DGWC-42	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
262357	DGWC-22	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
262357	DGWC-17	Fluoride	-	-	J	Sample exceeds RPD field goals for precision
262357	FD-2	Fluoride	-	-	J	Sample exceeds RPD field goals for precision

Abbreviations:
MDC: Minimum detectable concentration
MS/MSD: Matrix spike / matrix spike duplicate
MDL: Method detection limit
RL : Reporting limit
SDG : Sample delivery group
RPD: Relative percent difference

Qualifiers:
J+ : Estimated result, biased high
J-: Estimated result, biased low
J: Estimated result
U : Non-detect result

New RL, MDL or MDC refers to raising respective RLs or MDLs to the sample result as part of the blank qualification process.

TABLE 2
Georgia Power Company - Plant McDonough
Qualifier Summary Table - February-March 2018

SDG	*Sample Name*	*Constituent*	*New RL*	*New MDL or MDC*	*Qualifier*	*Reason*
262659	DGWA-53	Radium-226	-	0.372	U	Blank detection
262659	DGWA-53	Total Radium	-	-	J+	Blank detection. Total radium is > MDC and non-qualified component is > MDC
262423	DGWC-47	Radium-228	-	1.18	U	Blank detection
262423	DGWC-39	Radium-228	-	1.10	U	Blank detection
262423	DGWC-38	Radium-228	-	0.847	U	Blank detection
262423	DGWC-68A	Radium-228	-	0.796	U	Blank detection
262423	DGWC-48	Radium-228	-	1.210	U	Blank detection
262423	DGWC-47	Total Radium	-	-	J+	Blank detection. Total radium is > MDC and non-qualified component is > MDC
262423	DGWC-39	Total Radium	-	1.24	U	Blank detection. Total radium is > MDC and non-qualified component is < MDC
262423	DGWC-68A	Total Radium	-	-	J+	Blank detection. Total radium is > MDC and non-qualified component is > MDC
262423	DGWC-48	Total Radium	-	-	J+	Blank detection. Total radium is > MDC and non-qualified component is > MDC
262423	DGWC-37	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
262423	DGWC-23	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
262423	DGWC-47	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
262423	DGWC-39	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
262423	DGWC-38	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
262423	DGWC-67	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
262423	DGWC-68A	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
262423	DGWC-69	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
262423	DGWC-40	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
262423	DGWC-48	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%

Abbreviations:
MDC: Minimum detectable concentration
MS/MSD: Matrix spike / matrix spike duplicate
MDL: Method detection limit
RL : Reporting limit
SDG : Sample delivery group
RPD: Relative percent difference

Qualifiers:
J+ : Estimated result, biased high
J-: Estimated result, biased low
J: Estimated result
U : Non-detect result

New RL, MDL or MDC refers to raising respective RLs or MDLs as part of the blank qualification process

LEVEL 2A LABORATORY DATA VALIDATIONS

March 2019

Georgia Power Company - Plant McDonough
Quality Control Review of Analytical Data – March 2019

This narrative presents results of the Quality Control (QC) data review that was performed on the analytical data submitted by Pace Analytical Services, LLC for groundwater samples collected at Plant McDonough between March 12, 2019 and March 14, 2019. The chemical data were reviewed to identify quality issues which could affect the use of the data for decision making purposes.

Information regarding the primary sample locations, analytical parameters, QC samples, sampling dates, and laboratory sample delivery group (SDG) designations is summarized in Table 1. In accordance with groundwater monitoring and corrective action procedures discussed in Title 40 CFR, Subpart D - Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, the samples were analyzed for detection monitoring constituents listed in 40 CFR, Part 257, Appendix III. Test methods included Inductively Coupled Plasma- Mass Spectrometry (USEPA Method 6020B), Determination of Inorganic Anions (USEPA Method 300.0), and Solids in Water (Standard Methods 2540C).

Data were reviewed in accordance with the US EPA Region IV Data Validation Standard Operating Procedures for Contract Laboratory Program Inorganic Data by Inductively Coupled Plasma – Atomic Emission Spectroscopy and Inductively Coupled Plasma – Mass Spectroscopy (September 2011, Rev. 2.0) and the National Functional Guidelines for Inorganic Superfund Methods Data Review (January 2017). In addition, Southern Company Services, Inc. provided data validation guidance. The review included an assessment of the results for completeness, precision (laboratory duplicates, matrix spike/matrix spike duplicates), accuracy (laboratory control samples and matrix spike samples), and blank contamination (including laboratory blanks). Additionally, sample procedures, holding times and chains-of-custody were reviewed. Where there was a discrepancy between the QC criteria in the guidelines and the QC criterion established in the analytic methodology, method-specific criteria or professional judgment was used.

DATA QUALITY OBJECTIVES

Laboratory Precision: Laboratory goals for precision were met.

Field Precision: Field goals for precision were met.

Accuracy: Laboratory goals for accuracy were met, with the exception of total dissolved solids (TDS), sulfate, fluoride, and chloride as described in the qualifications sections below.

Detection Limits: Project goals for detection limits were met. Certain samples were diluted due to the concentration of the target analytes. Dilutions do not require qualifications based on USEPA guidelines. Detection and reporting limits of non-detect compounds are elevated proportional to the dilution when undiluted sample results are not provided by the laboratory. The data usability of diluted results was evaluated by the data user in the context of site-wide characterization.

Completeness: There were no rejected analytical results for this event, resulting in a completion of 100%.

Holding Times: All holding time requirements were met, with the exception of TDS reanalysis in SDG 2616158.

QUALIFICATIONS

In general, chemical results for the samples collected at the site were qualified on the basis of low precision or accuracy, or on the basis of professional judgment. The following definitions provide brief explanations of the qualifiers which may have been assigned to data by the laboratory during the data validation process.

J	The analyte was positively identified above the method detection limit; however, the associated numerical value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified above the method detection limit; however, the concentration reported is an estimated value that may be biased high.
J-	The analyte was reported above the method detection limit; however, the concentration reported is an estimated value that may be biased low.
U	The analyte was not detected above the method detection limit.

The data generated as part of this sampling event met the QC criteria established in the respective analytical methods and data validation guidelines except as specified below. Although these qualifications were applied to some data from of the samples collected at the site, the qualifications may not have been required or applied to all samples collected. A summary of sample qualifications can be found in Table 2.

- Certain chloride and sulfate results in SDGs 2616034, 2616035, 2616156, 2616158, and 2616160 were qualified as estimated biased low (J-) as the associated matrix spike/matrix spike duplicate (MS/MSD) recoveries were below the QC criteria.
- Certain fluoride results in SDG 2616160 were qualified as estimated biased high (J+) when the associated MS/MSD recoveries exceeded QC criteria.
- Certain TDS results in SDG 2616158 were qualified as estimated biased high (J+) as the associated laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries were above the QC criteria.
- Certain TDS, fluoride, and sulfate results in SDGs 2616156, 2616034, and 2616035 were qualified non-detect (U) when the analyte was detected at a similar level in an associated blank sample. As shown in Table 2, when the original sample result was below the RL, the method detection limit was raised to the sample result as part of the qualification process. When the original sample result was above the RL, both the MDL and the RL were raised to the sample result as part of the qualification process.
- Certain TDS results in SDG 2616158 were reanalyzed out of analytical hold time due to a batch QC exceedance. These results confirmed the original results from the analyses conducted within analytical hold time. The out of holding time analyses were deemed non-reportable during the validation process.

Golder reviewed the data from samples collected at the Plant McDonough Ash Ponds between March 12, 2019 and March 14, 2019 in accordance with the analytical methods, the laboratory specific QC criteria, and the guidelines. As described above, results were acceptable for project use.

REFERENCE

USEPA, September 2011, Region 4, Science and Ecosystem Support Division, Quality Assurance Section, MTSB, *Data Validation Standard Operating Procedures for Contract Laboratory Program Inorganic Data By Inductively Coupled Plasma – Atomic Emission Spectroscopy and Inductively Coupled Plasma – Mass Spectroscopy,* Revision 2.0.

USEPA, January 2017, National, Office of Superfund Remediation and Technology Innovation, *National Functional Guidelines for Inorganic Superfund Methods Data Review,* Revision 0.0.

TABLE 1
Georgia Power Company - Plant McDonough
Sample Summary Table - March 2019

						Analyses		
SDGs	*Field Identification*	*Collection Date*	*Lab Identification Number*	*Matrix*	*QC Samples*	*Select Metals (6020B)*	*Anions (300.0)*	*TDS (2540C)*
2616034	DGWC-2	3/12/2019	2616034001	GW	-	X	X	X
2616034	DGWC-4	3/12/2019	2616034002	GW	-	X	X	X
2616034	DGWA-5	3/12/2019	2616034003	GW	-	X	X	X
2616034	DGWC-8	3/12/2019	2616034004	GW	-	X	X	X
2616034	DGWC-9	3/12/2019	2616034005	GW	-	X	X	X
2616034	DGWC-10	3/12/2019	2616034006	GW	-	X	X	X
2616034	DGWC-11	3/12/2019	2616034007	GW	-	X	X	X
2616034	DGWC-12	3/12/2019	2616034008	GW	-	X	X	X
2616034	FB-1	3/12/2019	2616034009	WQ	FB	X	X	X
2616034	EB-1	3/12/2019	2616034010	WQ	EB	X	X	X
2616034	FD-2	3/12/2019	2616034011	GW	FD (DGWC-4)	X	X	X
2616035	DGWA-70A	3/12/2019	2616035001	GW	-	X	X	X
2616035	DGWA-71	3/12/2019	2616035001	GW	-	X	X	X
2616035	FD-1	3/12/2019	2616035001	GW	FD (DGWA-70A)	X	X	X
2616035	EB-1	3/12/2019	2616035001	WQ	EB	X	X	X
2616158	DGWC-37	3/13/2019	2616158001	GW	-	X	X	X
2616158	DGWC-38	3/13/2019	2616158002	GW	-	X	X	X
2616158	DGWC-39	3/13/2019	2616158003	GW	-	X	X	X
2616158	DGWC-40	3/13/2019	2616158004	GW	-	X	X	X
2616158	DGWC-67	3/13/2019	2616158005	GW	-	X	X	X
2616158	DGWC-68A	3/13/2019	2616158006	GW	-	X	X	X
2616158	DGWC-69	3/13/2019	2616158007	GW	-	X	X	X
2616158	EB-3	3/13/2019	2616158008	WQ	EB	X	X	X
2616158	FD-3	3/13/2019	2616158009	GW	FD (DGWC-69)	X	X	X
2616156	DGWA-53	3/13/2019	2616156001	GW	-	X	X	X
2616156	FB-2	3/13/2019	2616156002	WQ	FB	X	X	X
2616160	DGWC-13	3/13/2019	2616160001	GW	-	X	X	X
2616160	DGWC-14	3/13/2019	2616160002	GW	-	X	X	X
2616160	DGWC-17	3/13/2019	2616160003	GW	-	X	X	X
2616160	DGWC-19	3/13/2019	2616160004	GW	-	X	X	X
2616160	DGWC-20	3/13/2019	2616160005	GW	-	X	X	X
2616160	DGWC-21	3/13/2019	2616160006	GW	-	X	X	X
2616160	DGWC-15	3/14/2019	2616160007	GW	-	X	X	X
2616160	DGWC-22	3/14/2019	2616160008	GW	-	X	X	X
2616160	DGWC-23	3/14/2019	2616160009	GW	-	X	X	X
2616160	DGWC-42	3/14/2019	2616160010	GW	-	X	X	X
2616160	DGWC-47	3/14/2019	2616160011	GW	-	X	X	X
2616160	DGWC-48	3/14/2019	2616160012	GW	-	X	X	X
2616160	FB-3	3/14/2019	2616160013	WQ	FB	X	X	X

Abbreviations:
FB - Field blank
FD - Field duplicate
GW - Groundwater
EB- Equipment blank
TDS - Total dissolved solids
WQ - Water quality control
QC - Quality control

TABLE 2
Georgia Power Company - Plant McDonough
Qualifier Summary Table - March 2019

SDG	Sample Name	Constituent	New RL	New MDL	Qualifier	Reason
2616156	DGWA-53	TDS	201	201	U	Blank contamination
2616158	DGWC-40	TDS	-	-	J+	LCS and/or LCSD recovered above QC criteria
2616158	DGWC-37	TDS	-	-	J+	LCS and/or LCSD recovered above QC criteria
2616158	DGWC-38	TDS	-	-	J+	LCS and/or LCSD recovered above QC criteria
2616158	DGWC-39	TDS	-	-	J+	LCS and/or LCSD recovered above QC criteria
2616158	DGWC-67	TDS	-	-	J+	LCS and/or LCSD recovered above QC criteria
2616158	DGWC-68A	TDS	-	-	J+	LCS and/or LCSD recovered above QC criteria
2616156	DGWA-53	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616158	DGWC-37	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616158	DGWC-38	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616158	DGWC-39	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616158	DGWC-40	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616158	DGWC-67	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616158	DGWC-68A	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616158	DGWC-69	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616158	FD-3	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616034	DGWC-2	Fluoride	-	0.052	U	Blank contamination
2616034	DGWC-4	Fluoride	-	0.082	U	Blank contamination
2616034	DGWC-11	Fluoride	-	0.052	U	Blank contamination
2616034	DGWC-12	Fluoride	-	0.065	U	Blank contamination
2616034	FD-2	Fluoride	-	0.083	U	Blank contamination
2616034	DGWC-2	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616034	DGWC-4	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616034	DGWA-5	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616034	DGWC-8	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616034	DGWC-9	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616034	DGWC-10	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616034	DGWC-11	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616034	DGWC-12	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616034	FD-2	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616035	DGWA-70A	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616035	DGWA-71	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616035	FD-1	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616035	DGWA-70A	TDS	43	43	U	Blank contamination
2616035	DGWA-71	TDS	74	74	U	Blank contamination
2616035	FD-1	TDS	50	50	U	Blank contamination
2616035	DGWA-70A	Sulfate	-	0.35	U	Blank contamination
2616035	FD-1	Sulfate	-	0.37	U	Blank contamination
2616160	DGWC-13	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616160	DGWC-14	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616160	DGWC-17	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616160	DGWC-19	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616160	DGWC-20	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616160	DGWC-21	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616160	DGWC-15	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616160	DGWC-22	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616160	DGWC-23	Sulfate	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616160	DGWC-42	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616160	DGWC-47	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616160	DGWC-48	Chloride	-	-	J-	MS and/or MSD recovered below QC criteria and above 10%
2616160	DGWC-47	Fluoride	-	-	J+	MS and/or MSD recovered above QC criteria
2616160	DGWC-48	Fluoride	-	-	J+	MS and/or MSD recovered above QC criteria

Abbreviations:
MDC: Minimum detectable concentration
MDL: Method detection limit
LCS/LCSD: Laboratory control sample / laboratory control sample duplicate
MS/MSD: Matrix spike / matrix spike duplicate
RL : Reporting limit
SDG : Sample delivery group
QC: Quality Control
RPD: Relative percent difference

Qualifiers:
J+ : Estimated result, biased high
J-: Estimated result, biased low
U : Non-detect result

New RL, MDL or MDC refers to raising respective RLs or MDLs to the sample result as part of the blank qualification process.

APPENDIX B

Statistical Analyses

Prediction Limit

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated Printed 7/23/2019, 6:16 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	DGWC-10	0.13	n/a	3/12/2019	0.98	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-11	0.13	n/a	3/12/2019	1.2	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-12	0.13	n/a	3/12/2019	4.8	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-13	0.13	n/a	3/13/2019	0.62	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-15	0.13	n/a	3/14/2019	1.6	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-17	0.13	n/a	3/13/2019	0.76	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-19	0.13	n/a	3/13/2019	2.6	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-20	0.13	n/a	3/13/2019	5.6	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-21	0.13	n/a	3/13/2019	6.2	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-22	0.13	n/a	3/14/2019	4.1	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-42	0.13	n/a	3/14/2019	0.89	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-47	0.13	n/a	3/14/2019	0.26	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-48	0.13	n/a	3/14/2019	0.72	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-5	0.13	n/a	3/12/2019	4.3	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-4	0.13	n/a	3/12/2019	4.6	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-9	0.13	n/a	3/12/2019	1.2	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-8	0.13	n/a	3/12/2019	1.5	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-2	0.13	n/a	3/12/2019	0.72	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	DGWC-23	0.13	n/a	3/14/2019	4.7	Yes	28	10.71	n/a	0.001991	NP Inter (normality) ...
Calcium (mg/L)	DGWC-10	40.3	n/a	3/12/2019	83.5	Yes	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	DGWC-11	40.3	n/a	3/12/2019	61.4	Yes	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	DGWC-12	40.3	n/a	3/12/2019	62.1	Yes	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	DGWC-13	40.3	n/a	3/13/2019	42.1	Yes	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	DGWC-19	40.3	n/a	3/13/2019	76.9	Yes	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	DGWC-20	40.3	n/a	3/13/2019	86.4	Yes	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	DGWC-21	40.3	n/a	3/13/2019	79.9	Yes	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	DGWC-22	40.3	n/a	3/14/2019	64.8	Yes	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	DGWC-42	40.3	n/a	3/14/2019	43.5	Yes	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	DGWC-48	40.3	n/a	3/14/2019	74.6	Yes	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	DGWC-5	40.3	n/a	3/12/2019	110	Yes	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	DGWC-4	40.3	n/a	3/12/2019	295	Yes	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	DGWC-9	40.3	n/a	3/12/2019	78.1	Yes	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	DGWC-8	40.3	n/a	3/12/2019	54.3	Yes	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	DGWC-2	40.3	n/a	3/12/2019	52.2	Yes	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	DGWC-23	40.3	n/a	3/14/2019	73.2	Yes	29	0	n/a	0.001869	NP Inter (normality) ...
Chloride (mg/L)	DGWC-10	4.211	n/a	3/12/2019	12.1	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	DGWC-11	4.211	n/a	3/12/2019	14.5	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	DGWC-12	4.211	n/a	3/12/2019	12.1	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	DGWC-13	4.211	n/a	3/13/2019	12.4	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	DGWC-15	4.211	n/a	3/14/2019	24	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	DGWC-17	4.211	n/a	3/13/2019	19.9	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	DGWC-19	4.211	n/a	3/13/2019	40.1	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	DGWC-20	4.211	n/a	3/13/2019	24.8	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	DGWC-21	4.211	n/a	3/13/2019	21.3	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	DGWC-22	4.211	n/a	3/14/2019	26.3	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	DGWC-42	4.211	n/a	3/14/2019	24.8	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	DGWC-47	4.211	n/a	3/14/2019	6.6	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	DGWC-48	4.211	n/a	3/14/2019	10.2	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	DGWC-5	4.211	n/a	3/12/2019	10.6	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	DGWC-4	4.211	n/a	3/12/2019	24.2	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2

Prediction Limit

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated Printed 7/23/2019, 6:16 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Chloride (mg/L)	DGWC-9	4.211	n/a	3/12/2019	8.5	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	DGWC-8	4.211	n/a	3/12/2019	10.7	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	DGWC-23	4.211	n/a	3/14/2019	15.2	Yes	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	DGWC-10	0.4097	n/a	3/12/2019	1.7	Yes	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	DGWC-20	0.4097	n/a	3/13/2019	0.45	Yes	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	DGWC-47	0.4097	n/a	3/14/2019	1.6	Yes	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	DGWC-48	0.4097	n/a	3/14/2019	1.4	Yes	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	DGWC-9	0.4097	n/a	3/12/2019	0.97	Yes	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	DGWC-17	6.619	5.099	3/13/2019	5.07	Yes	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	DGWC-19	6.619	5.099	3/13/2019	4.76	Yes	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	DGWC-20	6.619	5.099	3/13/2019	4.65	Yes	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	DGWC-47	6.619	5.099	3/14/2019	3.88	Yes	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	DGWC-48	6.619	5.099	3/14/2019	4.12	Yes	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	DGWC-5	6.619	5.099	3/12/2019	4.42	Yes	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	DGWC-9	6.619	5.099	3/12/2019	3.98	Yes	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	DGWC-8	6.619	5.099	3/12/2019	5.07	Yes	29	0	No	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-10	38.5	n/a	3/12/2019	297	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-11	38.5	n/a	3/12/2019	275	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-12	38.5	n/a	3/12/2019	284	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-13	38.5	n/a	3/13/2019	179	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-14	38.5	n/a	3/13/2019	41.2	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-15	38.5	n/a	3/14/2019	195	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-17	38.5	n/a	3/13/2019	268	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-19	38.5	n/a	3/13/2019	299	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-20	38.5	n/a	3/13/2019	539	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-21	38.5	n/a	3/13/2019	312	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-22	38.5	n/a	3/14/2019	297	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-42	38.5	n/a	3/14/2019	404	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-47	38.5	n/a	3/14/2019	238	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-48	38.5	n/a	3/14/2019	450	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-5	38.5	n/a	3/12/2019	484	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-4	38.5	n/a	3/12/2019	987	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-9	38.5	n/a	3/12/2019	362	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-8	38.5	n/a	3/12/2019	295	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-2	38.5	n/a	3/12/2019	159	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
Sulfate (mg/L)	DGWC-23	38.5	n/a	3/14/2019	266	Yes	31	0	sqrt(x)	0.000...	Param Inter 1 of 2
TDS (mg/L)	DGWC-10	350.4	n/a	3/12/2019	436	Yes	28	0	x^(1/3)	0.000...	Param Inter 1 of 2
TDS (mg/L)	DGWC-11	350.4	n/a	3/12/2019	433	Yes	28	0	x^(1/3)	0.000...	Param Inter 1 of 2
TDS (mg/L)	DGWC-12	350.4	n/a	3/12/2019	465	Yes	28	0	x^(1/3)	0.000...	Param Inter 1 of 2
TDS (mg/L)	DGWC-13	350.4	n/a	3/13/2019	656	Yes	28	0	x^(1/3)	0.000...	Param Inter 1 of 2
TDS (mg/L)	DGWC-17	350.4	n/a	3/13/2019	802	Yes	28	0	x^(1/3)	0.000...	Param Inter 1 of 2
TDS (mg/L)	DGWC-20	350.4	n/a	3/13/2019	639	Yes	28	0	x^(1/3)	0.000...	Param Inter 1 of 2
TDS (mg/L)	DGWC-21	350.4	n/a	3/13/2019	486	Yes	28	0	x^(1/3)	0.000...	Param Inter 1 of 2
TDS (mg/L)	DGWC-22	350.4	n/a	3/14/2019	491	Yes	28	0	x^(1/3)	0.000...	Param Inter 1 of 2
TDS (mg/L)	DGWC-42	350.4	n/a	3/14/2019	630	Yes	28	0	x^(1/3)	0.000...	Param Inter 1 of 2
TDS (mg/L)	DGWC-47	350.4	n/a	3/14/2019	378	Yes	28	0	x^(1/3)	0.000...	Param Inter 1 of 2
TDS (mg/L)	DGWC-48	350.4	n/a	3/14/2019	625	Yes	28	0	x^(1/3)	0.000...	Param Inter 1 of 2
TDS (mg/L)	DGWC-5	350.4	n/a	3/12/2019	711	Yes	28	0	x^(1/3)	0.000...	Param Inter 1 of 2
TDS (mg/L)	DGWC-4	350.4	n/a	3/12/2019	1490	Yes	28	0	x^(1/3)	0.000...	Param Inter 1 of 2
TDS (mg/L)	DGWC-9	350.4	n/a	3/12/2019	493	Yes	28	0	x^(1/3)	0.000...	Param Inter 1 of 2

Prediction Limit

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated Printed 7/23/2019, 6:16 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
TDS (mg/L)	**DGWC-8**	**350.4**	**n/a**	**3/12/2019**	**438**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
TDS (mg/L)	**DGWC-23**	**350.4**	**n/a**	**3/14/2019**	**453**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**

Prediction Limit

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated Printed 7/23/2019, 6:16 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	**DGWC-10**	**0.13**	**n/a**	**3/12/2019**	**0.98**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	**DGWC-11**	**0.13**	**n/a**	**3/12/2019**	**1.2**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	**DGWC-12**	**0.13**	**n/a**	**3/12/2019**	**4.8**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	**DGWC-13**	**0.13**	**n/a**	**3/13/2019**	**0.62**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	DGWC-14	0.13	n/a	3/13/2019	0.047	No	28	10.71	n/a	0.001991	NP Inter (normality) ...
Boron (mg/L)	**DGWC-15**	**0.13**	**n/a**	**3/14/2019**	**1.6**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	**DGWC-17**	**0.13**	**n/a**	**3/13/2019**	**0.76**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	**DGWC-19**	**0.13**	**n/a**	**3/13/2019**	**2.6**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	**DGWC-20**	**0.13**	**n/a**	**3/13/2019**	**5.6**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	**DGWC-21**	**0.13**	**n/a**	**3/13/2019**	**6.2**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	**DGWC-22**	**0.13**	**n/a**	**3/14/2019**	**4.1**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	**DGWC-42**	**0.13**	**n/a**	**3/14/2019**	**0.89**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	**DGWC-47**	**0.13**	**n/a**	**3/14/2019**	**0.26**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	**DGWC-48**	**0.13**	**n/a**	**3/14/2019**	**0.72**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	**DGWC-5**	**0.13**	**n/a**	**3/12/2019**	**4.3**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	**DGWC-4**	**0.13**	**n/a**	**3/12/2019**	**4.6**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	**DGWC-9**	**0.13**	**n/a**	**3/12/2019**	**1.2**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	**DGWC-8**	**0.13**	**n/a**	**3/12/2019**	**1.5**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	**DGWC-2**	**0.13**	**n/a**	**3/12/2019**	**0.72**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Boron (mg/L)	**DGWC-23**	**0.13**	**n/a**	**3/14/2019**	**4.7**	**Yes**	**28**	**10.71**	**n/a**	**0.001991**	**NP Inter (normality) ...**
Calcium (mg/L)	**DGWC-10**	**40.3**	**n/a**	**3/12/2019**	**83.5**	**Yes**	**29**	**0**	**n/a**	**0.001869**	**NP Inter (normality) ...**
Calcium (mg/L)	**DGWC-11**	**40.3**	**n/a**	**3/12/2019**	**61.4**	**Yes**	**29**	**0**	**n/a**	**0.001869**	**NP Inter (normality) ...**
Calcium (mg/L)	**DGWC-12**	**40.3**	**n/a**	**3/12/2019**	**62.1**	**Yes**	**29**	**0**	**n/a**	**0.001869**	**NP Inter (normality) ...**
Calcium (mg/L)	**DGWC-13**	**40.3**	**n/a**	**3/13/2019**	**42.1**	**Yes**	**29**	**0**	**n/a**	**0.001869**	**NP Inter (normality) ...**
Calcium (mg/L)	DGWC-14	40.3	n/a	3/13/2019	9.7	No	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	DGWC-15	40.3	n/a	3/14/2019	34.7	No	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	DGWC-17	40.3	n/a	3/13/2019	11.9	No	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	**DGWC-19**	**40.3**	**n/a**	**3/13/2019**	**76.9**	**Yes**	**29**	**0**	**n/a**	**0.001869**	**NP Inter (normality) ...**
Calcium (mg/L)	**DGWC-20**	**40.3**	**n/a**	**3/13/2019**	**86.4**	**Yes**	**29**	**0**	**n/a**	**0.001869**	**NP Inter (normality) ...**
Calcium (mg/L)	**DGWC-21**	**40.3**	**n/a**	**3/13/2019**	**79.9**	**Yes**	**29**	**0**	**n/a**	**0.001869**	**NP Inter (normality) ...**
Calcium (mg/L)	**DGWC-22**	**40.3**	**n/a**	**3/14/2019**	**64.8**	**Yes**	**29**	**0**	**n/a**	**0.001869**	**NP Inter (normality) ...**
Calcium (mg/L)	**DGWC-42**	**40.3**	**n/a**	**3/14/2019**	**43.5**	**Yes**	**29**	**0**	**n/a**	**0.001869**	**NP Inter (normality) ...**
Calcium (mg/L)	DGWC-47	40.3	n/a	3/14/2019	36.6	No	29	0	n/a	0.001869	NP Inter (normality) ...
Calcium (mg/L)	**DGWC-48**	**40.3**	**n/a**	**3/14/2019**	**74.6**	**Yes**	**29**	**0**	**n/a**	**0.001869**	**NP Inter (normality) ...**
Calcium (mg/L)	**DGWC-5**	**40.3**	**n/a**	**3/12/2019**	**110**	**Yes**	**29**	**0**	**n/a**	**0.001869**	**NP Inter (normality) ...**
Calcium (mg/L)	**DGWC-4**	**40.3**	**n/a**	**3/12/2019**	**295**	**Yes**	**29**	**0**	**n/a**	**0.001869**	**NP Inter (normality) ...**
Calcium (mg/L)	**DGWC-9**	**40.3**	**n/a**	**3/12/2019**	**78.1**	**Yes**	**29**	**0**	**n/a**	**0.001869**	**NP Inter (normality) ...**
Calcium (mg/L)	**DGWC-8**	**40.3**	**n/a**	**3/12/2019**	**54.3**	**Yes**	**29**	**0**	**n/a**	**0.001869**	**NP Inter (normality) ...**
Calcium (mg/L)	**DGWC-2**	**40.3**	**n/a**	**3/12/2019**	**52.2**	**Yes**	**29**	**0**	**n/a**	**0.001869**	**NP Inter (normality) ...**
Calcium (mg/L)	**DGWC-23**	**40.3**	**n/a**	**3/14/2019**	**73.2**	**Yes**	**29**	**0**	**n/a**	**0.001869**	**NP Inter (normality) ...**
Chloride (mg/L)	**DGWC-10**	**4.211**	**n/a**	**3/12/2019**	**12.1**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Chloride (mg/L)	**DGWC-11**	**4.211**	**n/a**	**3/12/2019**	**14.5**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Chloride (mg/L)	**DGWC-12**	**4.211**	**n/a**	**3/12/2019**	**12.1**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Chloride (mg/L)	**DGWC-13**	**4.211**	**n/a**	**3/13/2019**	**12.4**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Chloride (mg/L)	DGWC-14	4.211	n/a	3/13/2019	3.4	No	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	**DGWC-15**	**4.211**	**n/a**	**3/14/2019**	**24**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Chloride (mg/L)	**DGWC-17**	**4.211**	**n/a**	**3/13/2019**	**19.9**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Chloride (mg/L)	**DGWC-19**	**4.211**	**n/a**	**3/13/2019**	**40.1**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Chloride (mg/L)	**DGWC-20**	**4.211**	**n/a**	**3/13/2019**	**24.8**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Chloride (mg/L)	**DGWC-21**	**4.211**	**n/a**	**3/13/2019**	**21.3**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**

Prediction Limit

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated Printed 7/23/2019, 6:16 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Chloride (mg/L)	**DGWC-22**	**4.211**	**n/a**	**3/14/2019**	**26.3**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Chloride (mg/L)	**DGWC-42**	**4.211**	**n/a**	**3/14/2019**	**24.8**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Chloride (mg/L)	**DGWC-47**	**4.211**	**n/a**	**3/14/2019**	**6.6**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Chloride (mg/L)	**DGWC-48**	**4.211**	**n/a**	**3/14/2019**	**10.2**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Chloride (mg/L)	**DGWC-5**	**4.211**	**n/a**	**3/12/2019**	**10.6**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Chloride (mg/L)	**DGWC-4**	**4.211**	**n/a**	**3/12/2019**	**24.2**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Chloride (mg/L)	**DGWC-9**	**4.211**	**n/a**	**3/12/2019**	**8.5**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Chloride (mg/L)	**DGWC-8**	**4.211**	**n/a**	**3/12/2019**	**10.7**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Chloride (mg/L)	DGWC-2	4.211	n/a	3/12/2019	3.1	No	31	0	x^(1/3)	0.000...	Param Inter 1 of 2
Chloride (mg/L)	**DGWC-23**	**4.211**	**n/a**	**3/14/2019**	**15.2**	**Yes**	**31**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Fluoride (mg/L)	**DGWC-10**	**0.4097**	**n/a**	**3/12/2019**	**1.7**	**Yes**	**29**	**37.93**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Fluoride (mg/L)	DGWC-11	0.4097	n/a	3/12/2019	0.052	No	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	DGWC-12	0.4097	n/a	3/12/2019	0.065	No	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	DGWC-13	0.4097	n/a	3/13/2019	0.13	No	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	DGWC-14	0.4097	n/a	3/13/2019	0.042	No	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	DGWC-15	0.4097	n/a	3/14/2019	0.057	No	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	DGWC-17	0.4097	n/a	3/13/2019	0.084	No	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	DGWC-19	0.4097	n/a	3/13/2019	0.22	No	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	**DGWC-20**	**0.4097**	**n/a**	**3/13/2019**	**0.45**	**Yes**	**29**	**37.93**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Fluoride (mg/L)	DGWC-21	0.4097	n/a	3/13/2019	0.043	No	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	DGWC-22	0.4097	n/a	3/14/2019	0.042	No	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	DGWC-42	0.4097	n/a	3/14/2019	0.0145ND	No	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	**DGWC-47**	**0.4097**	**n/a**	**3/14/2019**	**1.6**	**Yes**	**29**	**37.93**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Fluoride (mg/L)	**DGWC-48**	**0.4097**	**n/a**	**3/14/2019**	**1.4**	**Yes**	**29**	**37.93**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Fluoride (mg/L)	DGWC-5	0.4097	n/a	3/12/2019	0.31	No	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	DGWC-4	0.4097	n/a	3/12/2019	0.082	No	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	**DGWC-9**	**0.4097**	**n/a**	**3/12/2019**	**0.97**	**Yes**	**29**	**37.93**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
Fluoride (mg/L)	DGWC-8	0.4097	n/a	3/12/2019	0.35	No	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	DGWC-2	0.4097	n/a	3/12/2019	0.052	No	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
Fluoride (mg/L)	DGWC-23	0.4097	n/a	3/14/2019	0.092	No	29	37.93	x^(1/3)	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	DGWC-10	6.619	5.099	3/12/2019	5.26	No	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	DGWC-11	6.619	5.099	3/12/2019	5.7	No	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	DGWC-12	6.619	5.099	3/12/2019	5.98	No	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	DGWC-13	6.619	5.099	3/13/2019	5.79	No	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	DGWC-14	6.619	5.099	3/13/2019	5.61	No	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	DGWC-15	6.619	5.099	3/14/2019	5.77	No	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	**DGWC-17**	**6.619**	**5.099**	**3/13/2019**	**5.07**	**Yes**	**29**	**0**	**No**	**0.000...**	**Param Inter 1 of 2**
pH [field] (S.U.)	**DGWC-19**	**6.619**	**5.099**	**3/13/2019**	**4.76**	**Yes**	**29**	**0**	**No**	**0.000...**	**Param Inter 1 of 2**
pH [field] (S.U.)	**DGWC-20**	**6.619**	**5.099**	**3/13/2019**	**4.65**	**Yes**	**29**	**0**	**No**	**0.000...**	**Param Inter 1 of 2**
pH [field] (S.U.)	DGWC-21	6.619	5.099	3/13/2019	5.62	No	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	DGWC-22	6.619	5.099	3/14/2019	5.67	No	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	DGWC-42	6.619	5.099	3/14/2019	5.1	No	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	**DGWC-47**	**6.619**	**5.099**	**3/14/2019**	**3.88**	**Yes**	**29**	**0**	**No**	**0.000...**	**Param Inter 1 of 2**
pH [field] (S.U.)	**DGWC-48**	**6.619**	**5.099**	**3/14/2019**	**4.12**	**Yes**	**29**	**0**	**No**	**0.000...**	**Param Inter 1 of 2**
pH [field] (S.U.)	**DGWC-5**	**6.619**	**5.099**	**3/12/2019**	**4.42**	**Yes**	**29**	**0**	**No**	**0.000...**	**Param Inter 1 of 2**
pH [field] (S.U.)	DGWC-4	6.619	5.099	3/12/2019	5.85	No	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	**DGWC-9**	**6.619**	**5.099**	**3/12/2019**	**3.98**	**Yes**	**29**	**0**	**No**	**0.000...**	**Param Inter 1 of 2**
pH [field] (S.U.)	**DGWC-8**	**6.619**	**5.099**	**3/12/2019**	**5.07**	**Yes**	**29**	**0**	**No**	**0.000...**	**Param Inter 1 of 2**
pH [field] (S.U.)	DGWC-2	6.619	5.099	3/12/2019	5.94	No	29	0	No	0.000...	Param Inter 1 of 2
pH [field] (S.U.)	DGWC-23	6.619	5.099	3/14/2019	5.99	No	29	0	No	0.000...	Param Inter 1 of 2

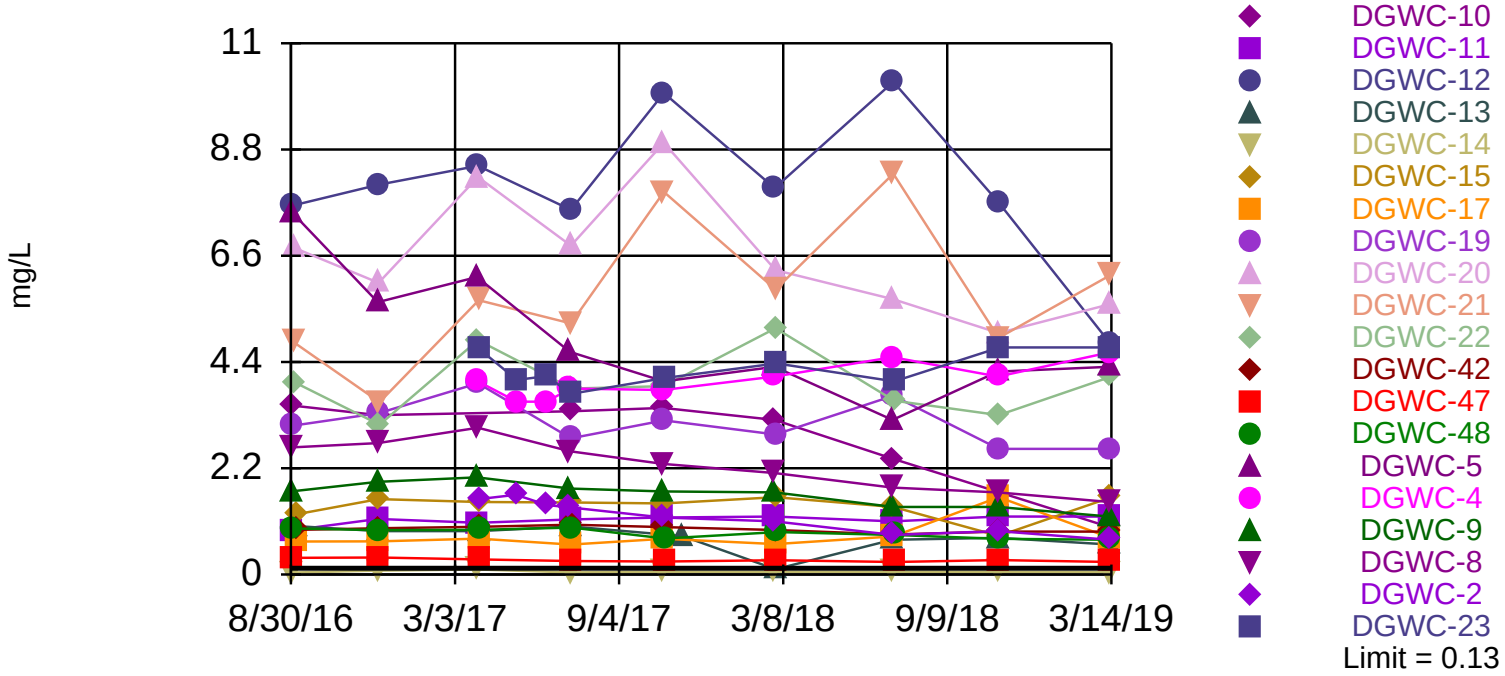
Prediction Limit

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated Printed 7/23/2019, 6:16 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Sulfate (mg/L)	**DGWC-10**	**38.5**	**n/a**	**3/12/2019**	**297**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-11**	**38.5**	**n/a**	**3/12/2019**	**275**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-12**	**38.5**	**n/a**	**3/12/2019**	**284**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-13**	**38.5**	**n/a**	**3/13/2019**	**179**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-14**	**38.5**	**n/a**	**3/13/2019**	**41.2**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-15**	**38.5**	**n/a**	**3/14/2019**	**195**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-17**	**38.5**	**n/a**	**3/13/2019**	**268**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-19**	**38.5**	**n/a**	**3/13/2019**	**299**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-20**	**38.5**	**n/a**	**3/13/2019**	**539**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-21**	**38.5**	**n/a**	**3/13/2019**	**312**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-22**	**38.5**	**n/a**	**3/14/2019**	**297**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-42**	**38.5**	**n/a**	**3/14/2019**	**404**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-47**	**38.5**	**n/a**	**3/14/2019**	**238**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-48**	**38.5**	**n/a**	**3/14/2019**	**450**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-5**	**38.5**	**n/a**	**3/12/2019**	**484**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-4**	**38.5**	**n/a**	**3/12/2019**	**987**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-9**	**38.5**	**n/a**	**3/12/2019**	**362**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-8**	**38.5**	**n/a**	**3/12/2019**	**295**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-2**	**38.5**	**n/a**	**3/12/2019**	**159**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
Sulfate (mg/L)	**DGWC-23**	**38.5**	**n/a**	**3/14/2019**	**266**	**Yes**	**31**	**0**	**sqrt(x)**	**0.000...**	**Param Inter 1 of 2**
TDS (mg/L)	**DGWC-10**	**350.4**	**n/a**	**3/12/2019**	**436**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
TDS (mg/L)	**DGWC-11**	**350.4**	**n/a**	**3/12/2019**	**433**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
TDS (mg/L)	**DGWC-12**	**350.4**	**n/a**	**3/12/2019**	**465**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
TDS (mg/L)	**DGWC-13**	**350.4**	**n/a**	**3/13/2019**	**656**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
TDS (mg/L)	DGWC-14	350.4	n/a	3/13/2019	280	No	28	0	x^(1/3)	0.000...	Param Inter 1 of 2
TDS (mg/L)	DGWC-15	350.4	n/a	3/14/2019	340	No	28	0	x^(1/3)	0.000...	Param Inter 1 of 2
TDS (mg/L)	**DGWC-17**	**350.4**	**n/a**	**3/13/2019**	**802**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
TDS (mg/L)	DGWC-19	350.4	n/a	3/13/2019	113	No	28	0	x^(1/3)	0.000...	Param Inter 1 of 2
TDS (mg/L)	**DGWC-20**	**350.4**	**n/a**	**3/13/2019**	**639**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
TDS (mg/L)	**DGWC-21**	**350.4**	**n/a**	**3/13/2019**	**486**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
TDS (mg/L)	**DGWC-22**	**350.4**	**n/a**	**3/14/2019**	**491**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
TDS (mg/L)	**DGWC-42**	**350.4**	**n/a**	**3/14/2019**	**630**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
TDS (mg/L)	**DGWC-47**	**350.4**	**n/a**	**3/14/2019**	**378**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
TDS (mg/L)	**DGWC-48**	**350.4**	**n/a**	**3/14/2019**	**625**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
TDS (mg/L)	**DGWC-5**	**350.4**	**n/a**	**3/12/2019**	**711**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
TDS (mg/L)	**DGWC-4**	**350.4**	**n/a**	**3/12/2019**	**1490**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
TDS (mg/L)	**DGWC-9**	**350.4**	**n/a**	**3/12/2019**	**493**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
TDS (mg/L)	**DGWC-8**	**350.4**	**n/a**	**3/12/2019**	**438**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**
TDS (mg/L)	DGWC-2	350.4	n/a	3/12/2019	297	No	28	0	x^(1/3)	0.000...	Param Inter 1 of 2
TDS (mg/L)	**DGWC-23**	**350.4**	**n/a**	**3/14/2019**	**453**	**Yes**	**28**	**0**	**x^(1/3)**	**0.000...**	**Param Inter 1 of 2**

Prediction Limit

Interwell Non-parametric



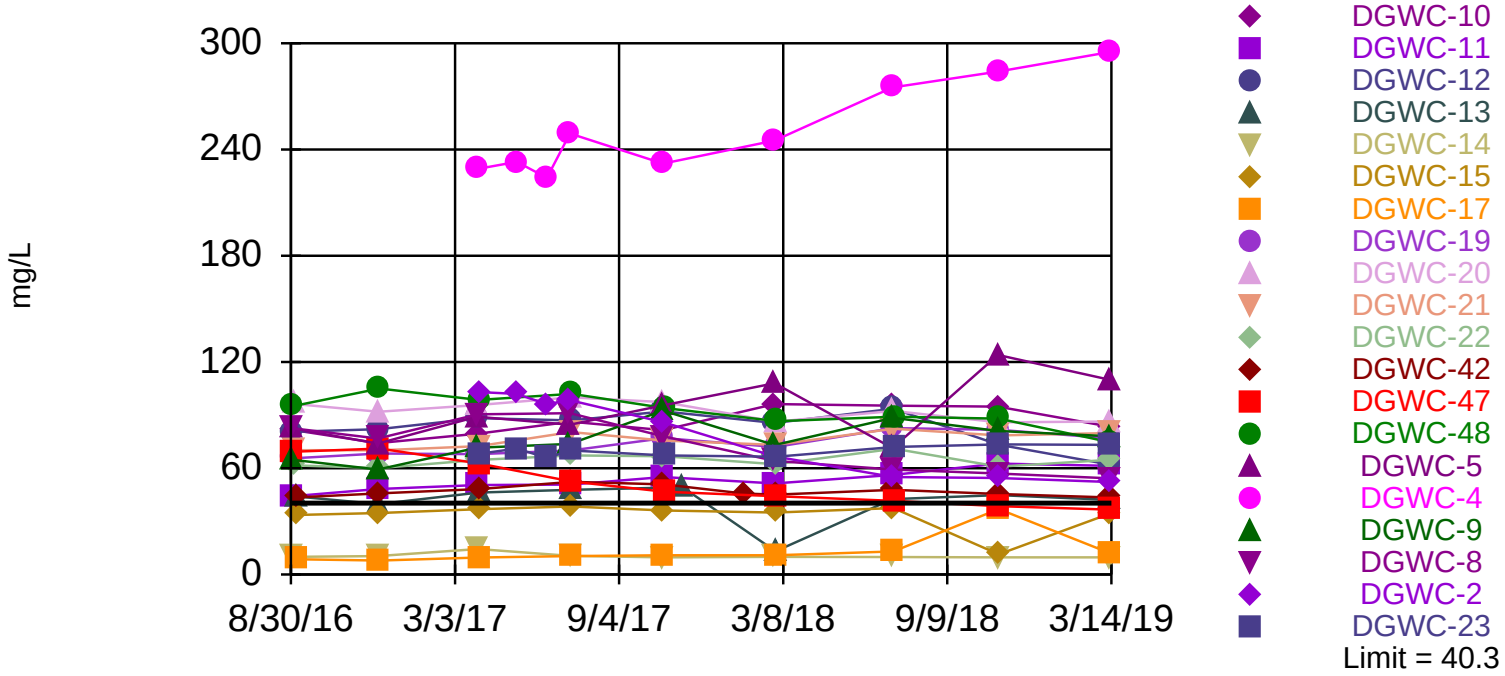
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 28 background values. 10.71% NDs. Annual per-constituent alpha = 0.07664. Individual comparison alpha = 0.001991 (1 of 2). Comparing 20 points to limit.

Constituent: Boron Analysis Run 7/23/2019 6:14 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Prediction Limit

Interwell Non-parametric



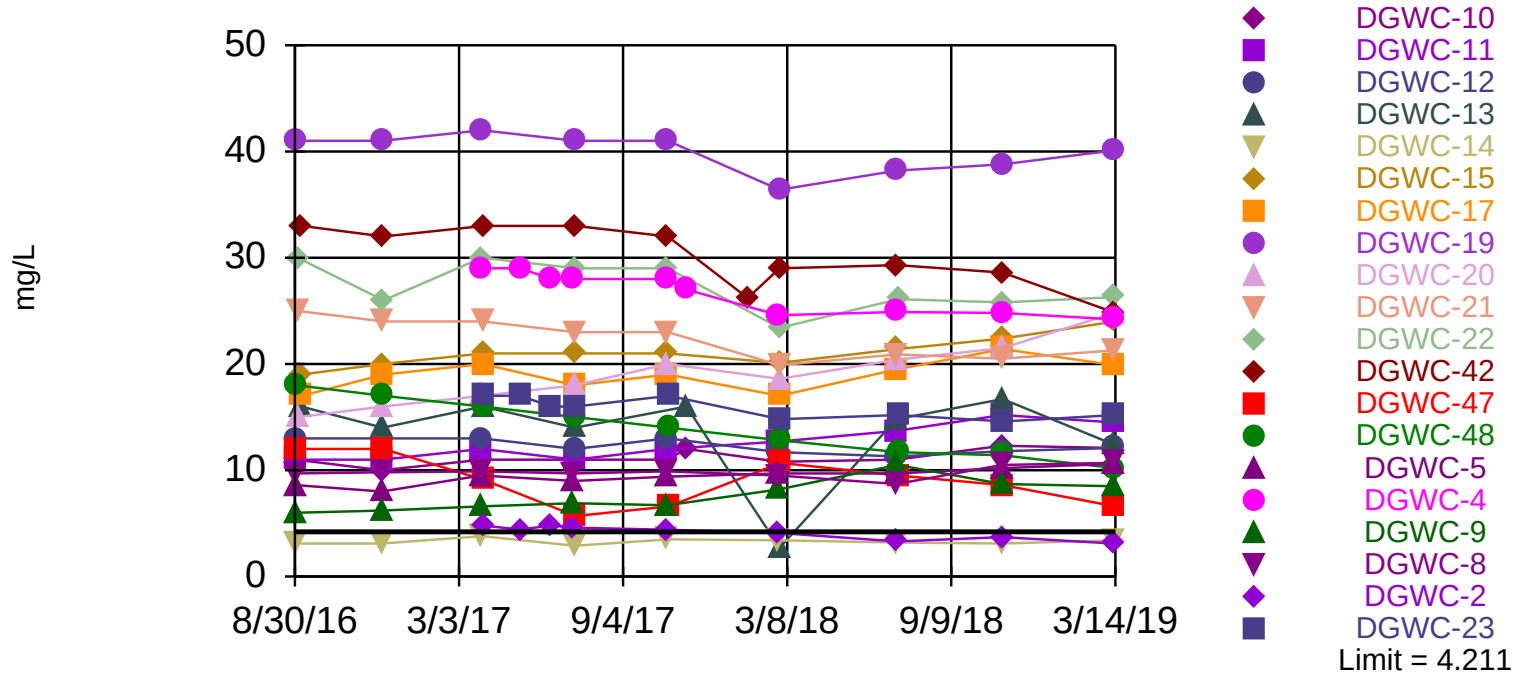
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 29 background values. Annual per-constituent alpha = 0.0721. Individual comparison alpha = 0.001869 (1 of 2). Comparing 20 points to limit.

Constituent: Calcium Analysis Run 7/23/2019 6:14 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Prediction Limit

Interwell Parametric



Background Data Summary (based on cube root transformation): Mean=1.39, Std. Dev.=0.09734, n=31. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.904, critical = 0.902. Kappa = 2.312 (c=7, w=20, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0003762. Comparing 20 points to limit.

Constituent: Chloride Analysis Run 7/23/2019 6:14 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

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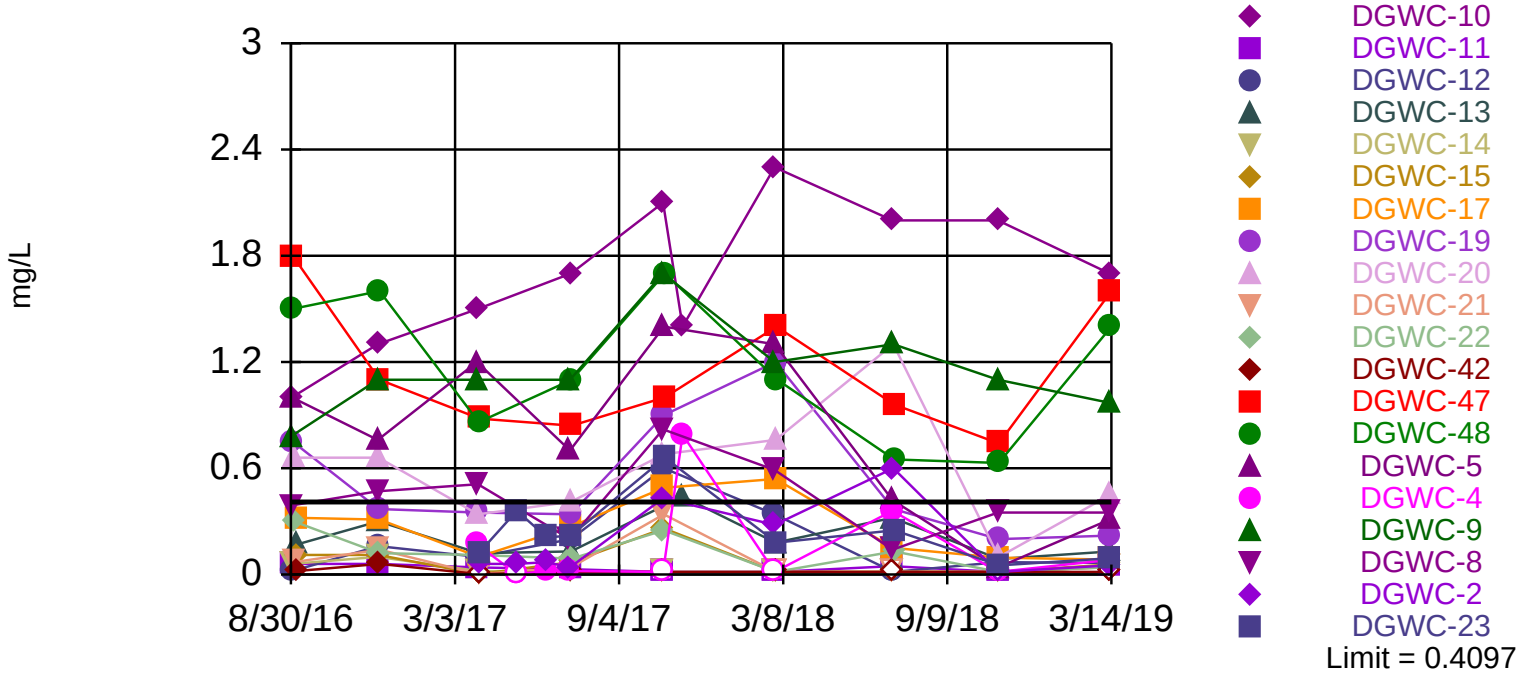
Hollow symbols indicate censored values.

Prediction Limit

Interwell Parametric



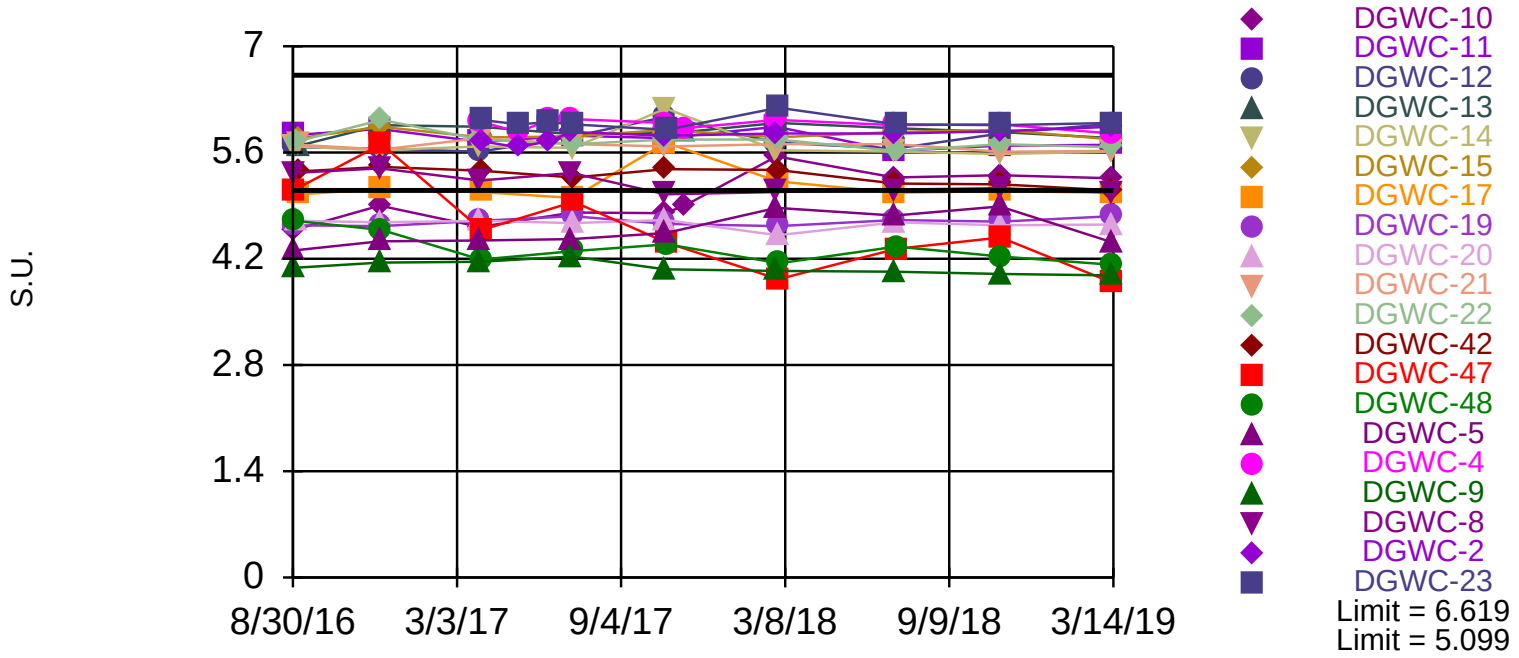
Background Data Summary (based on cube root transformation) (after Aitchison`s Adjustment): Mean=0.2409, Std. Dev.=0.2152, n=29, 37.93% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9266, critical = 0.898. Kappa = 2.332 (c=7, w=20, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0003762. Comparing 20 points to limit.

Constituent: Fluoride Analysis Run 7/23/2019 6:14 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Prediction Limit

Interwell Parametric



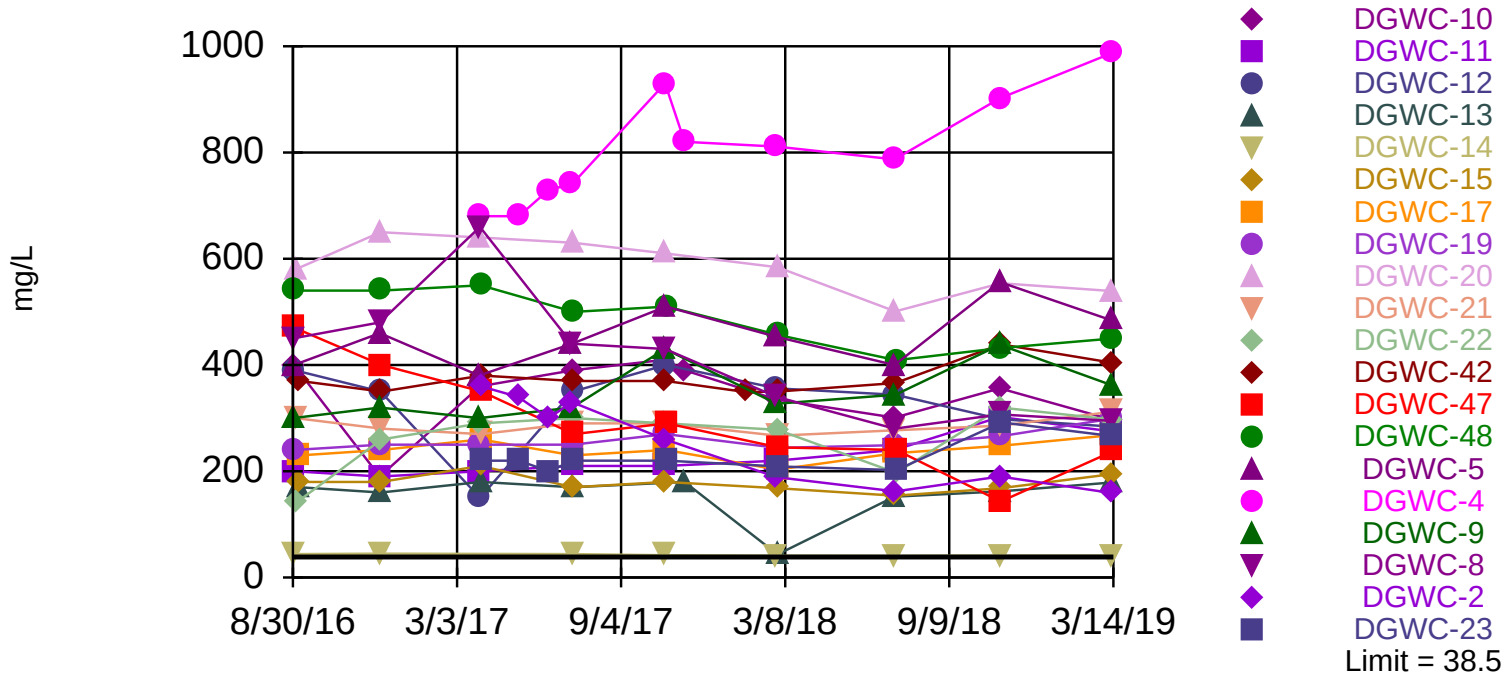
Background Data Summary: Mean=5.859, Std. Dev.=0.3258, n=29. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9016, critical = 0.898. Kappa = 2.332 (c=7, w=20, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0001881. Comparing 20 points to limit.

Constituent: pH [field] Analysis Run 7/23/2019 6:14 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Prediction Limit

Interwell Parametric



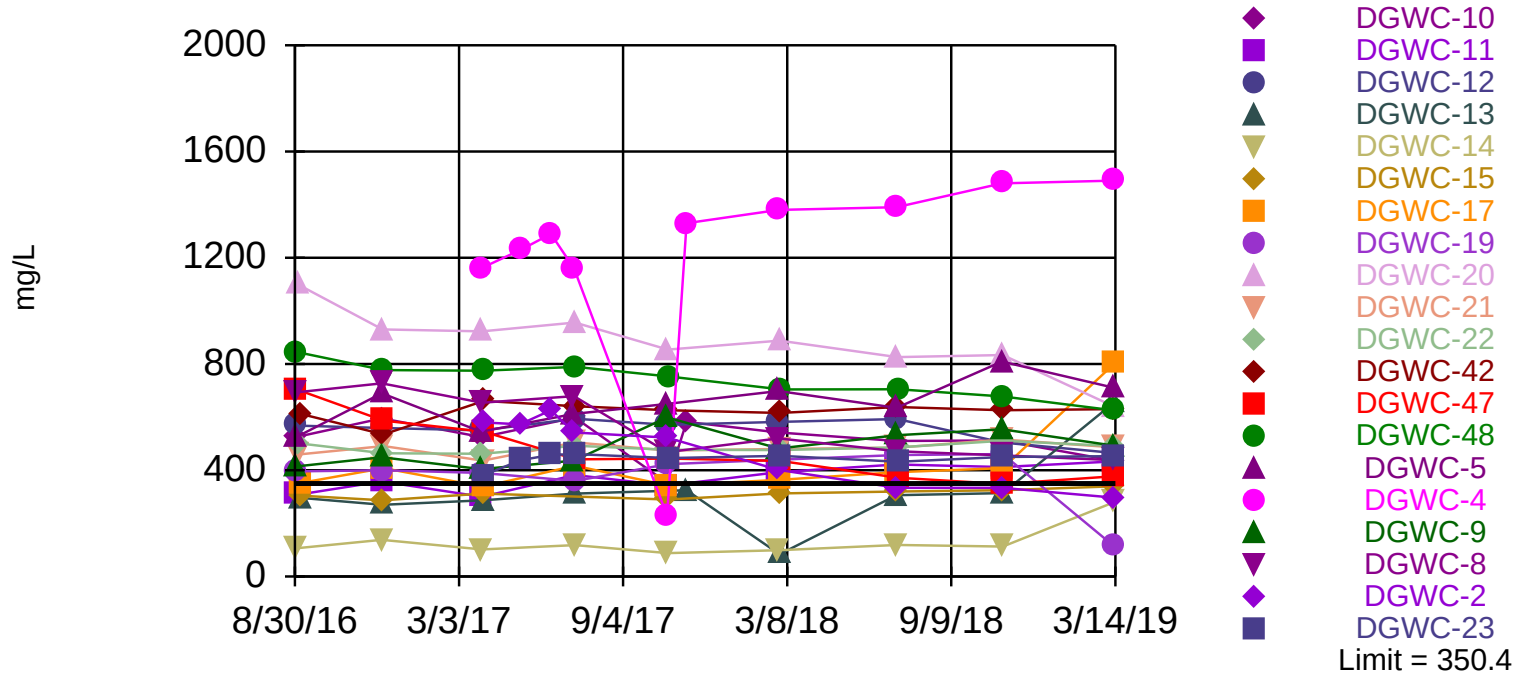
Background Data Summary (based on square root transformation): Mean=2.637, Std. Dev.=1.543, n=31. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9382, critical = 0.902. Kappa = 2.312 (c=7, w=20, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0003762. Comparing 20 points to limit.

Constituent: Sulfate Analysis Run 7/23/2019 6:14 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Prediction Limit

Interwell Parametric



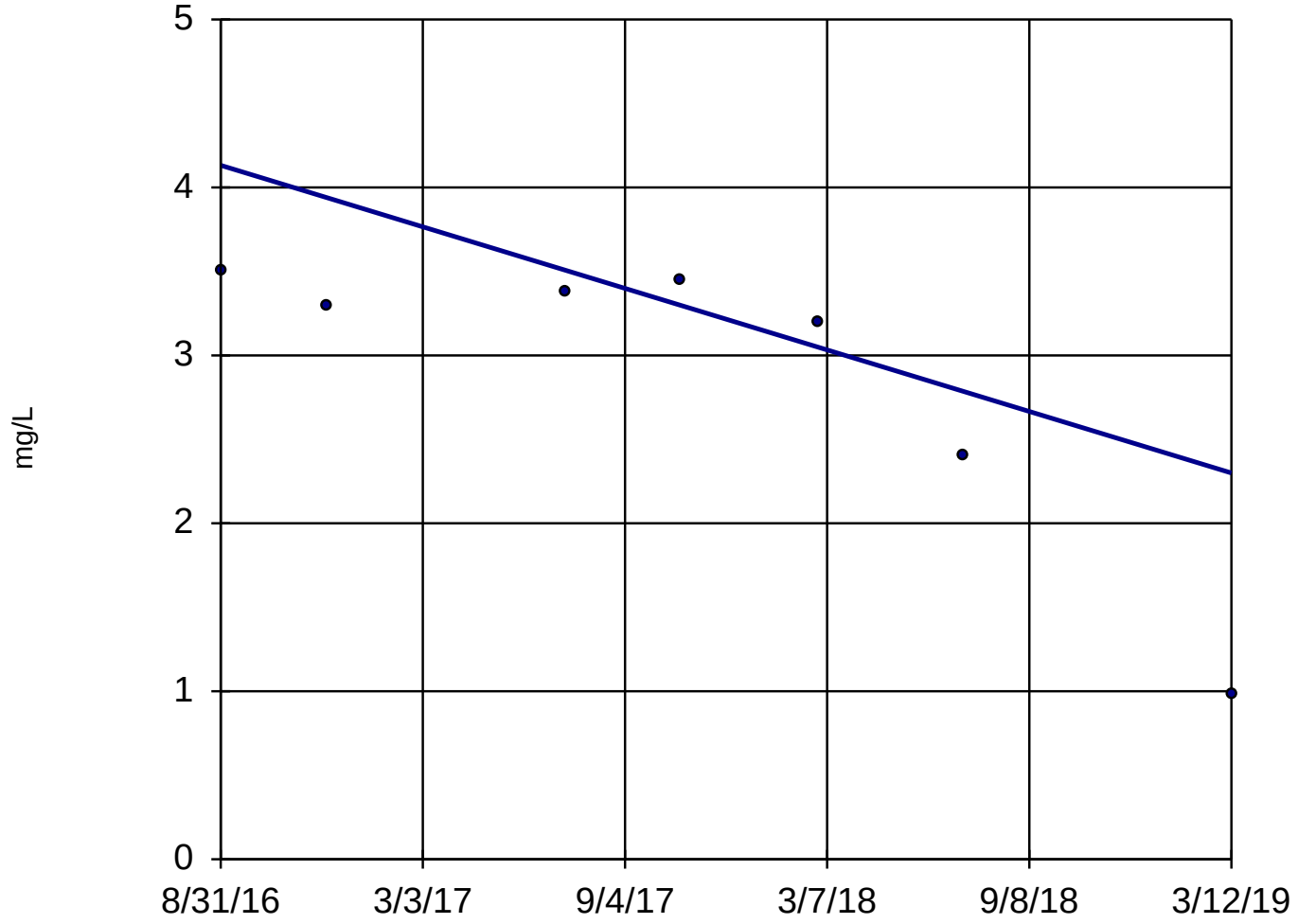
Background Data Summary (based on cube root transformation): Mean=4.733, Std. Dev.=0.9883, n=28. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9069, critical = 0.896. Kappa = 2.344 (c=7, w=20, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0003762. Comparing 20 points to limit.

Constituent: TDS Analysis Run 7/23/2019 6:14 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-10



n = 7

Slope = -0.7242 units per year.

Mann-Kendall statistic = -15
critical = -18

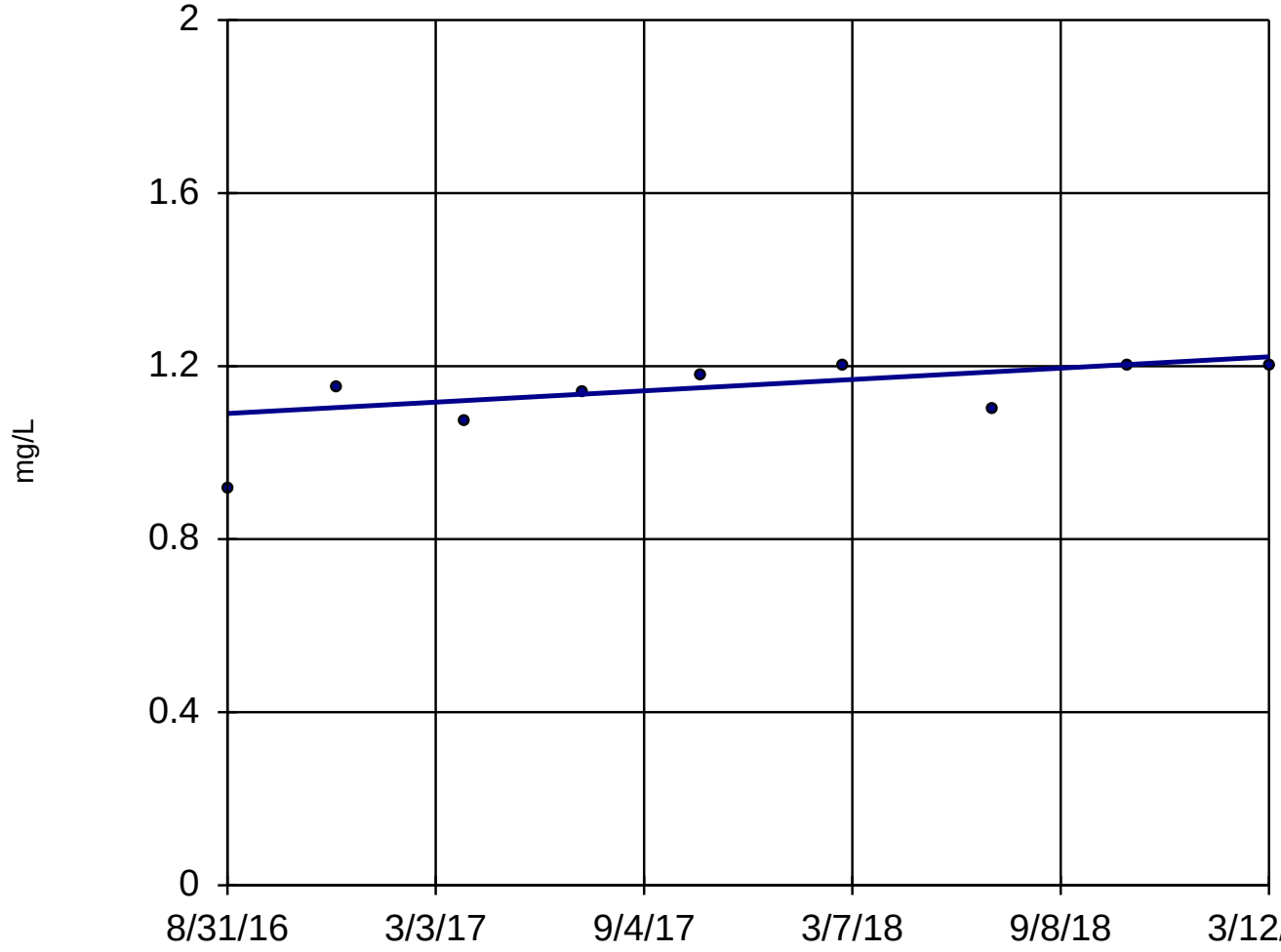
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-11



n = 9

Slope = 0.05169 units per year.

Mann-Kendall statistic = 21
critical = 25

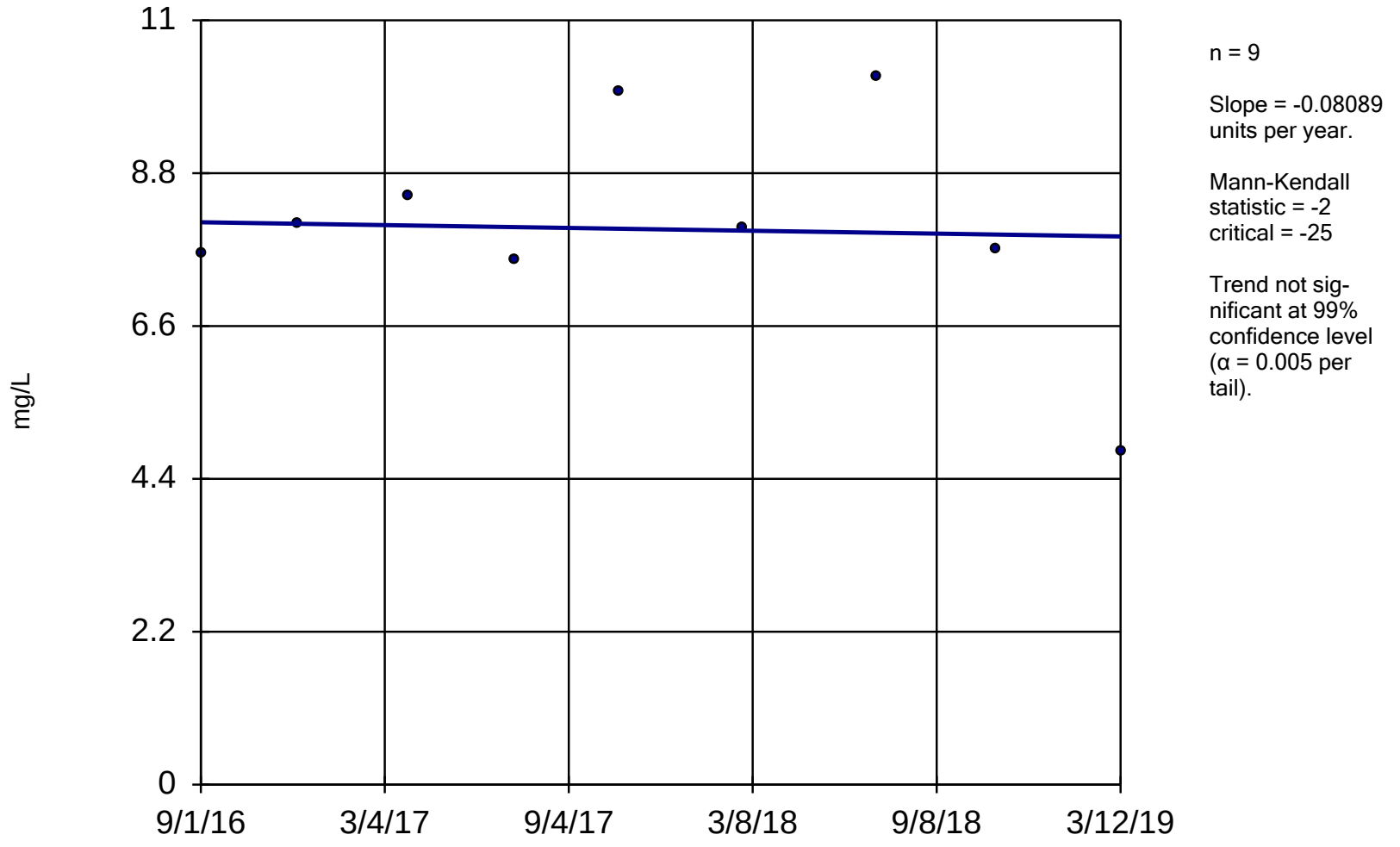
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-12



n = 9

Slope = -0.08089 units per year.

Mann-Kendall statistic = -2
critical = -25

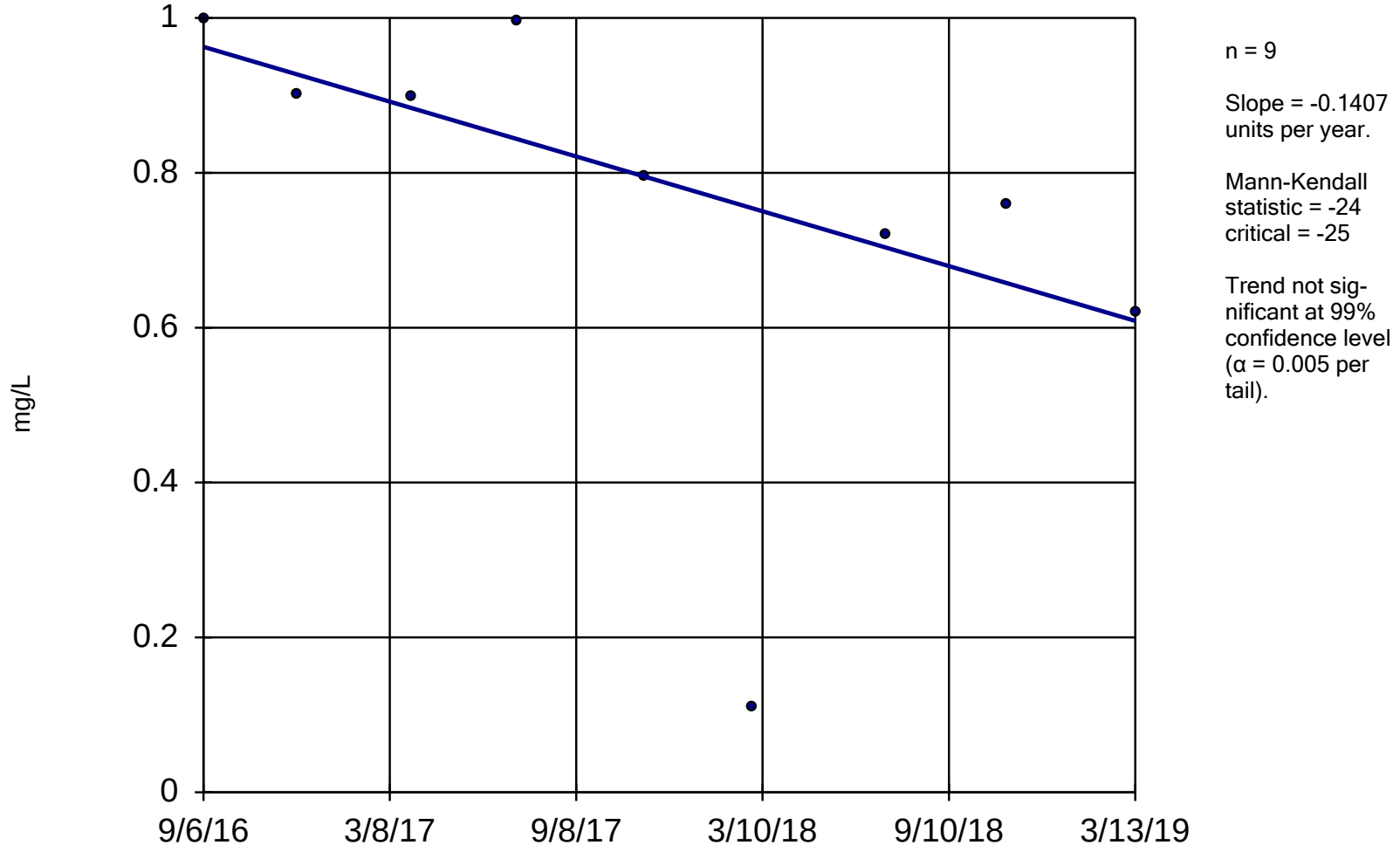
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-13



n = 9

Slope = -0.1407 units per year.

Mann-Kendall statistic = -24
critical = -25

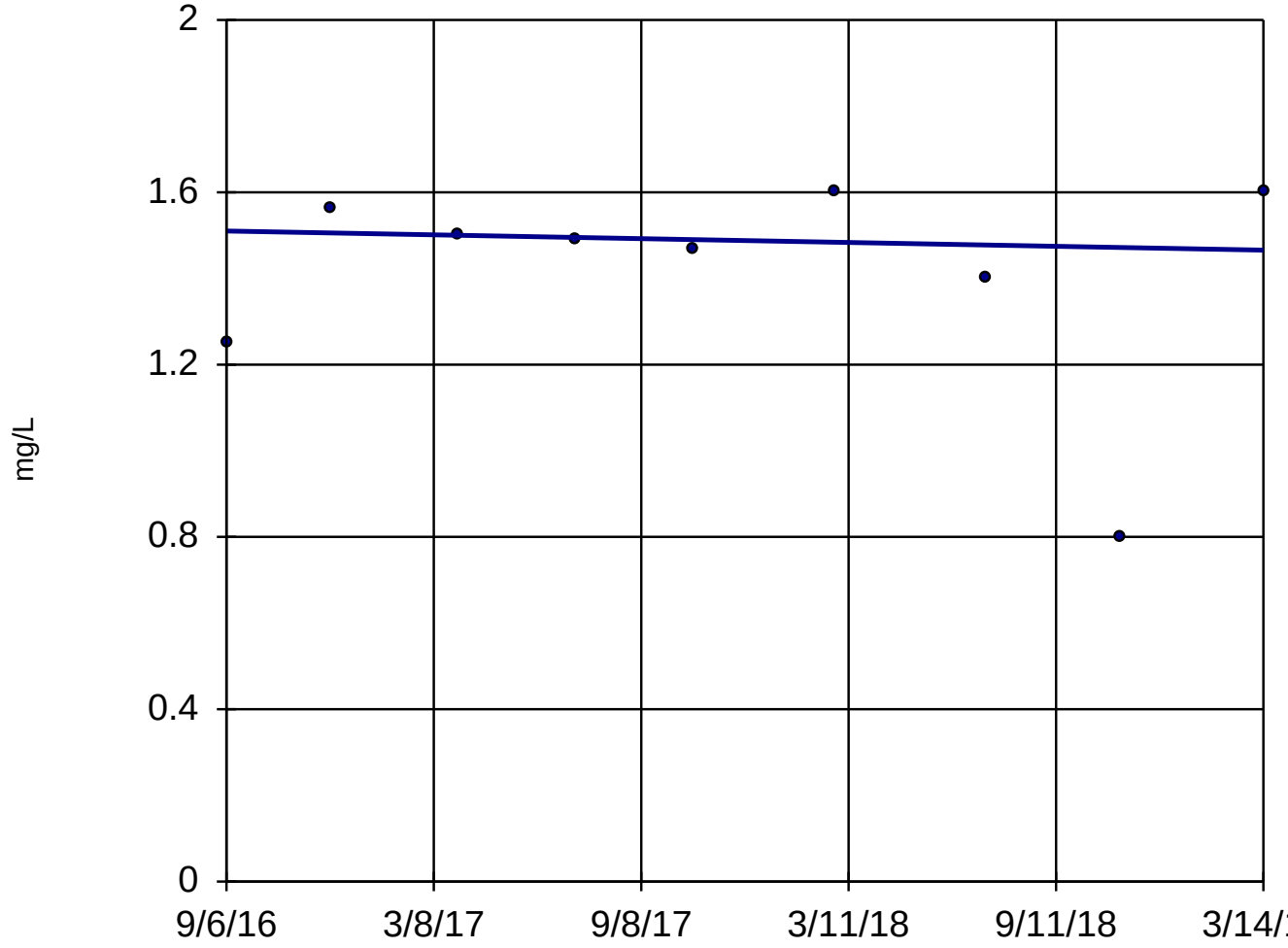
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-15



n = 9

Slope = -0.01755 units per year.

Mann-Kendall statistic = -1
critical = -25

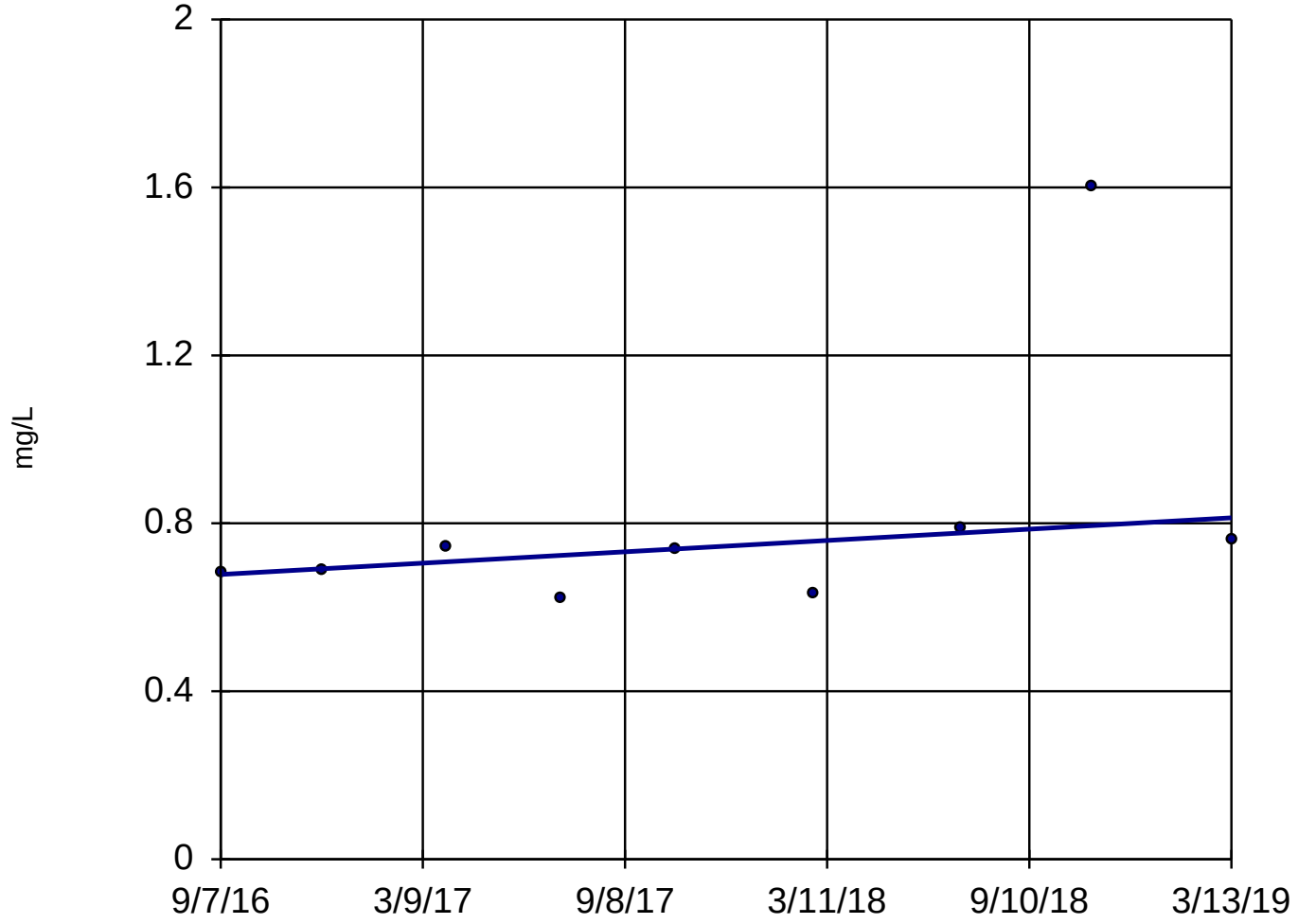
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-17



n = 9

Slope = 0.05374 units per year.

Mann-Kendall statistic = 16
critical = 25

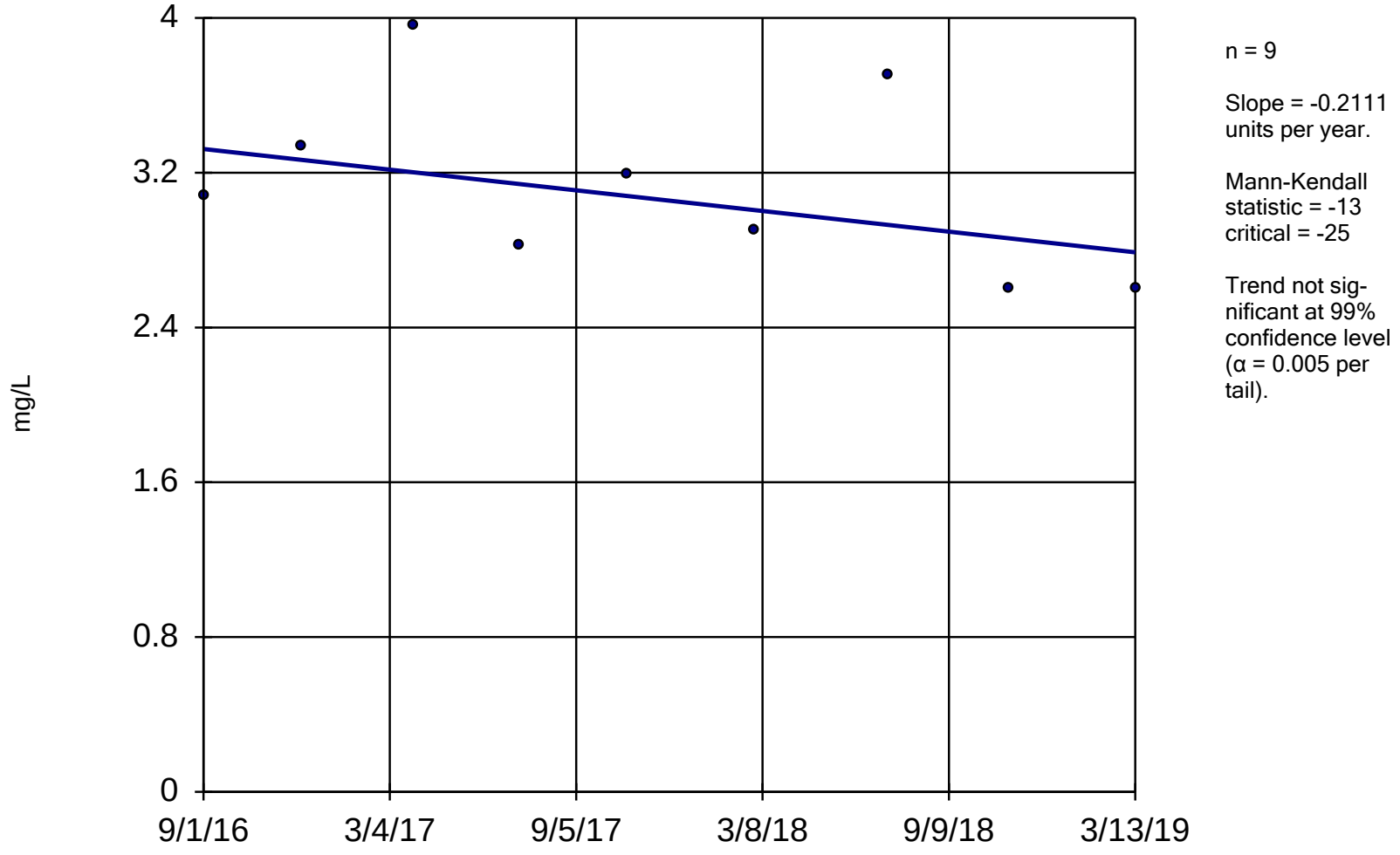
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-19



n = 9

Slope = -0.2111 units per year.

Mann-Kendall statistic = -13
critical = -25

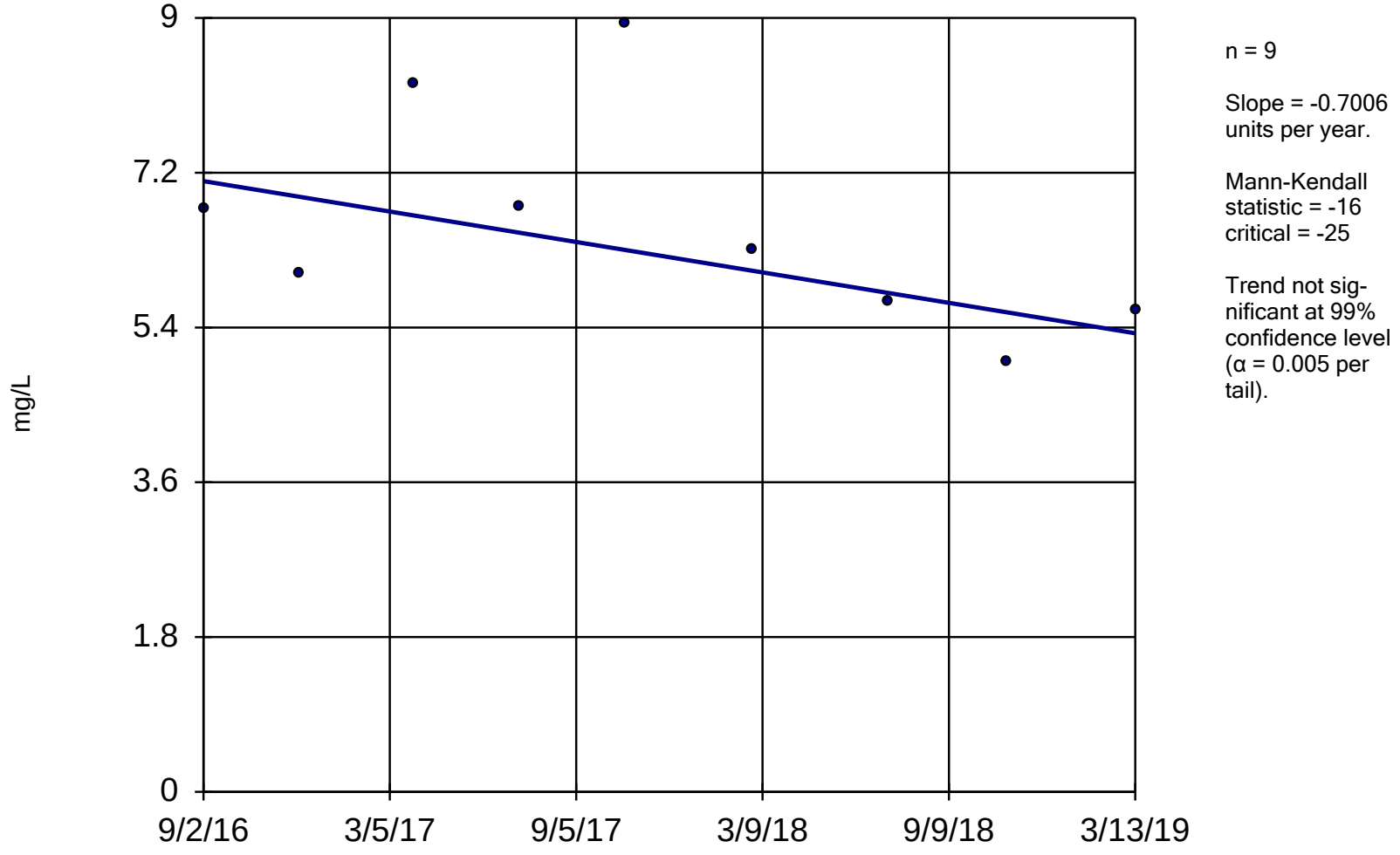
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-20



n = 9

Slope = -0.7006 units per year.

Mann-Kendall statistic = -16
critical = -25

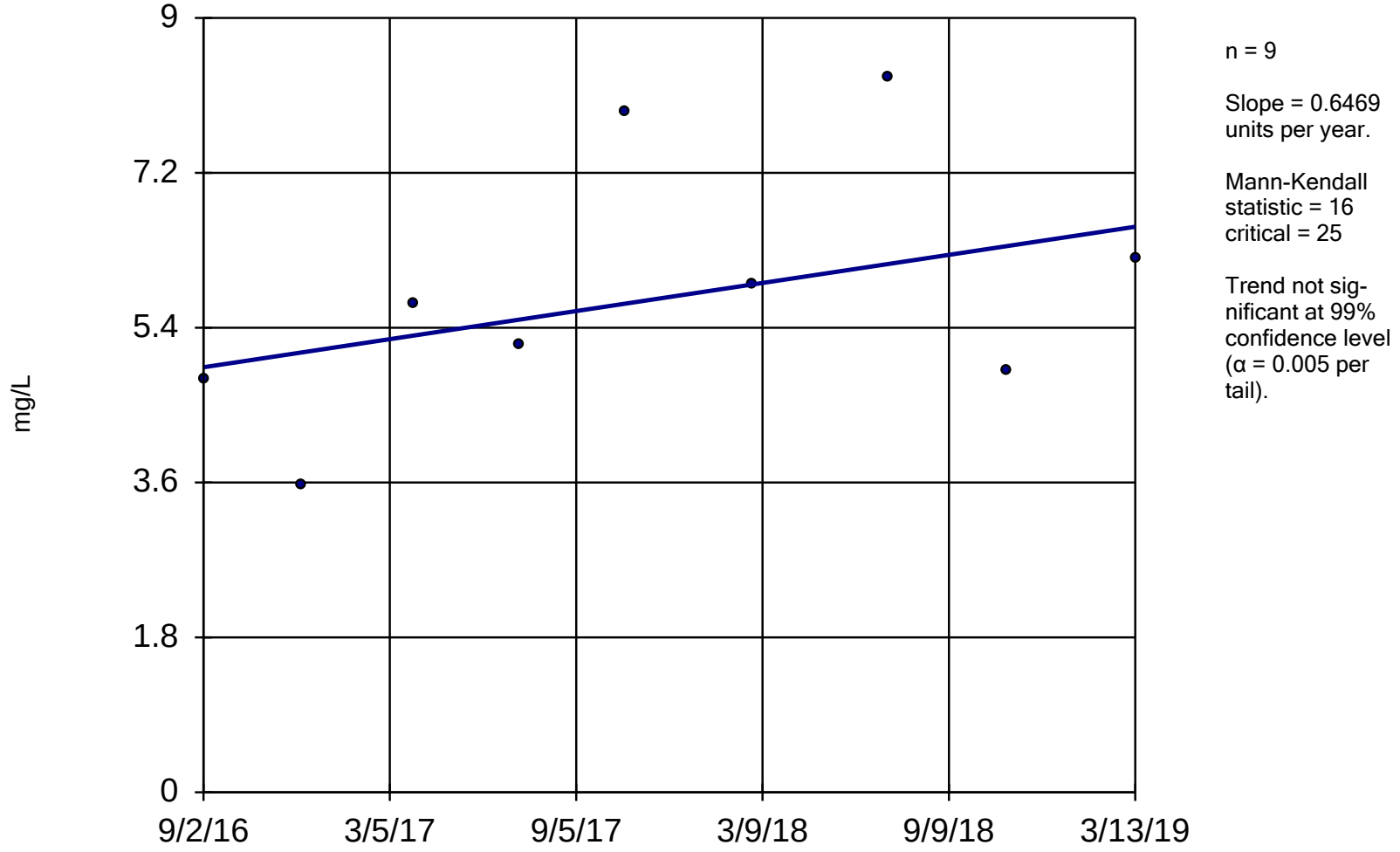
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-21



n = 9

Slope = 0.6469 units per year.

Mann-Kendall statistic = 16
critical = 25

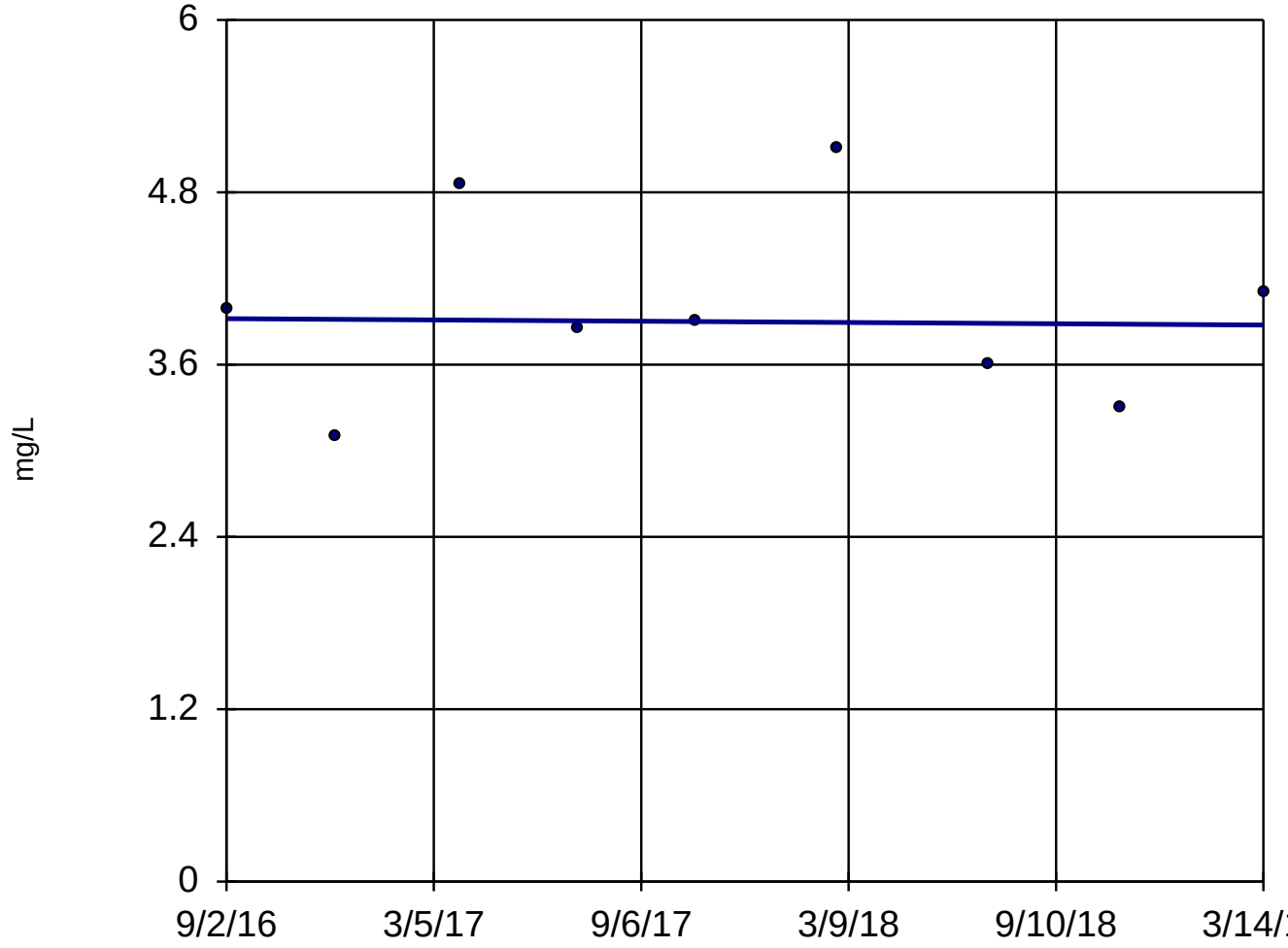
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-22



n = 9

Slope = -0.01754 units per year.

Mann-Kendall statistic = 0
critical = 25

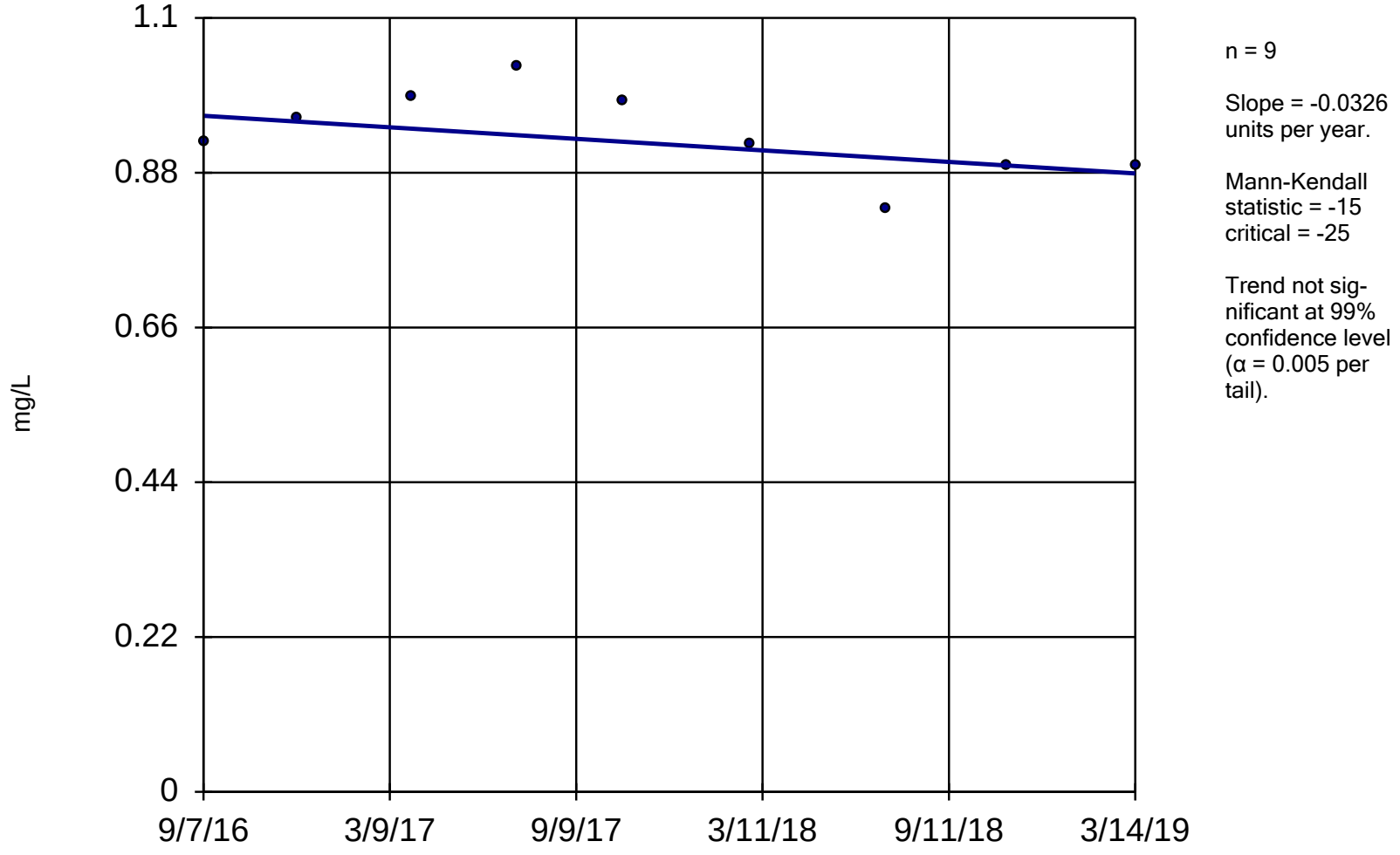
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-42



n = 9

Slope = -0.0326 units per year.

Mann-Kendall statistic = -15
critical = -25

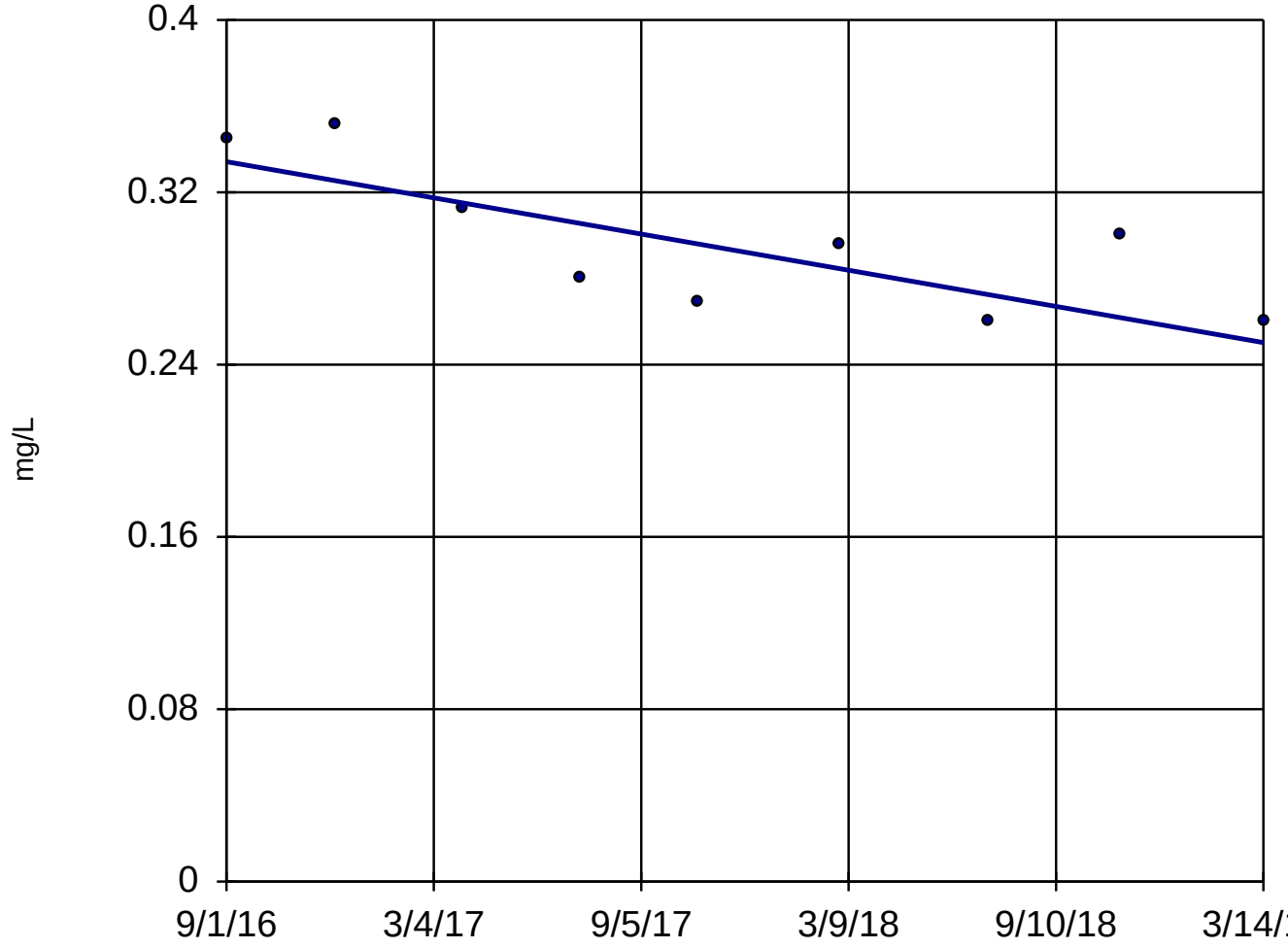
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-47



n = 9

Slope = -0.03317 units per year.

Mann-Kendall statistic = -21
critical = -25

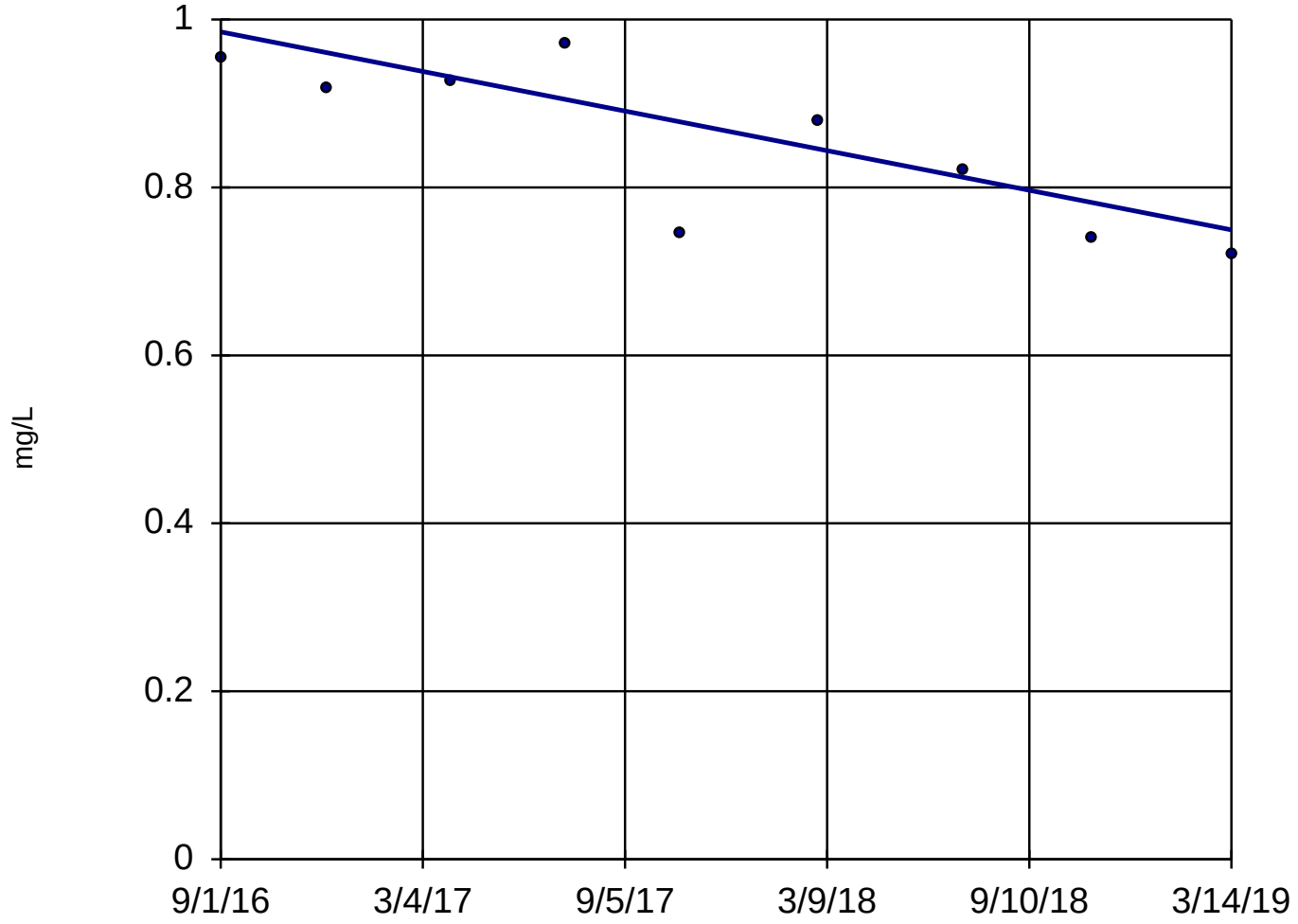
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-48



n = 9

Slope = -0.09315 units per year.

Mann-Kendall statistic = -24
critical = -25

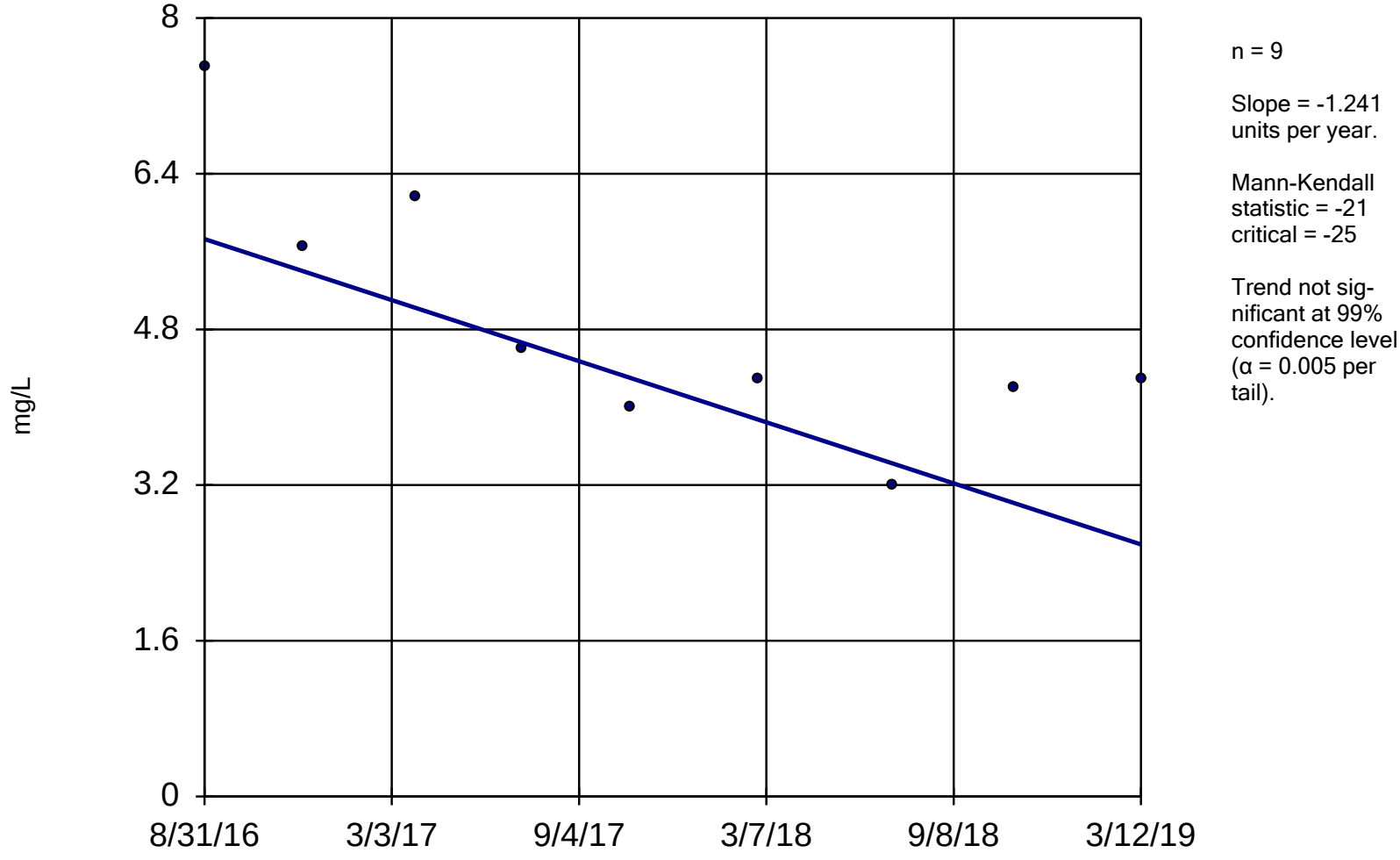
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-5



n = 9

Slope = -1.241 units per year.

Mann-Kendall statistic = -21
critical = -25

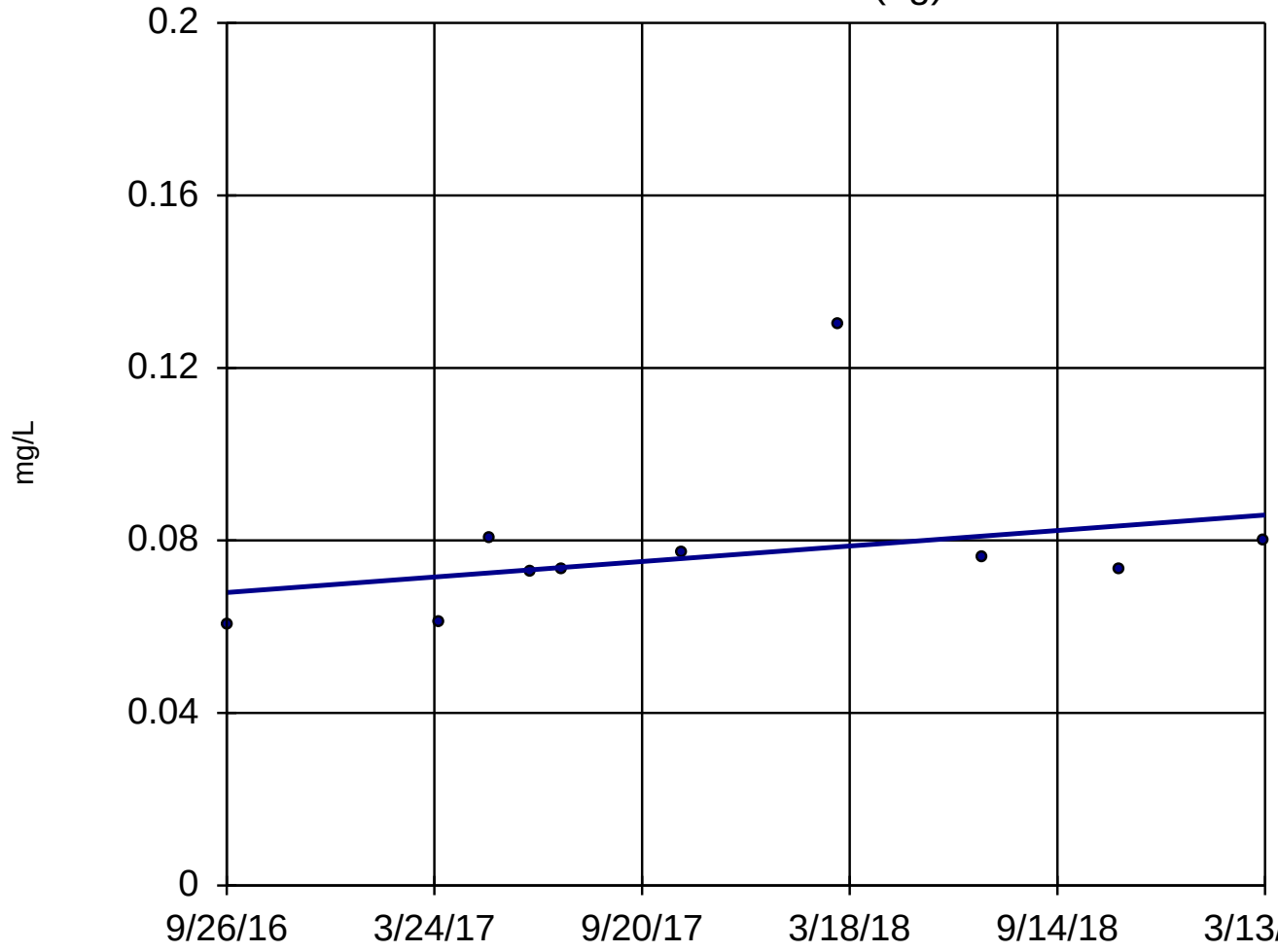
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWA-53 (bg)



n = 10

Slope = 0.007312 units per year.

Mann-Kendall statistic = 19
critical = 30

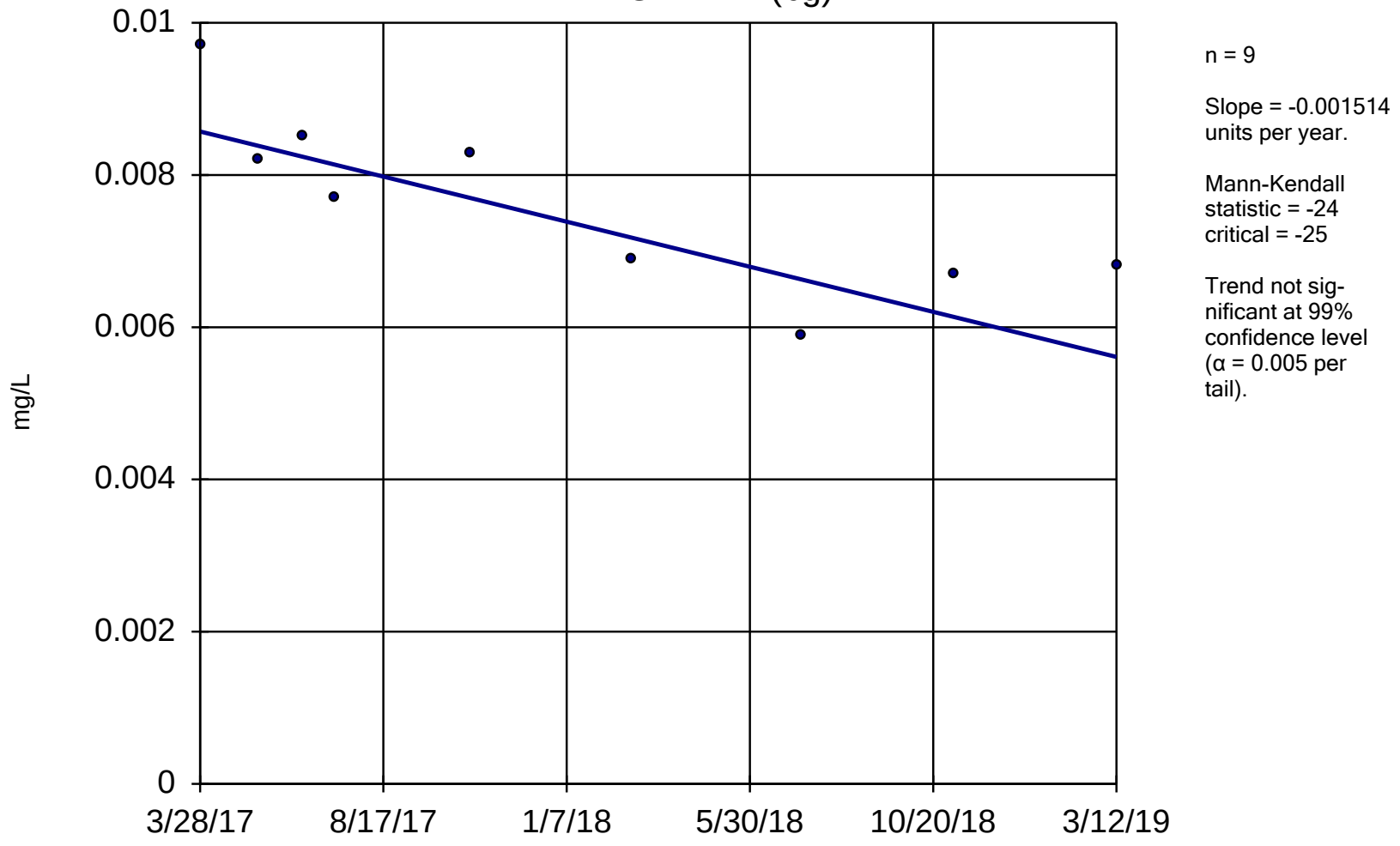
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWA-71 (bg)



n = 9

Slope = -0.001514 units per year.

Mann-Kendall statistic = -24
critical = -25

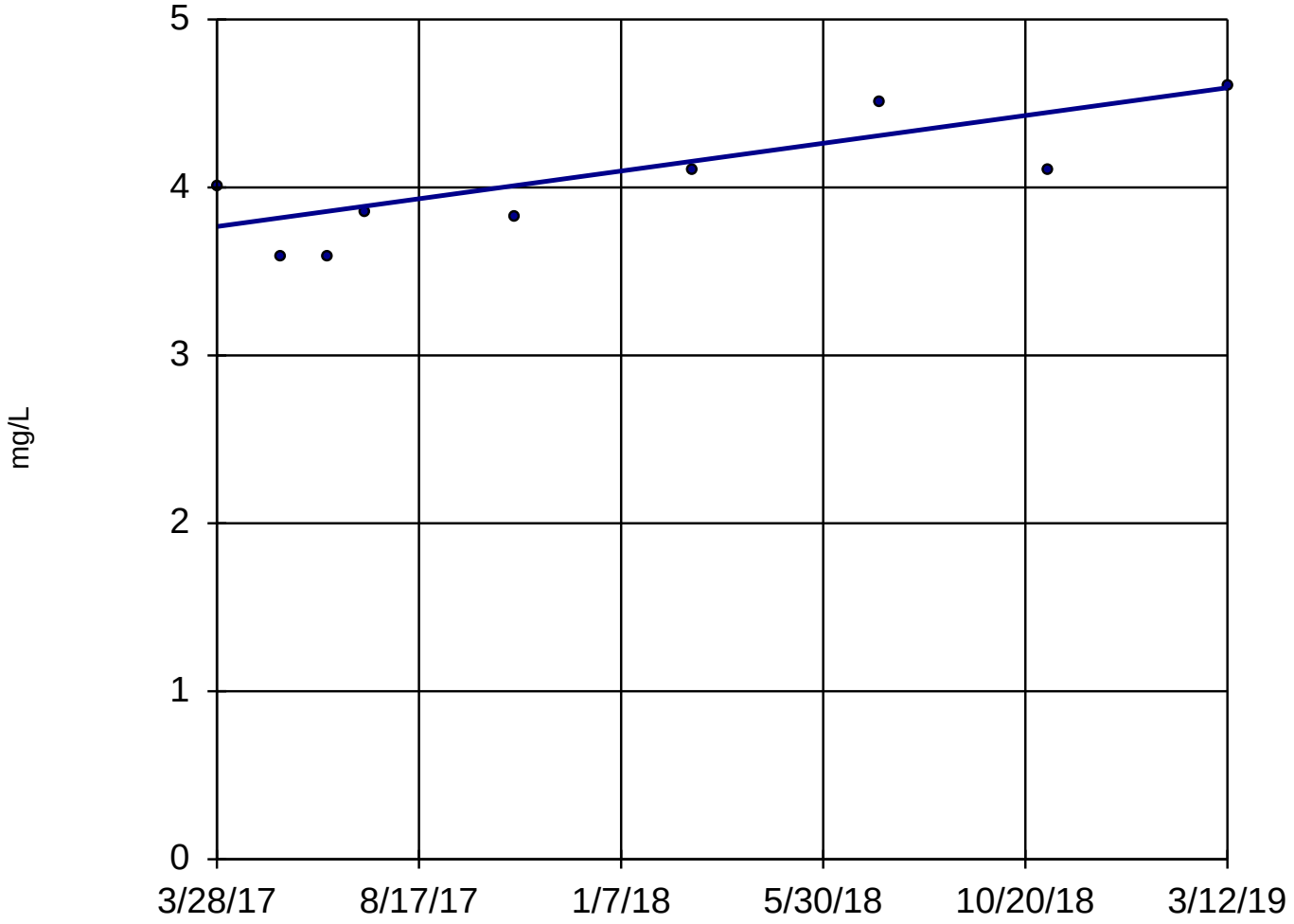
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-4



n = 9

Slope = 0.4223 units per year.

Mann-Kendall statistic = 22
critical = 25

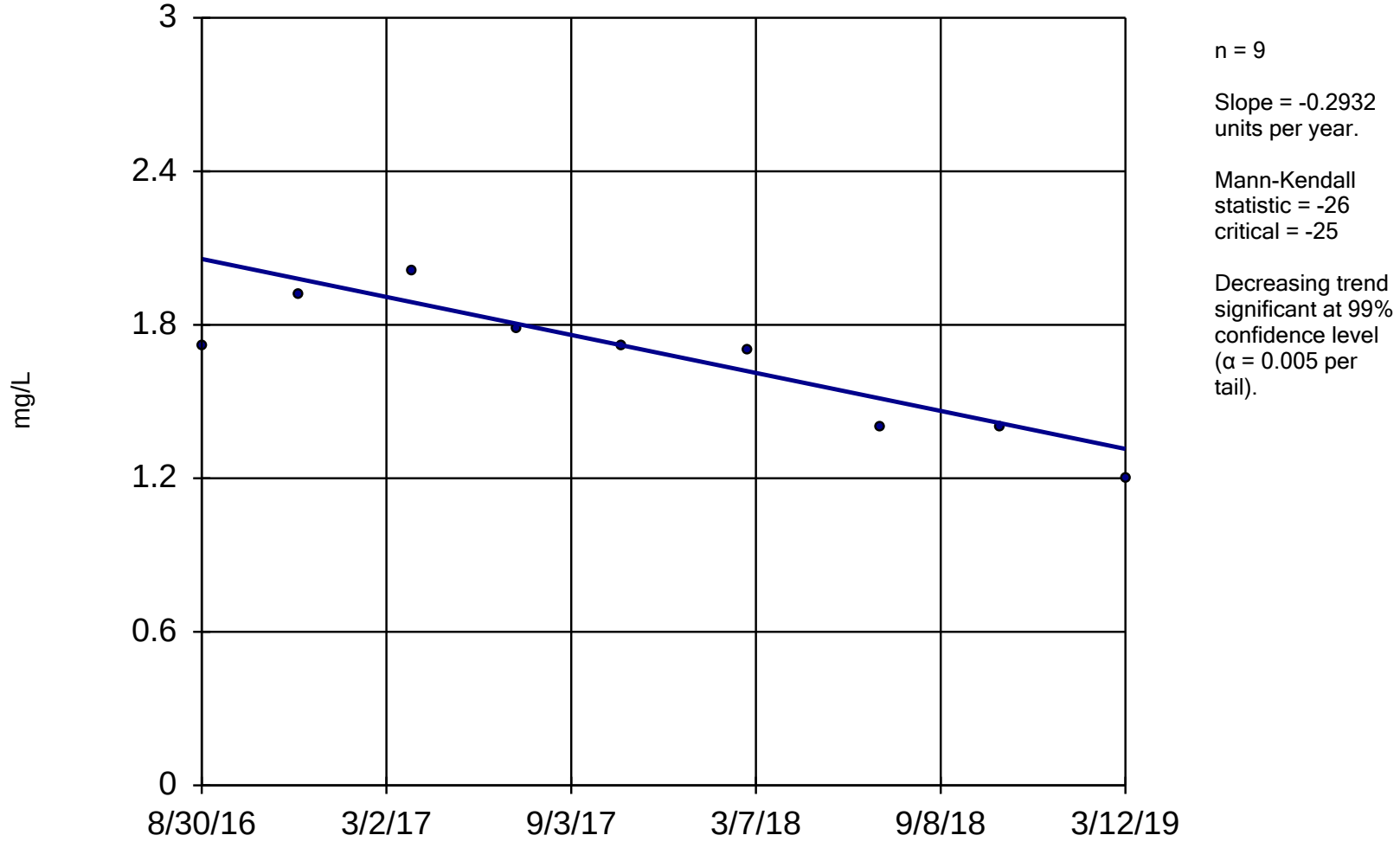
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-9



n = 9

Slope = -0.2932 units per year.

Mann-Kendall statistic = -26
critical = -25

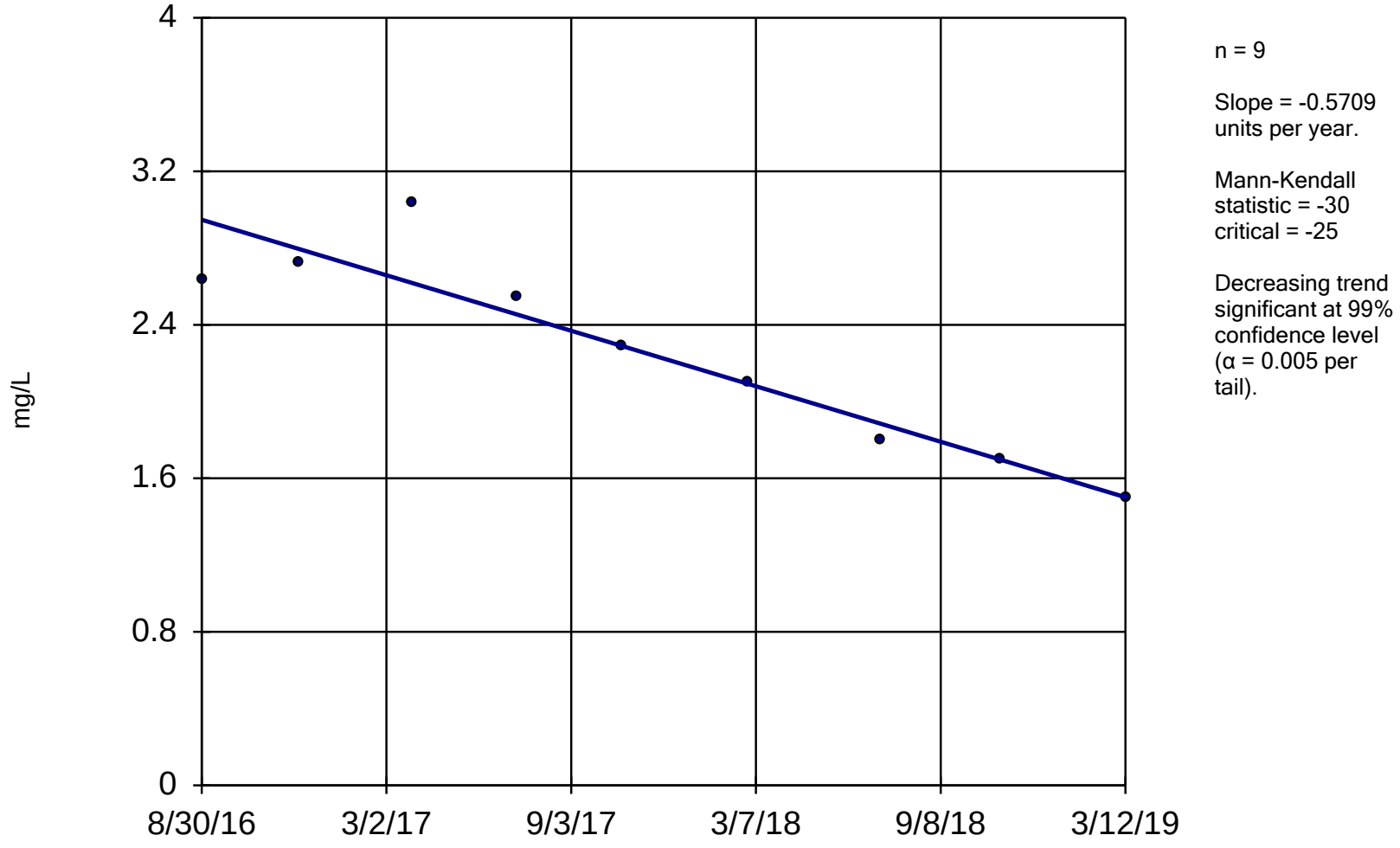
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:22 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-8



n = 9

Slope = -0.5709 units per year.

Mann-Kendall statistic = -30
critical = -25

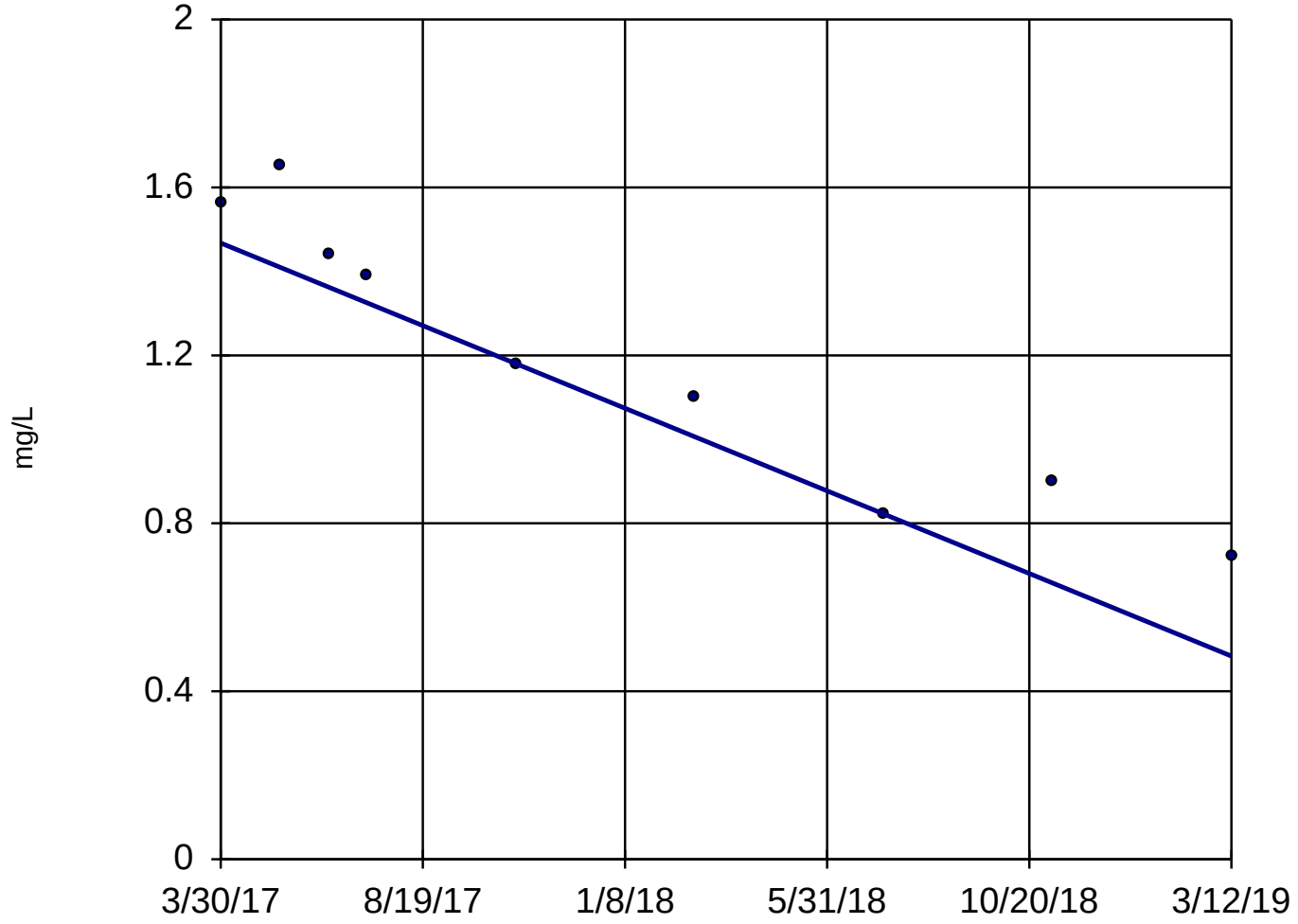
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-2



n = 9

Slope = -0.5043 units per year.

Mann-Kendall statistic = -32
critical = -25

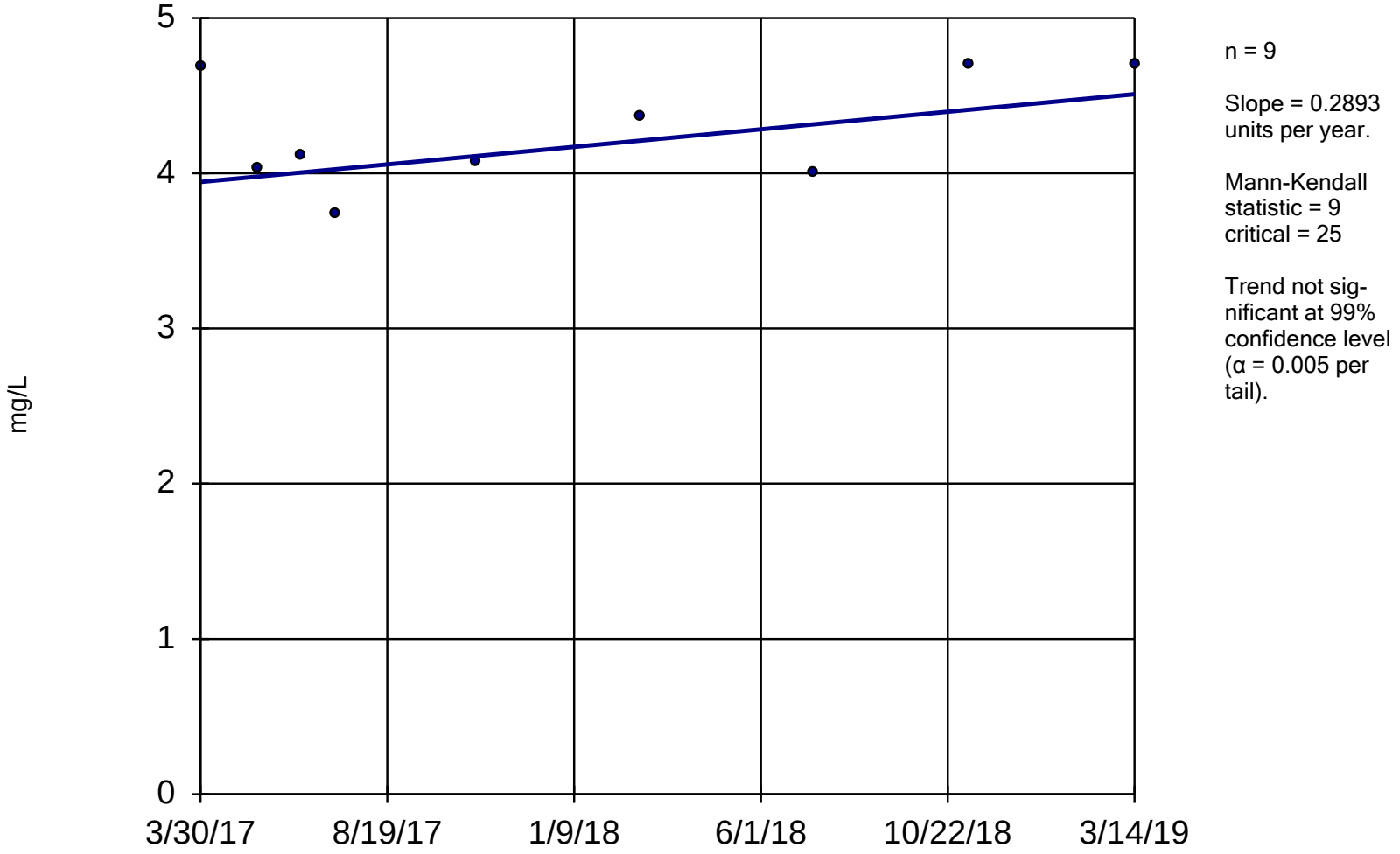
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-23



n = 9

Slope = 0.2893 units per year.

Mann-Kendall statistic = 9
critical = 25

Trend not significant at 99% confidence level (α = 0.005 per tail).

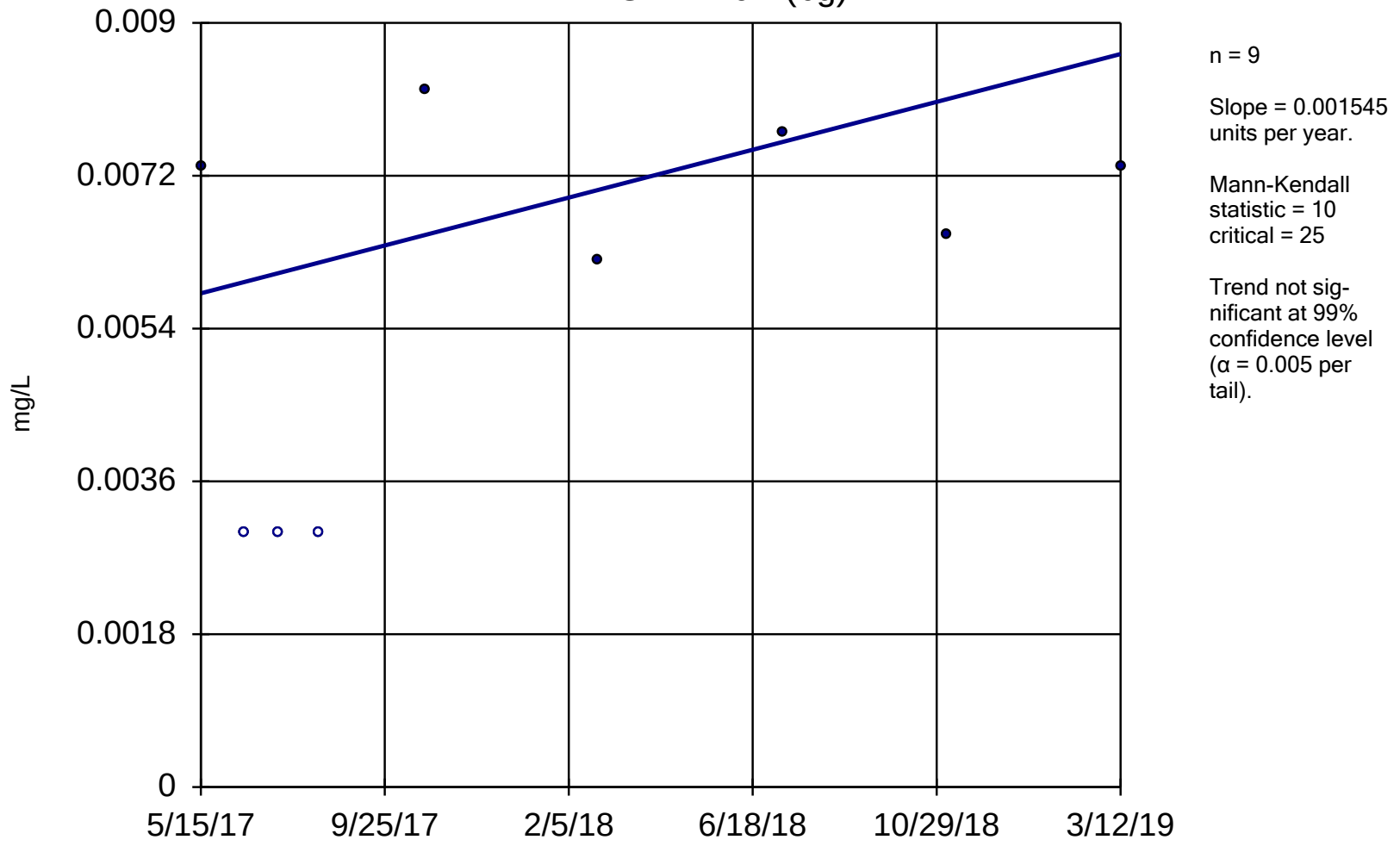
Constituent: Boron Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sanitas™ v.9.6.18 For the statistical analyses of ground water by Golder Associates only. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

DGWA-70A (bg)



n = 9

Slope = 0.001545 units per year.

Mann-Kendall statistic = 10
critical = 25

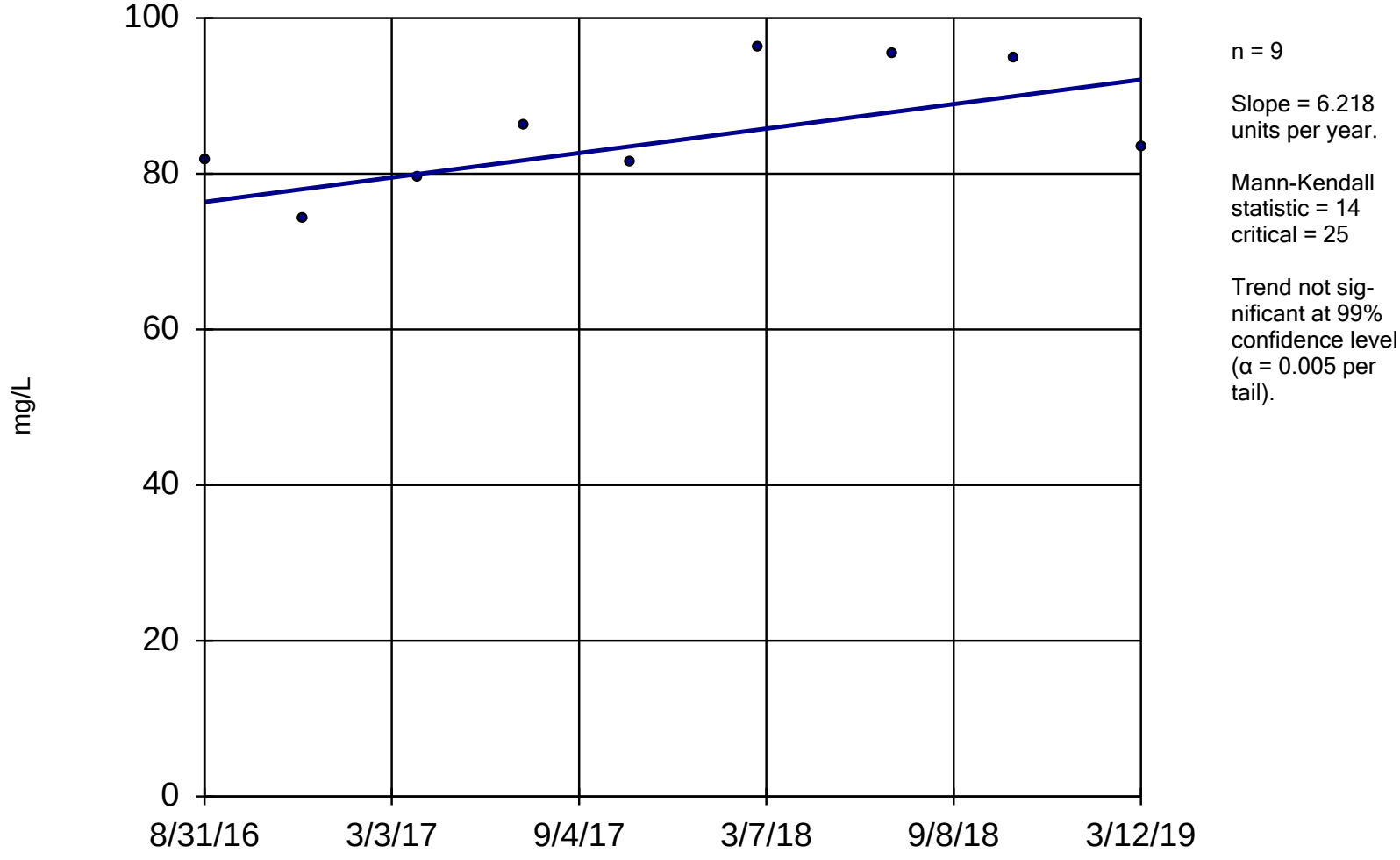
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-10



n = 9

Slope = 6.218 units per year.

Mann-Kendall statistic = 14
critical = 25

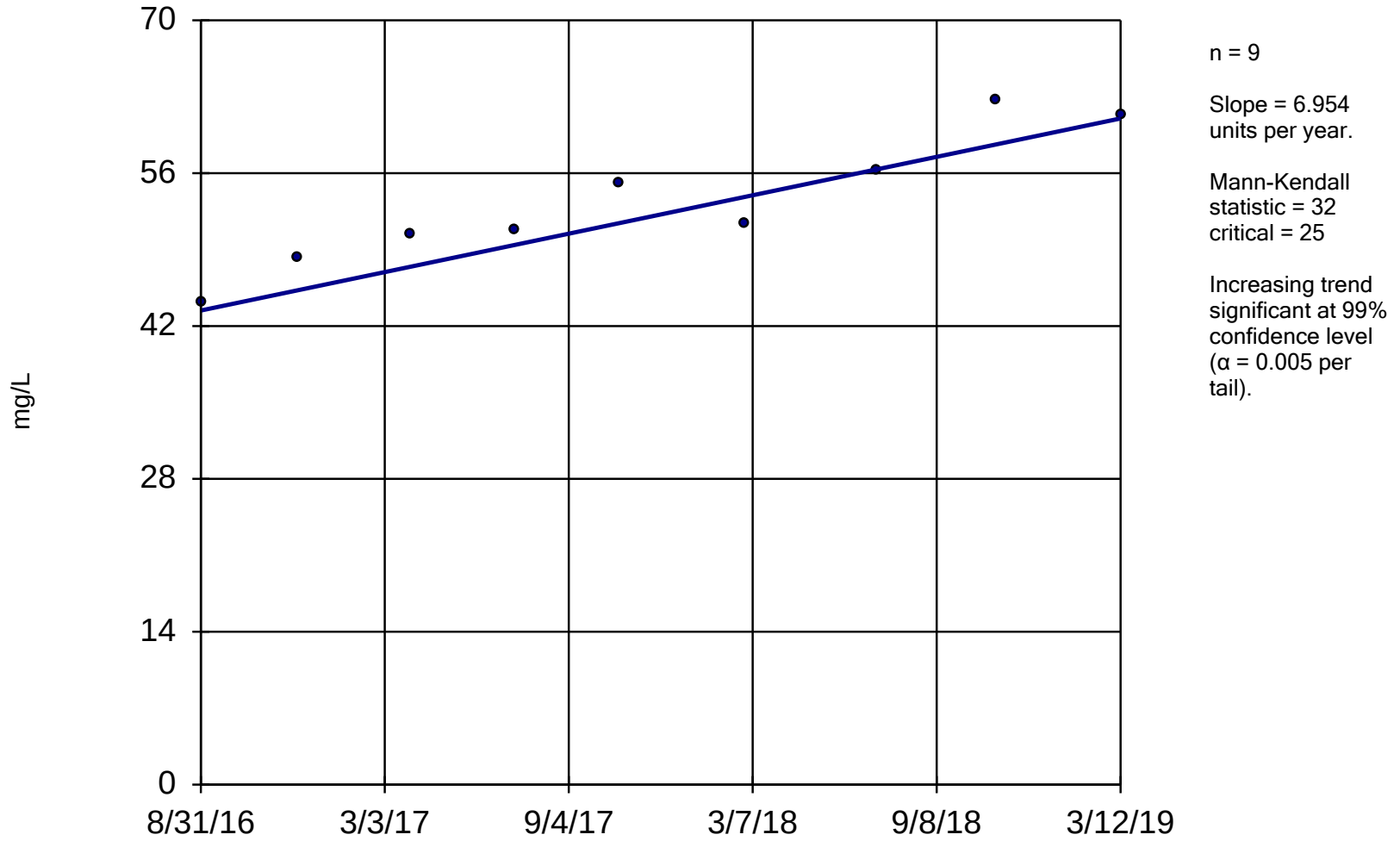
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-11

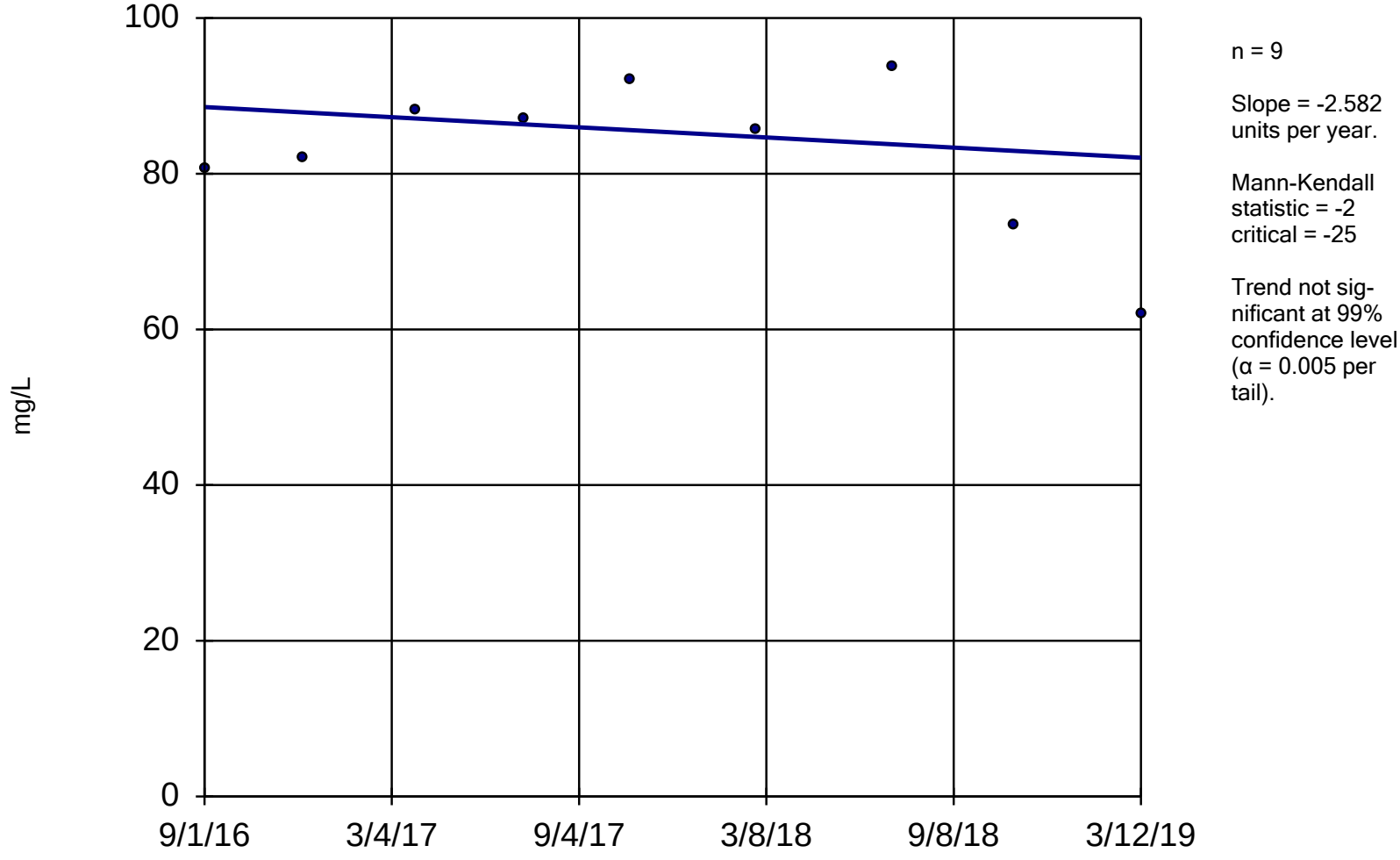


Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-12

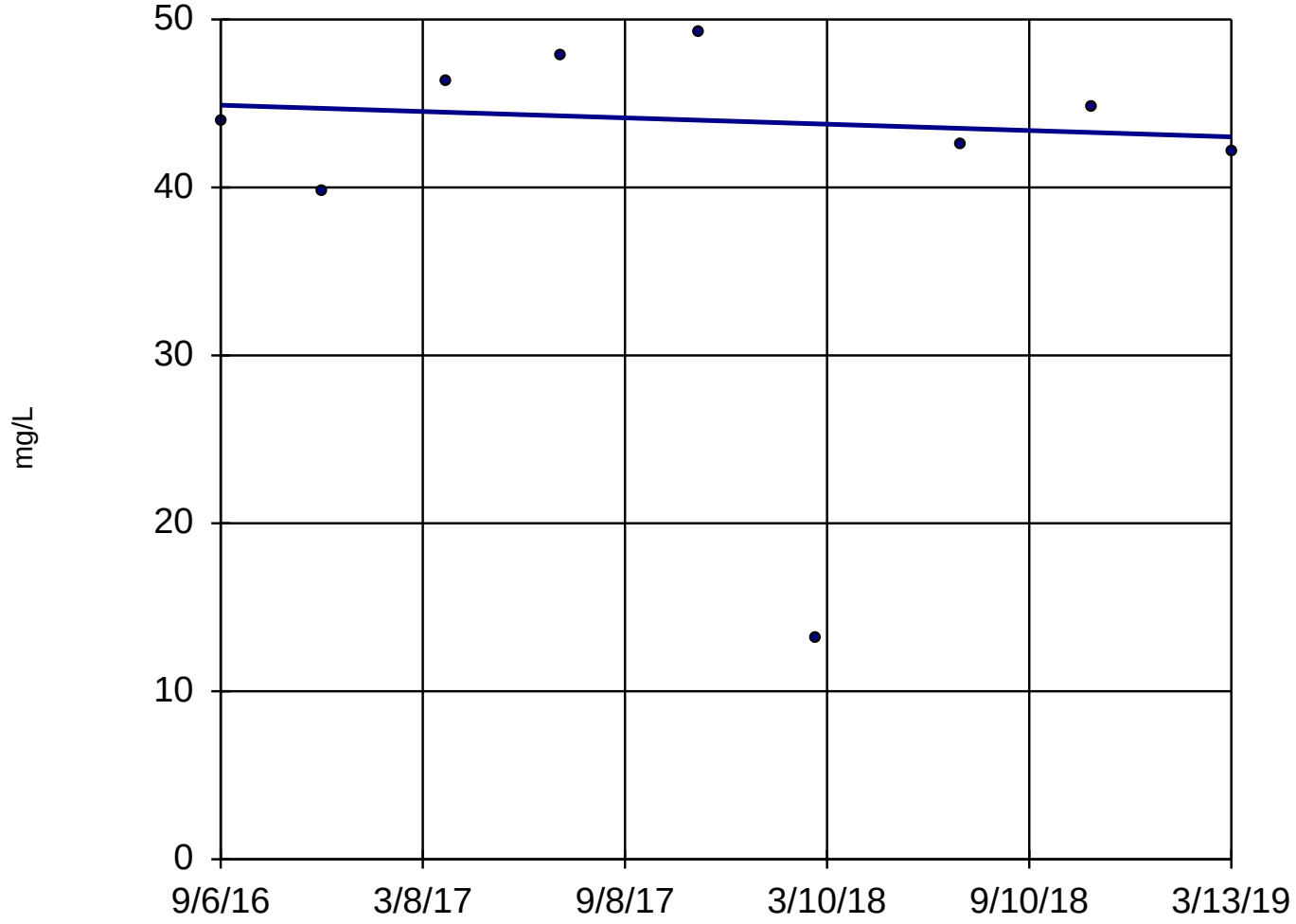


Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-13



n = 9

Slope = -0.7487 units per year.

Mann-Kendall statistic = -2
critical = -25

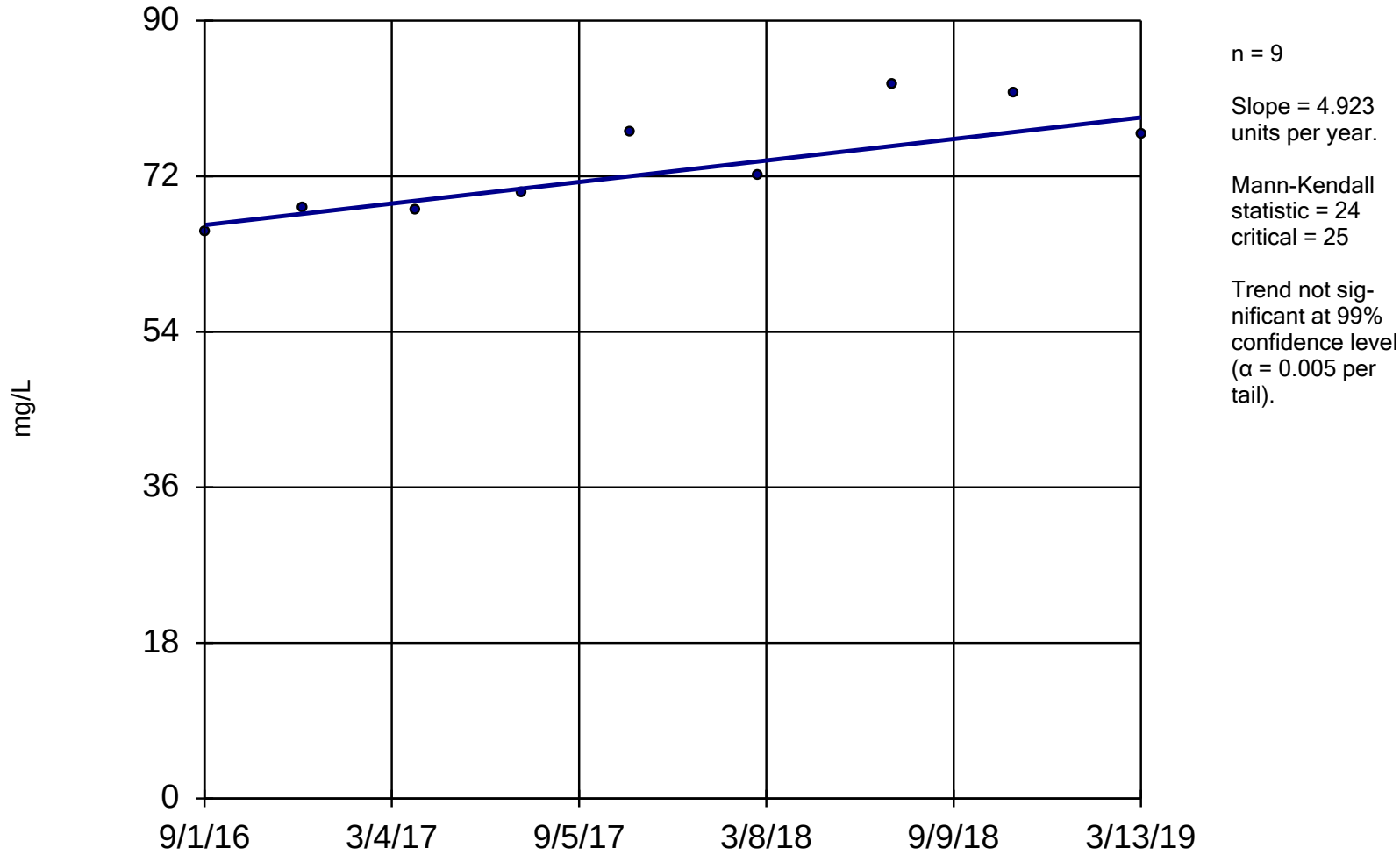
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-19

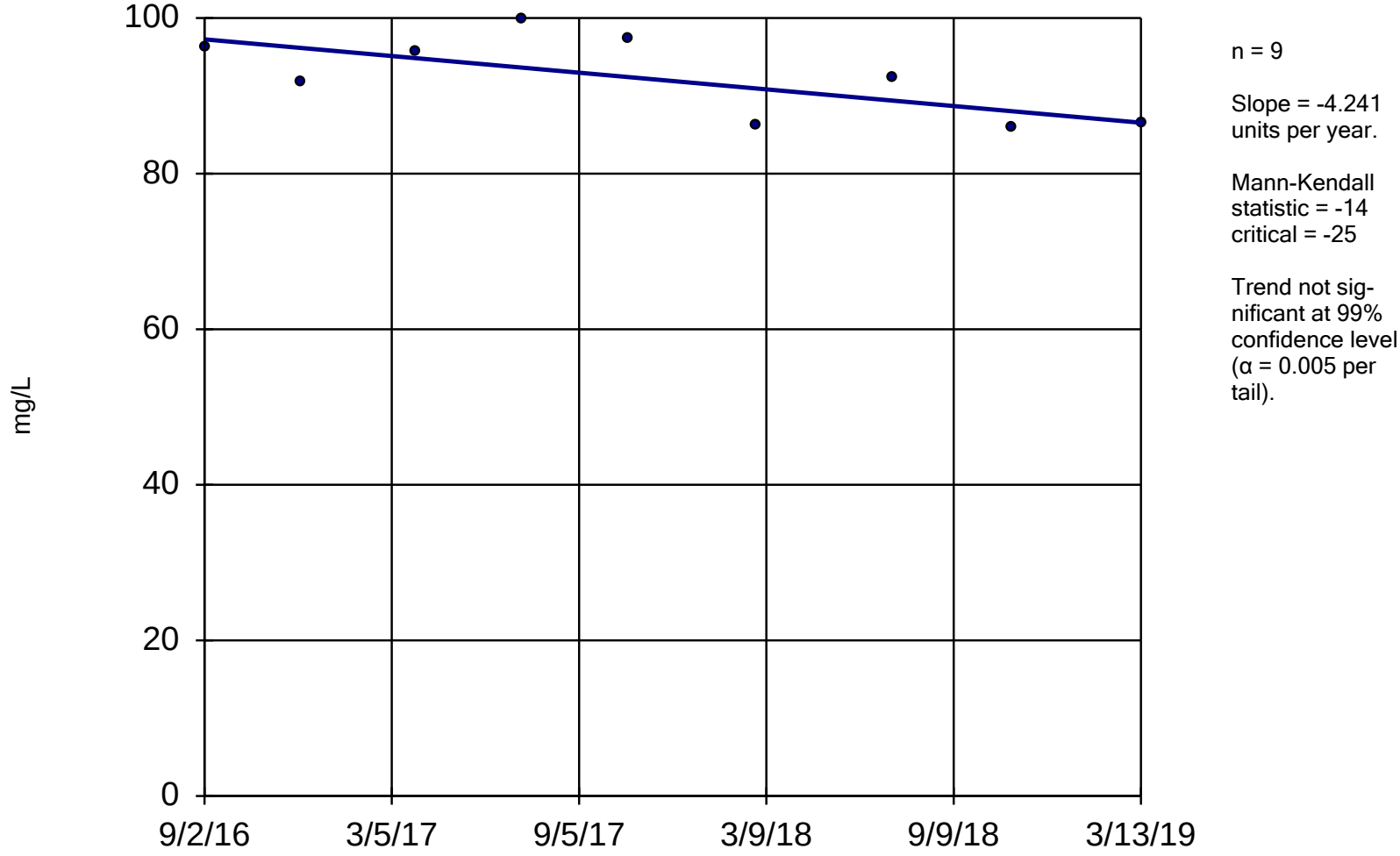


Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-20



n = 9

Slope = -4.241 units per year.

Mann-Kendall statistic = -14
critical = -25

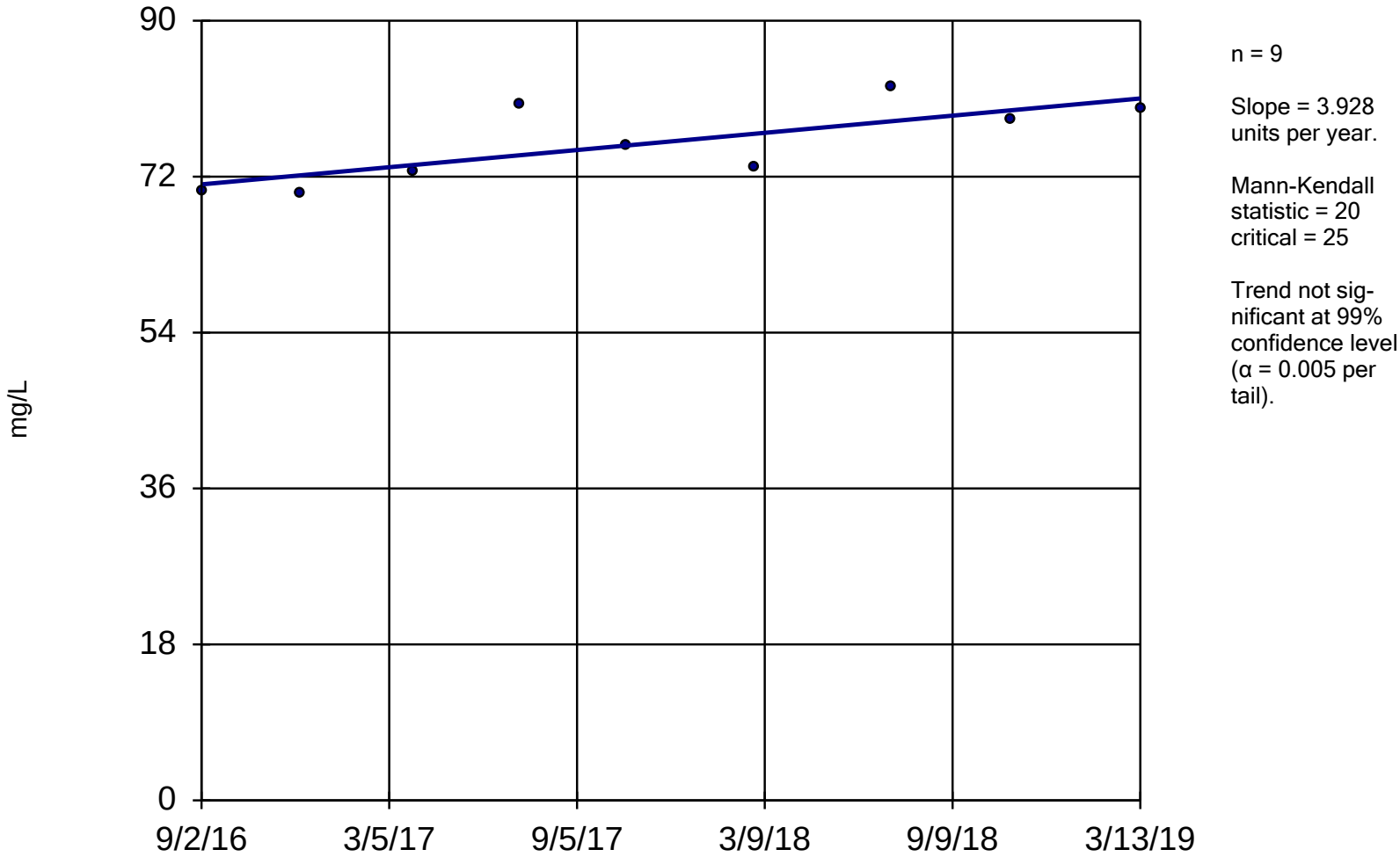
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-21



n = 9

Slope = 3.928 units per year.

Mann-Kendall statistic = 20
critical = 25

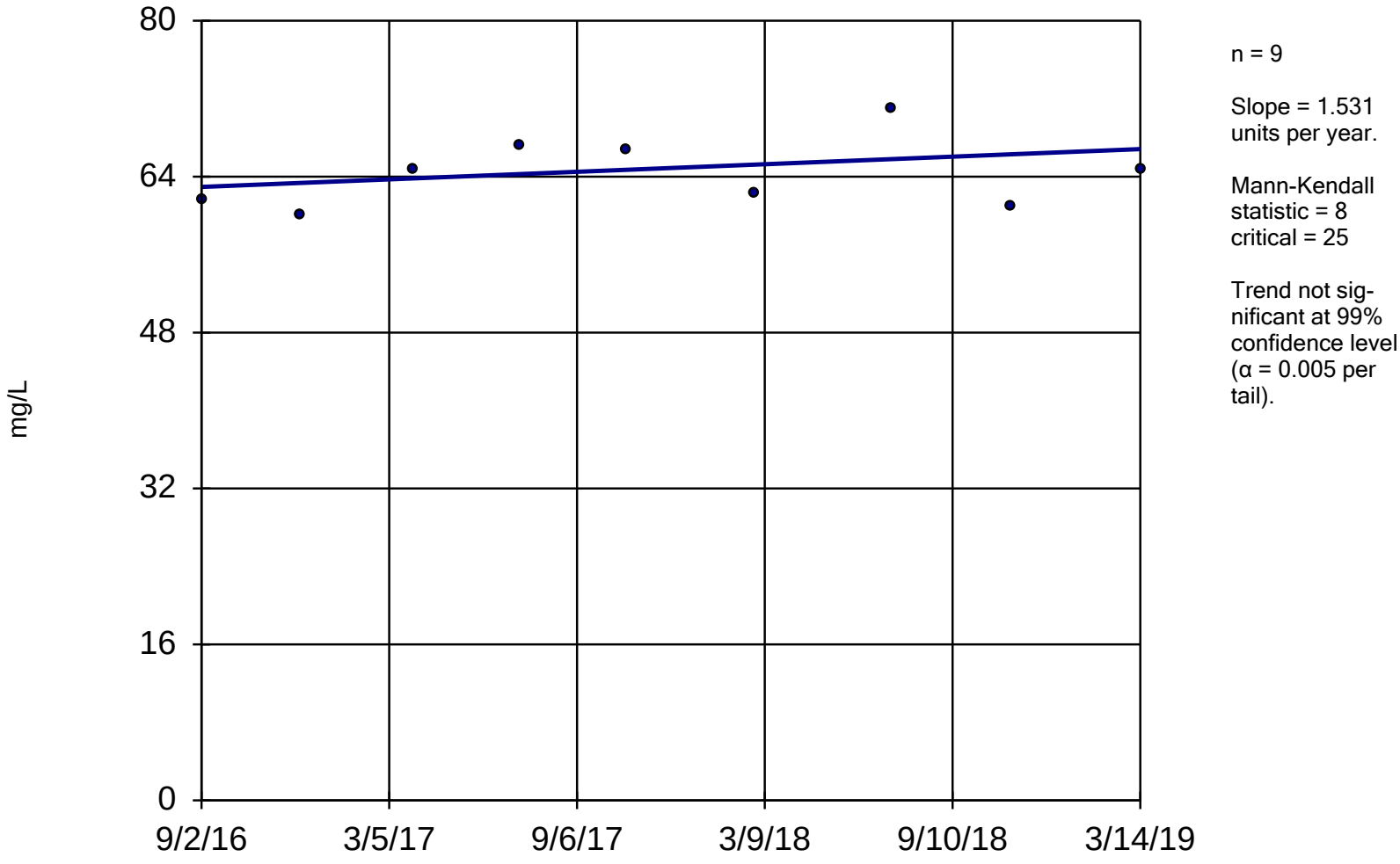
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-22



n = 9

Slope = 1.531 units per year.

Mann-Kendall statistic = 8
critical = 25

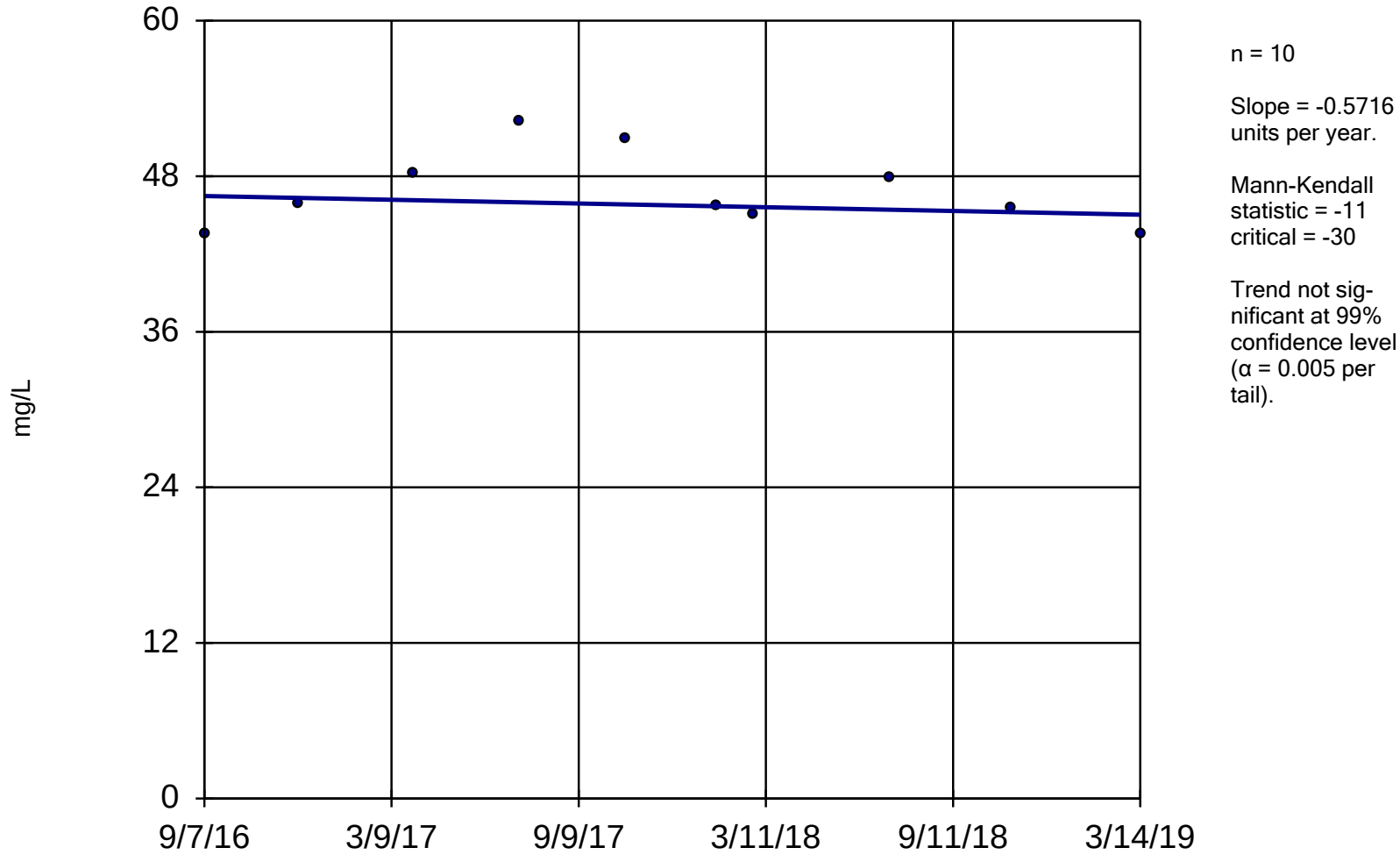
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-42



n = 10

Slope = -0.5716 units per year.

Mann-Kendall statistic = -11
critical = -30

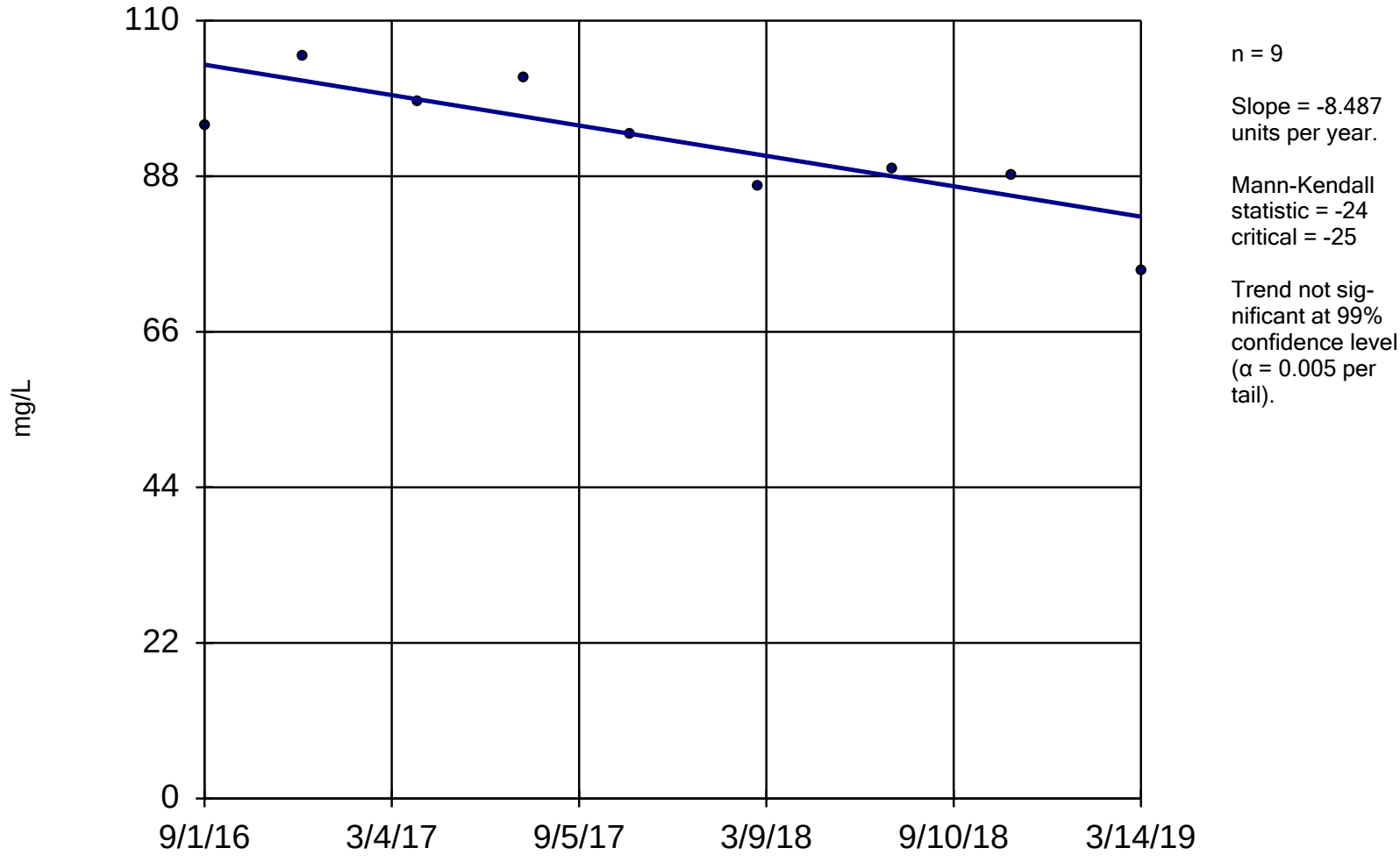
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-48



n = 9

Slope = -8.487 units per year.

Mann-Kendall statistic = -24
critical = -25

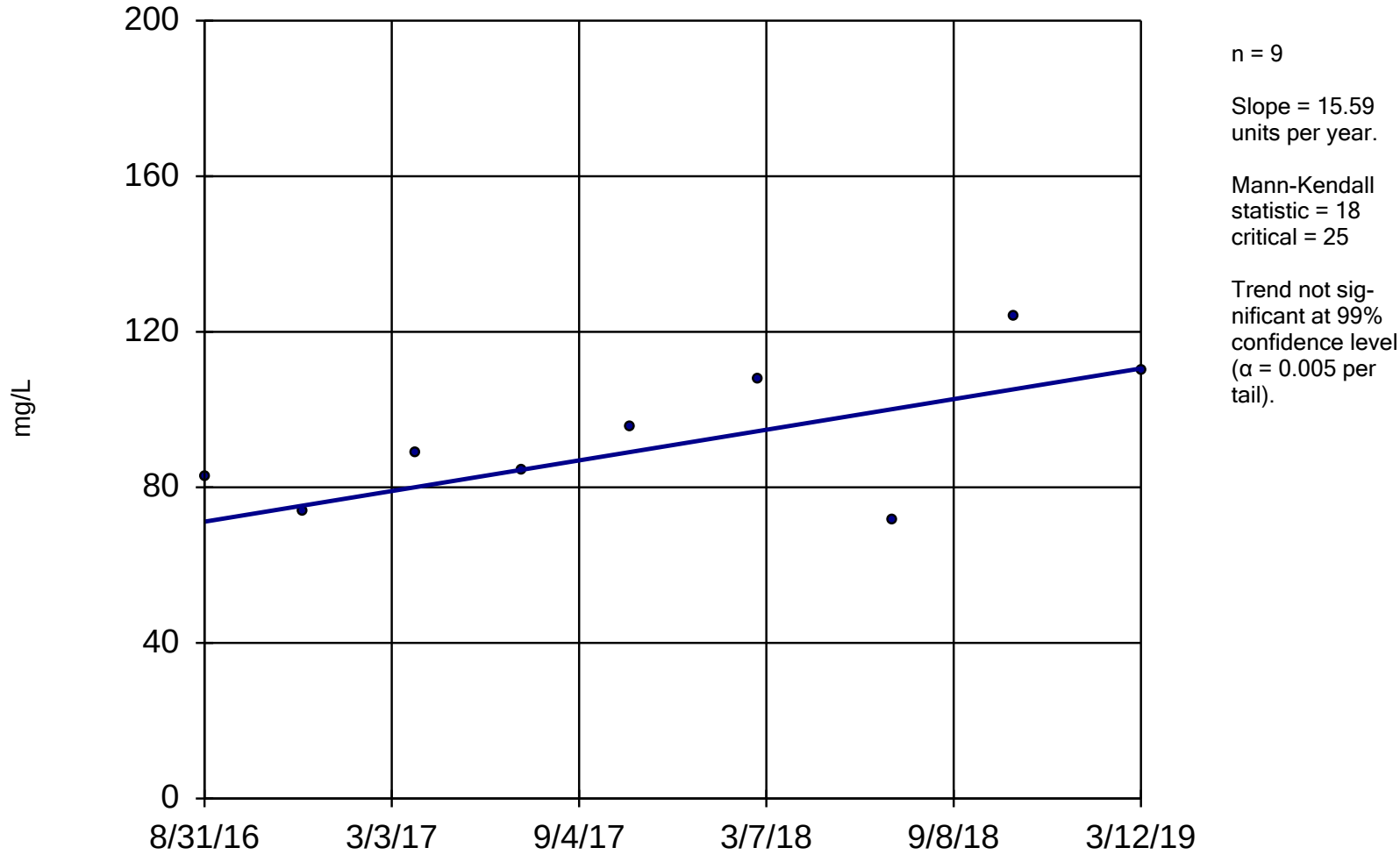
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-5



n = 9

Slope = 15.59 units per year.

Mann-Kendall statistic = 18
critical = 25

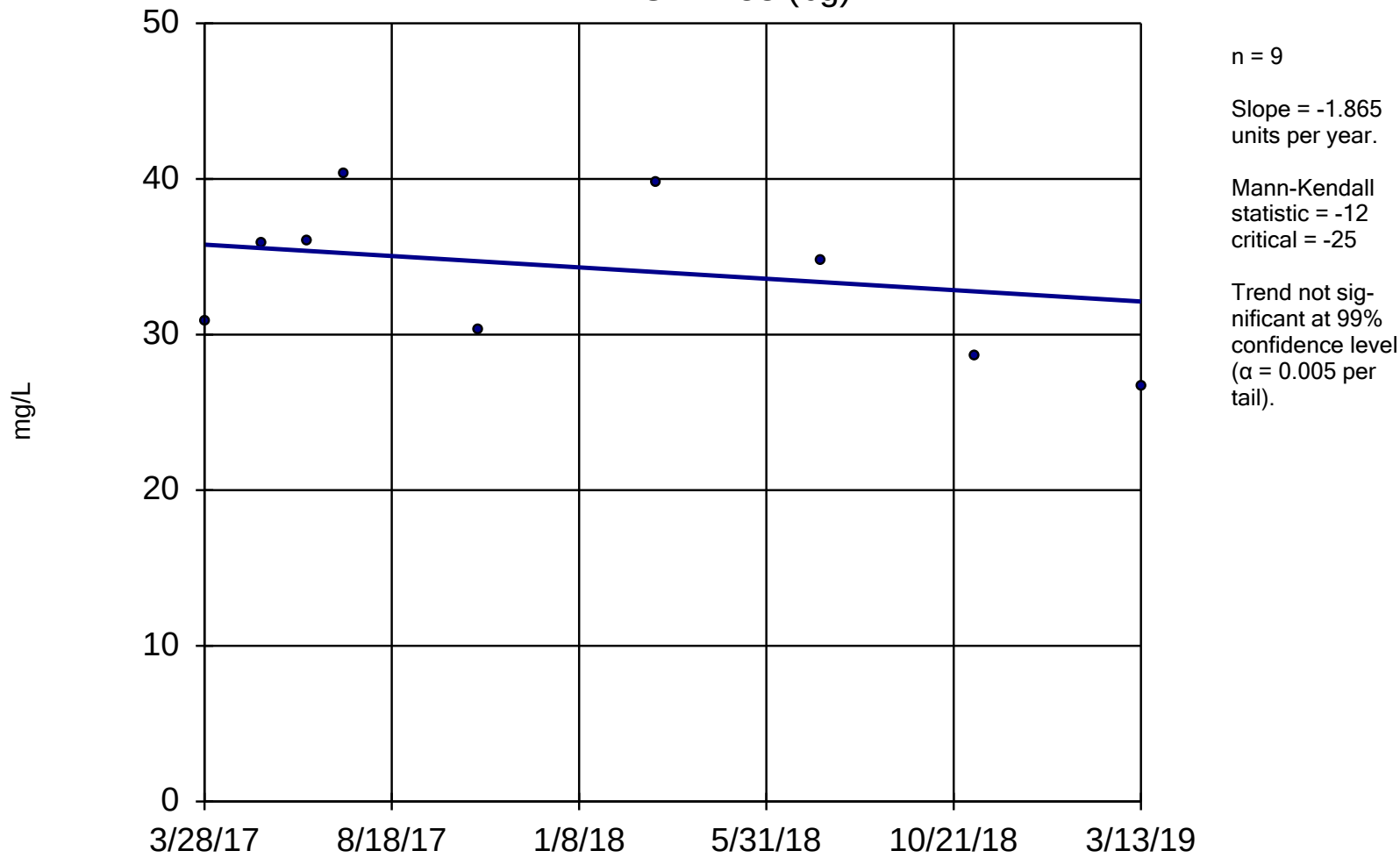
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWA-53 (bg)

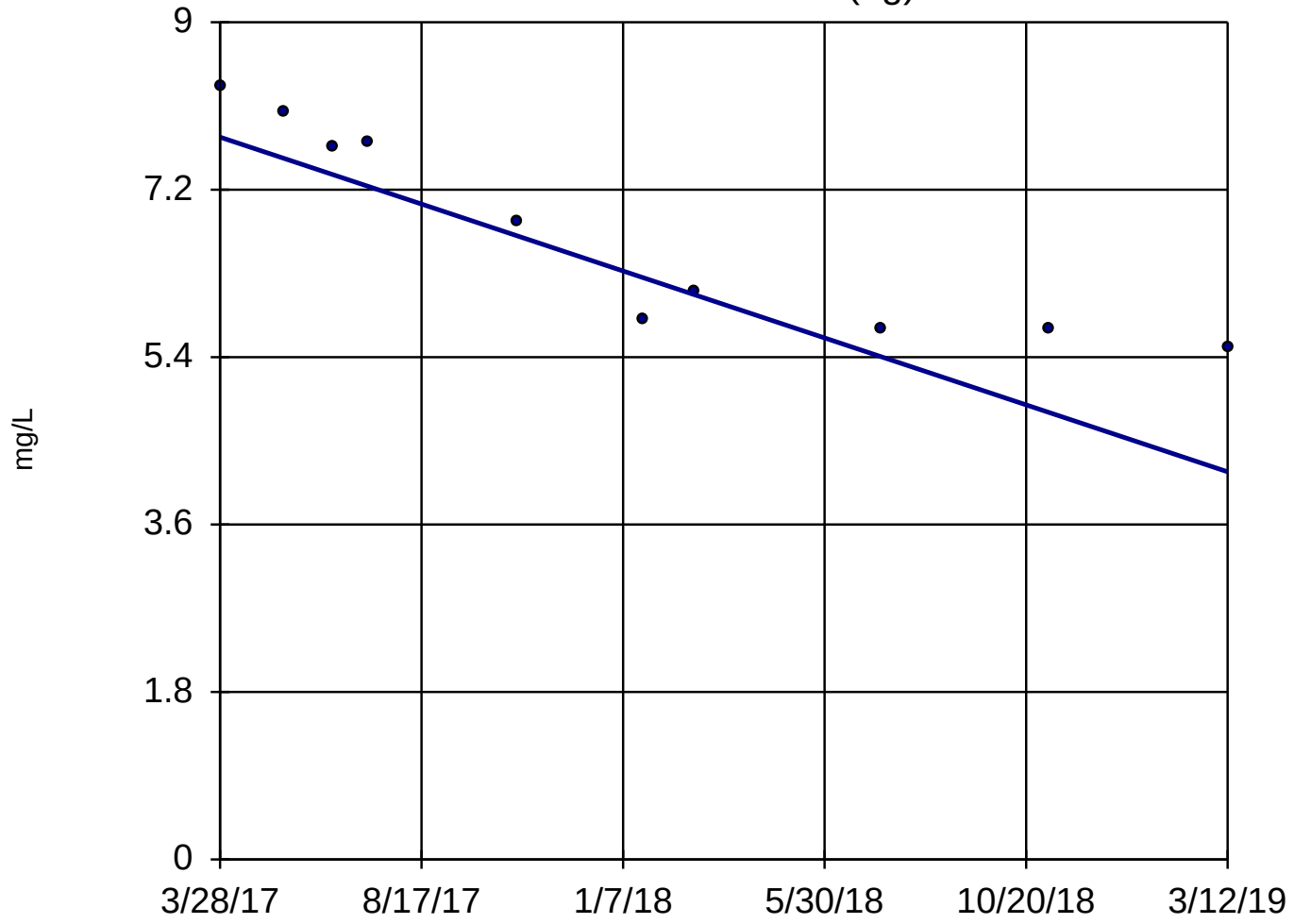


Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWA-71 (bg)



n = 10

Slope = -1.839 units per year.

Mann-Kendall statistic = -40
critical = -30

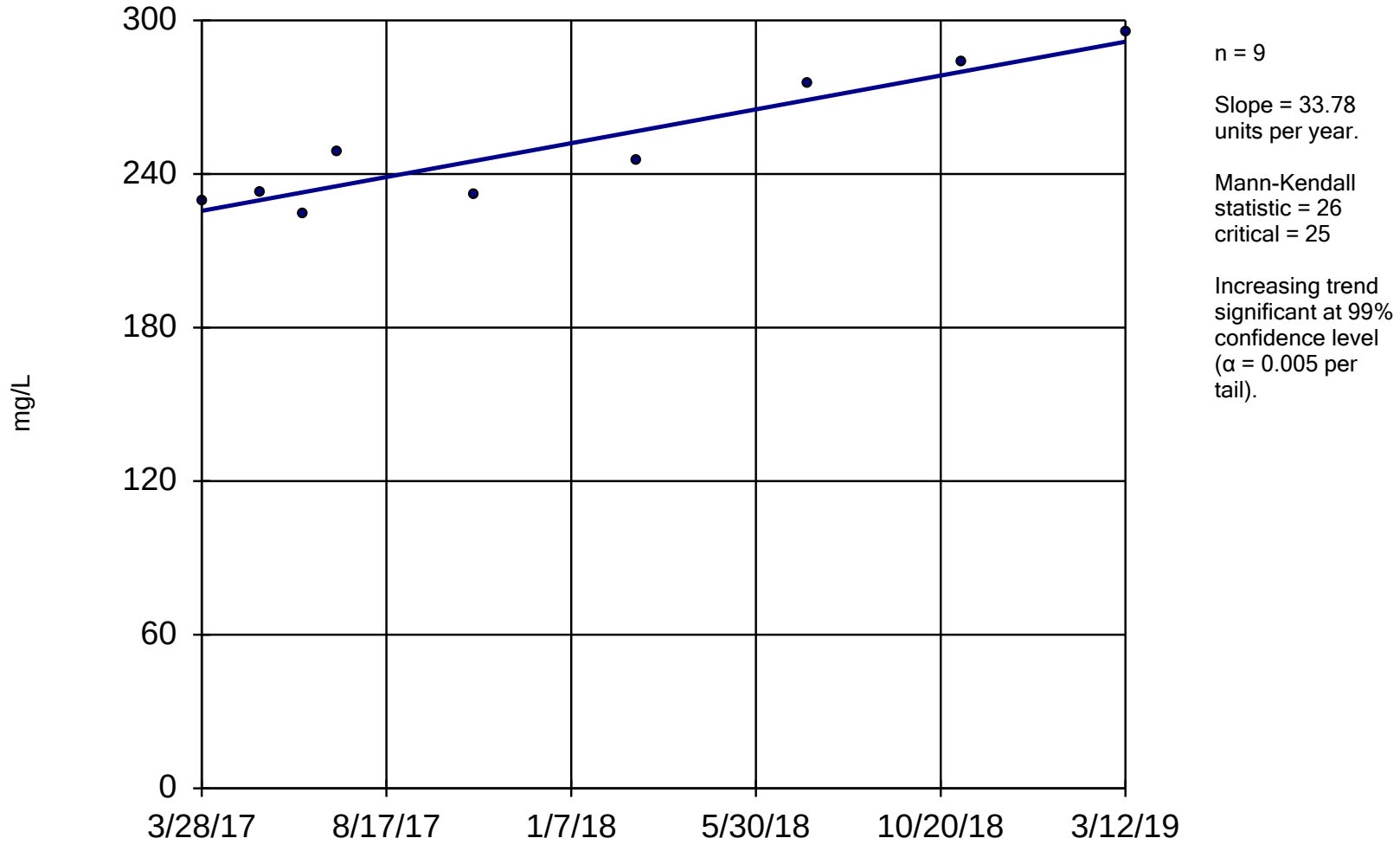
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-4



n = 9

Slope = 33.78 units per year.

Mann-Kendall statistic = 26
critical = 25

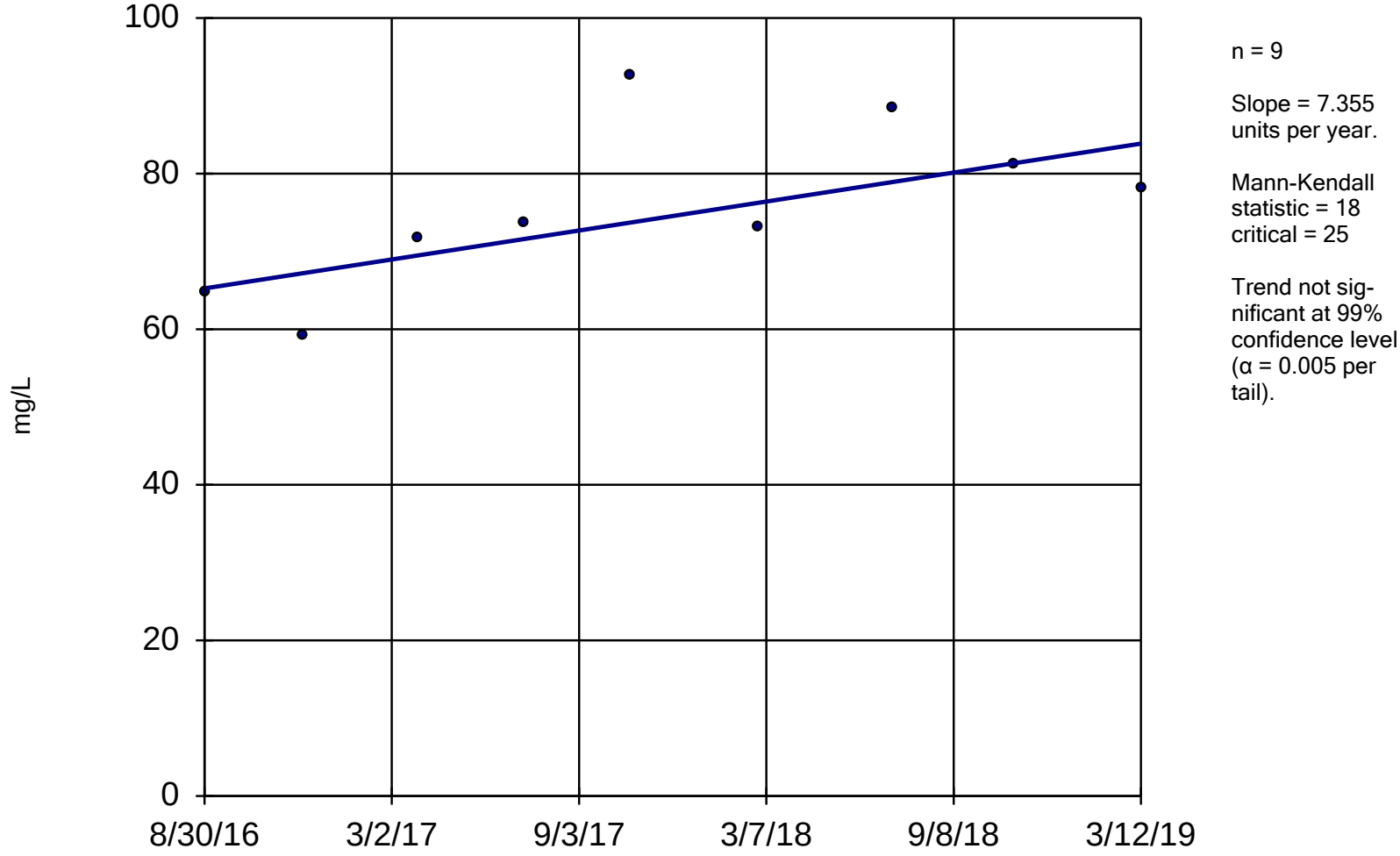
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-9



n = 9

Slope = 7.355 units per year.

Mann-Kendall statistic = 18
critical = 25

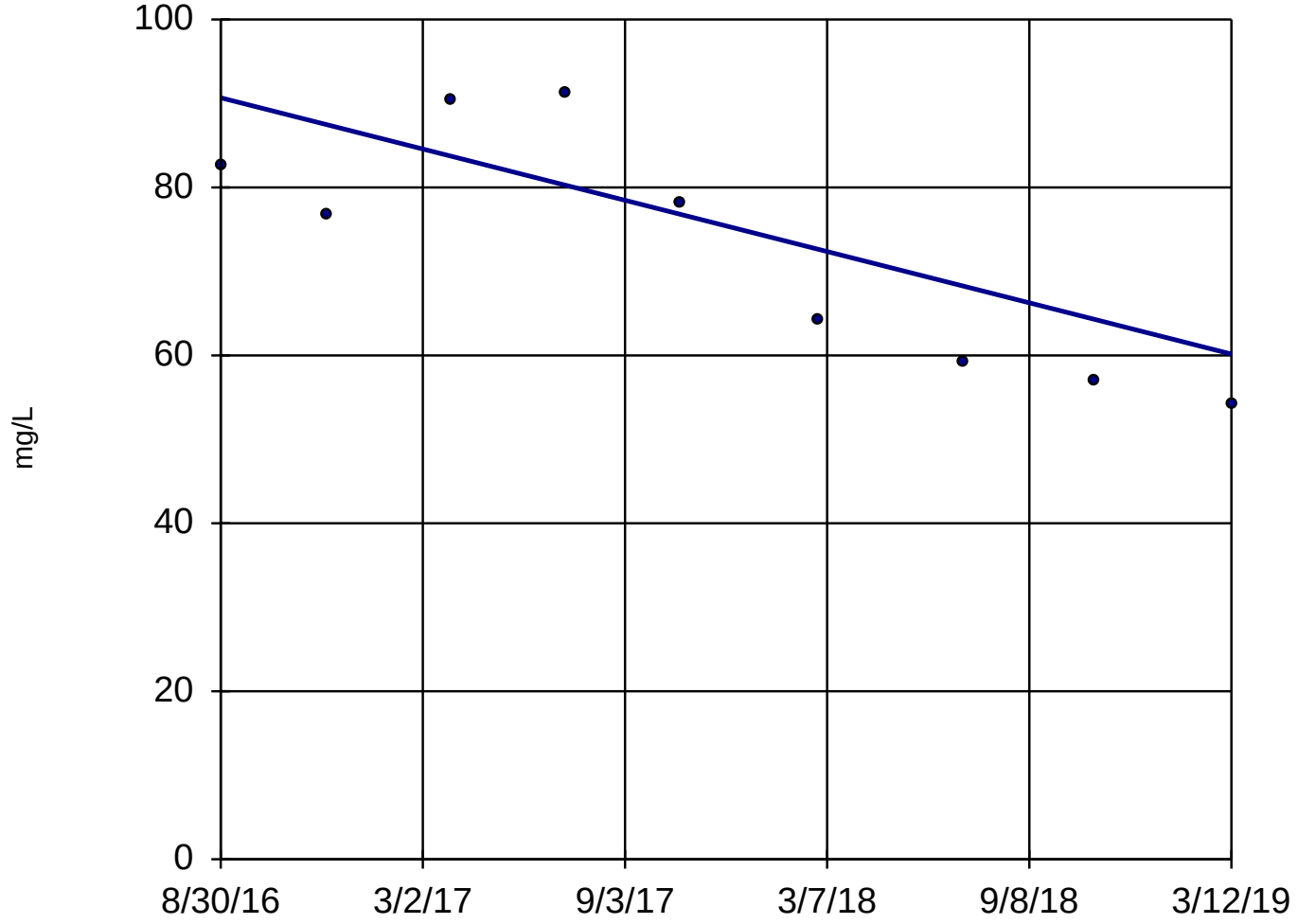
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-8



n = 9

Slope = -12.06 units per year.

Mann-Kendall statistic = -24
critical = -25

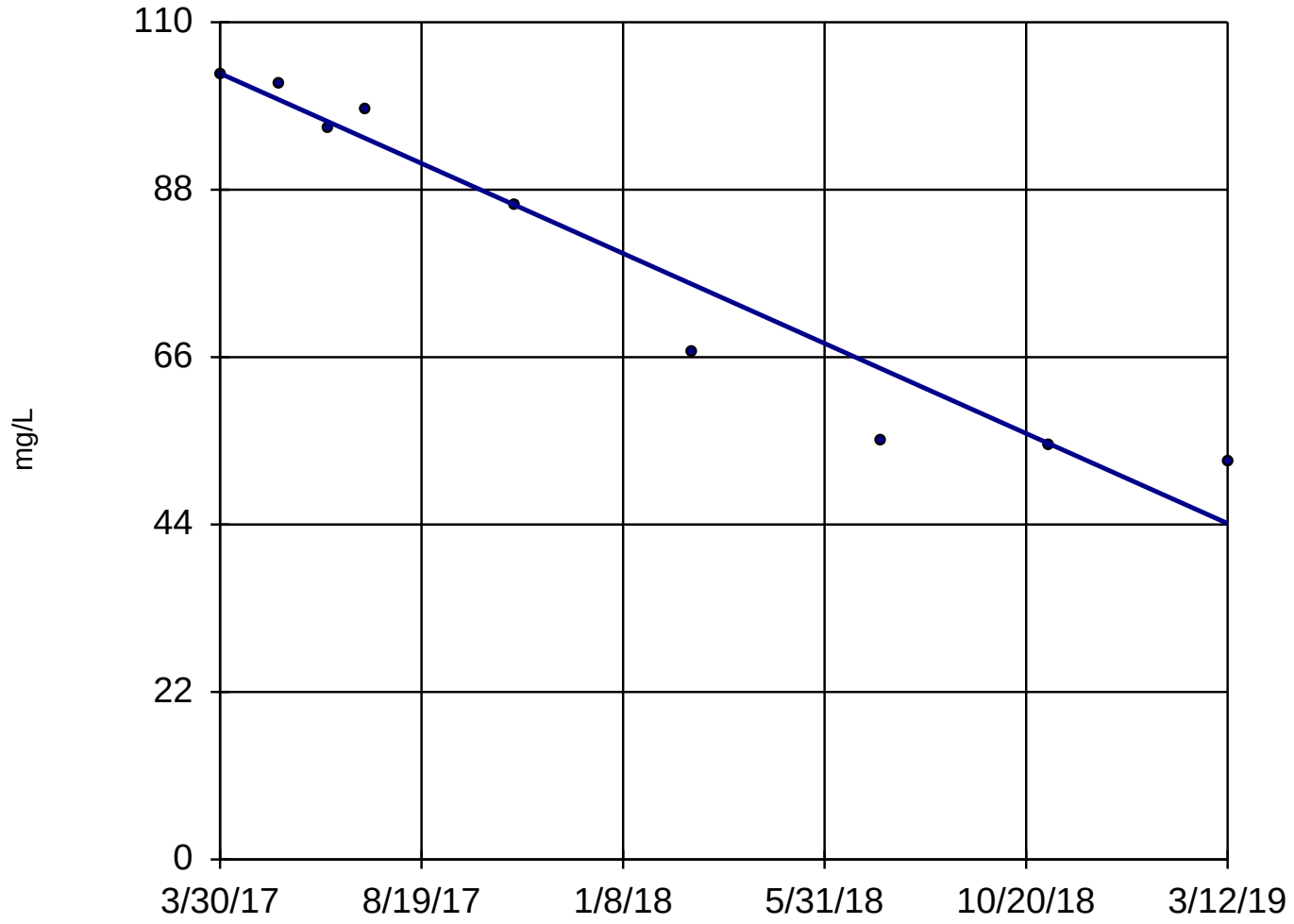
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-2



n = 9

Slope = -30.31 units per year.

Mann-Kendall statistic = -34
critical = -25

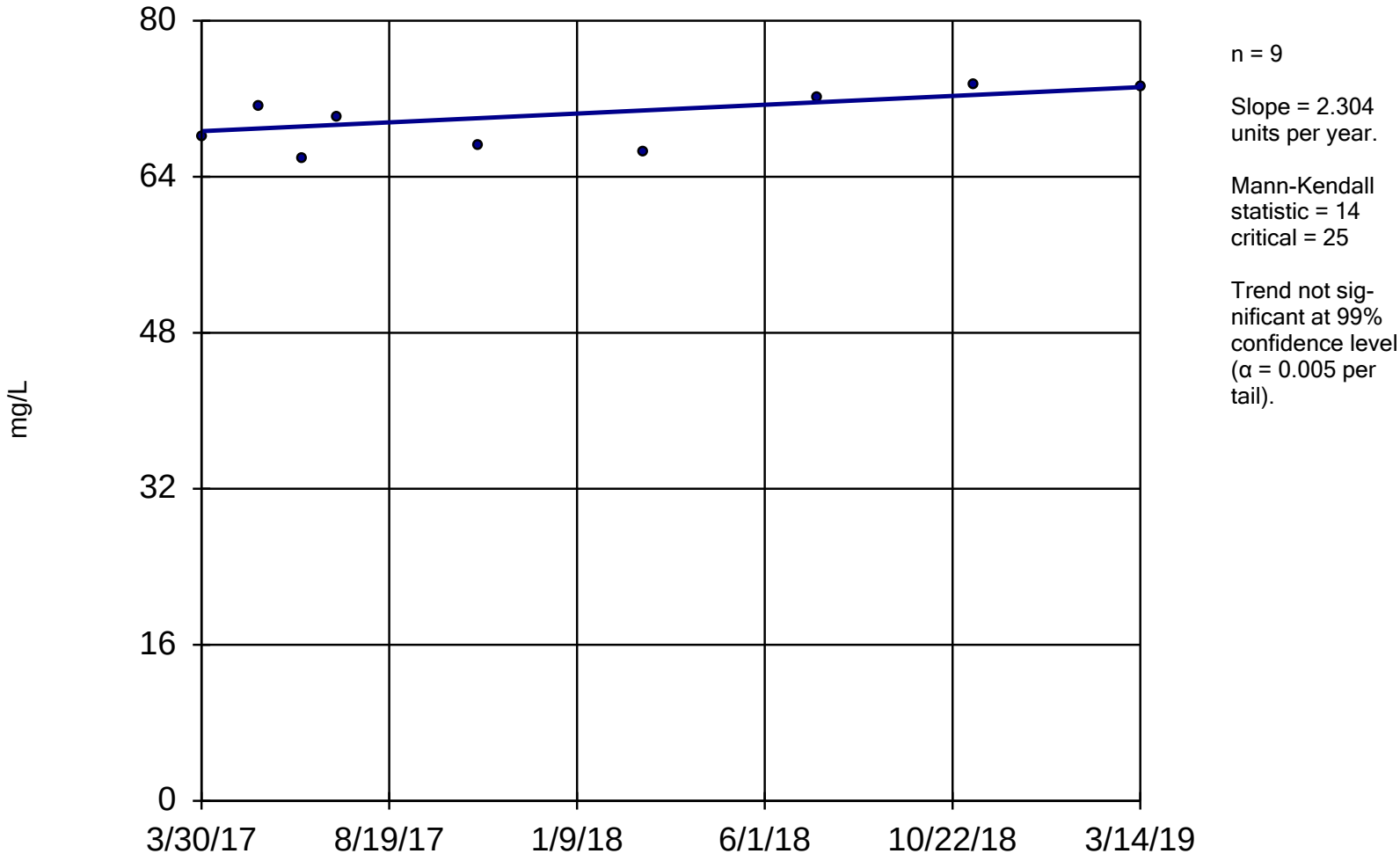
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-23



n = 9

Slope = 2.304 units per year.

Mann-Kendall statistic = 14
critical = 25

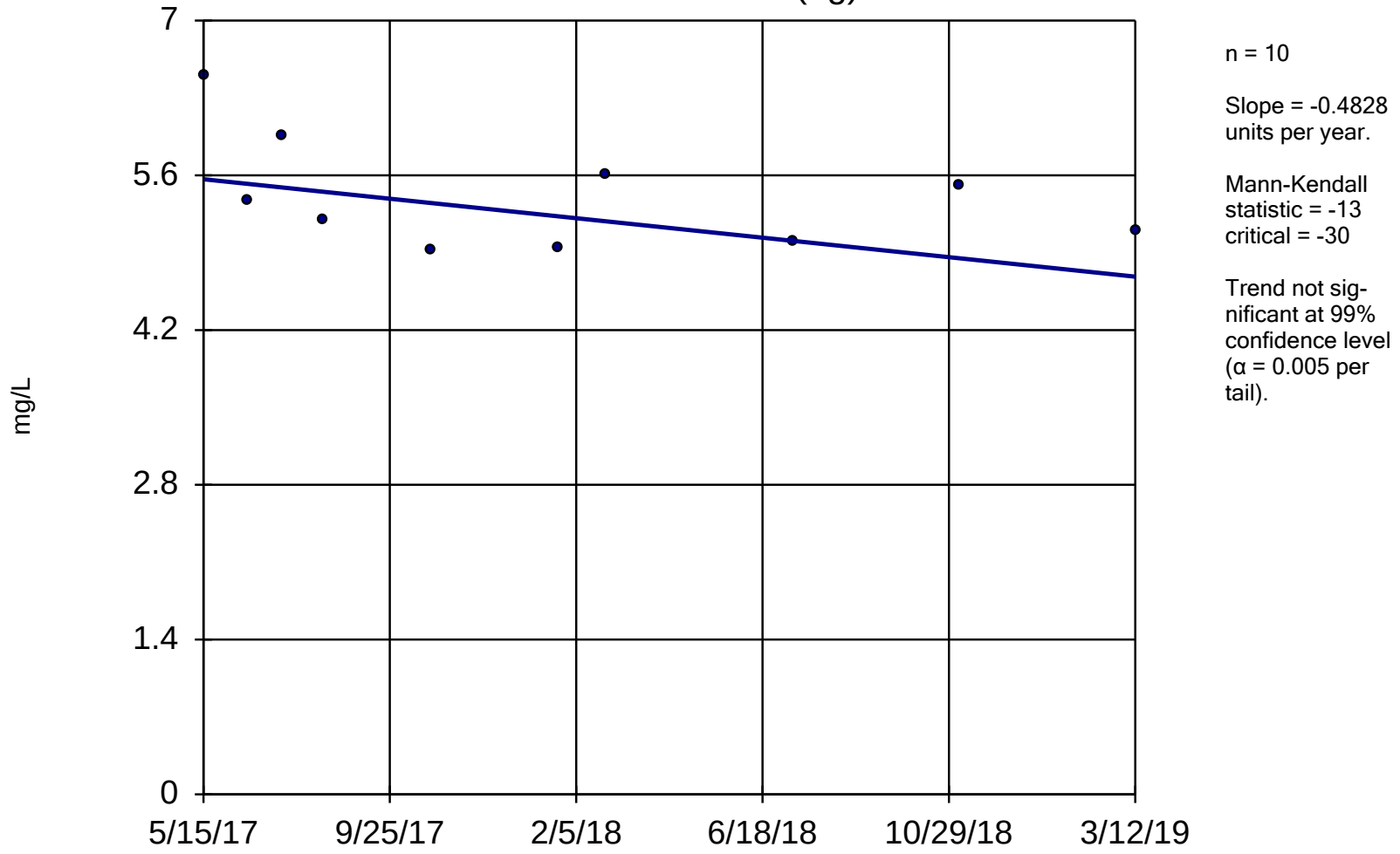
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWA-70A (bg)



n = 10

Slope = -0.4828 units per year.

Mann-Kendall statistic = -13
critical = -30

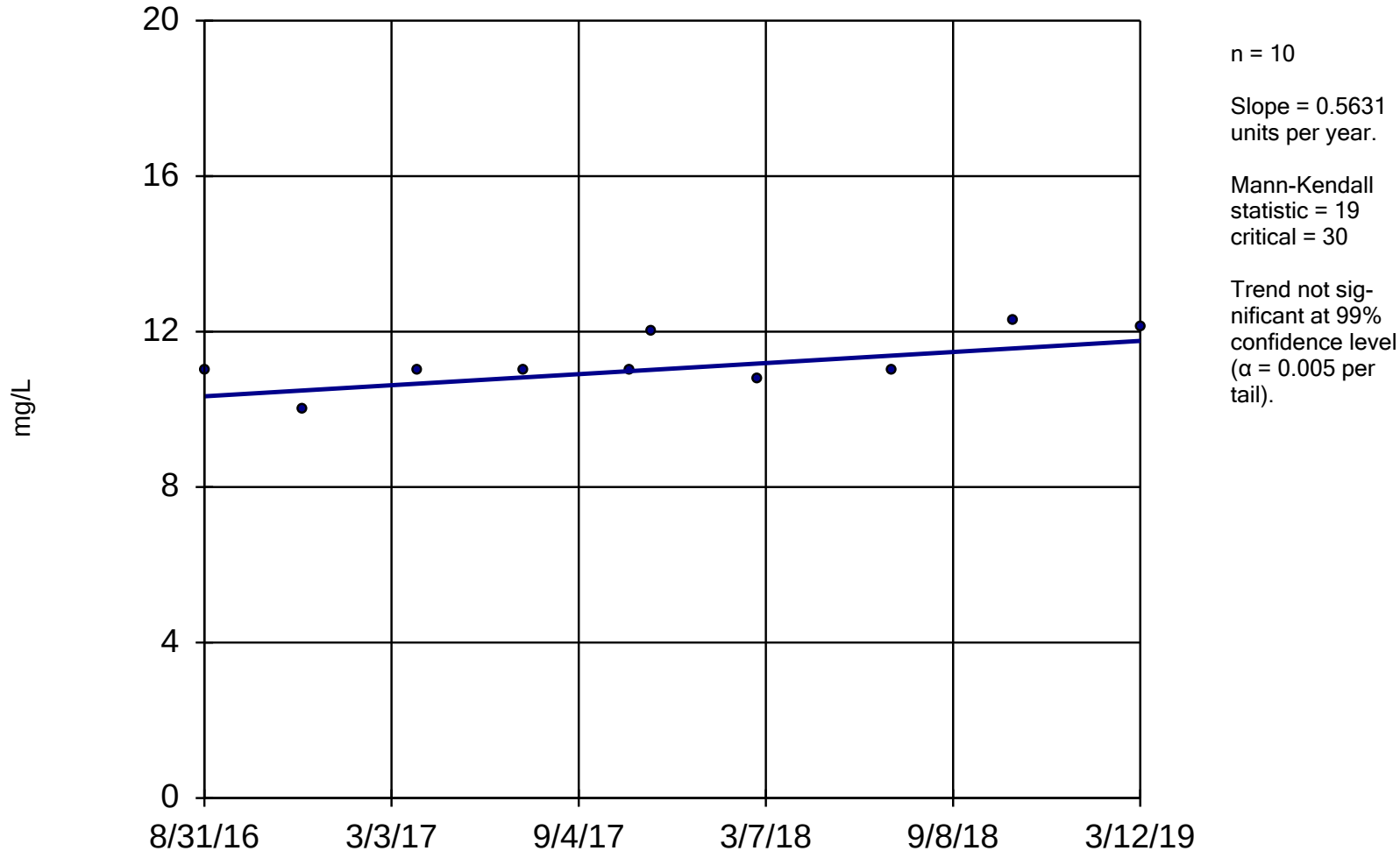
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-10



n = 10

Slope = 0.5631 units per year.

Mann-Kendall statistic = 19
critical = 30

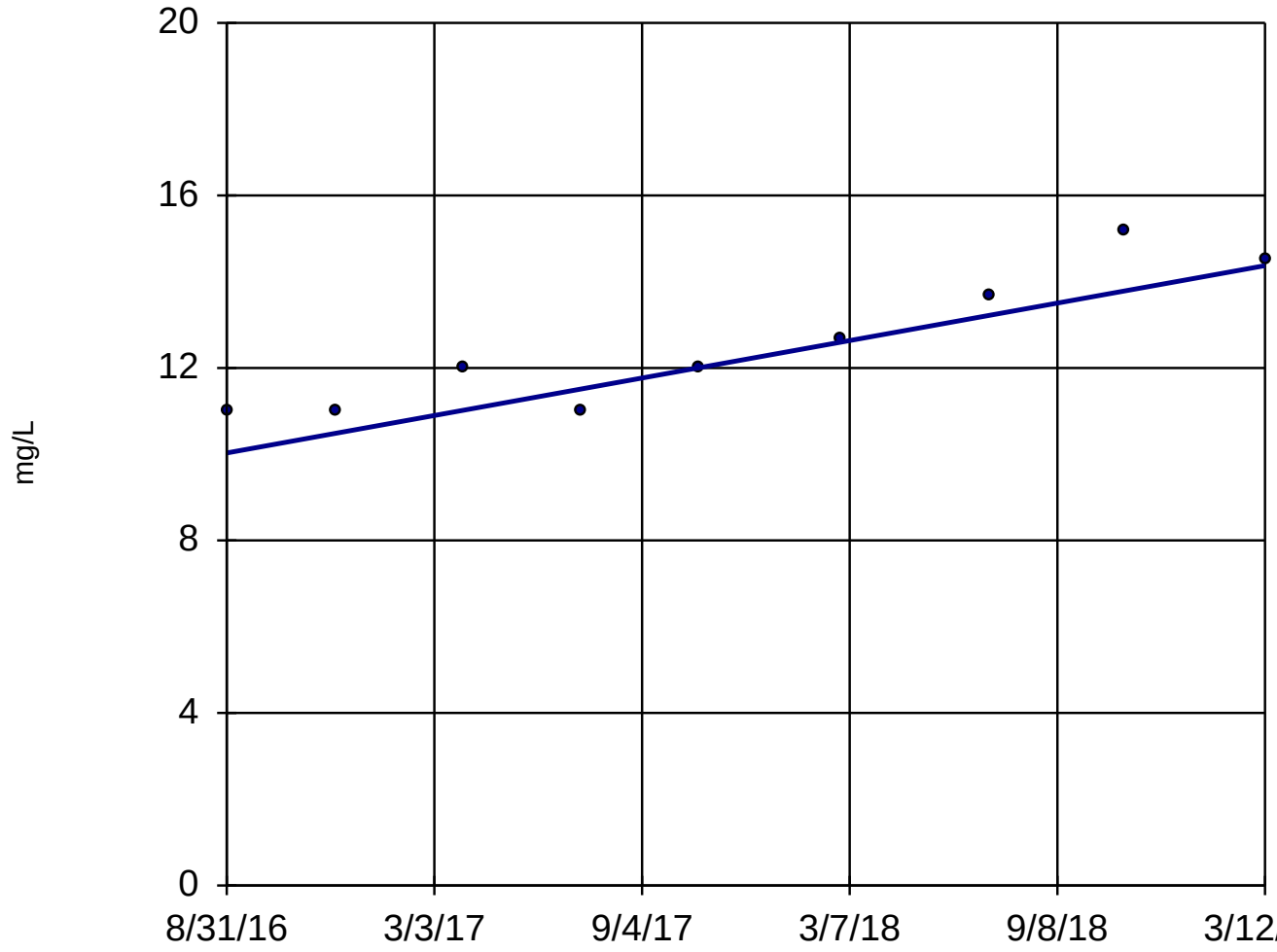
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-11



n = 9

Slope = 1.717 units per year.

Mann-Kendall statistic = 28
critical = 25

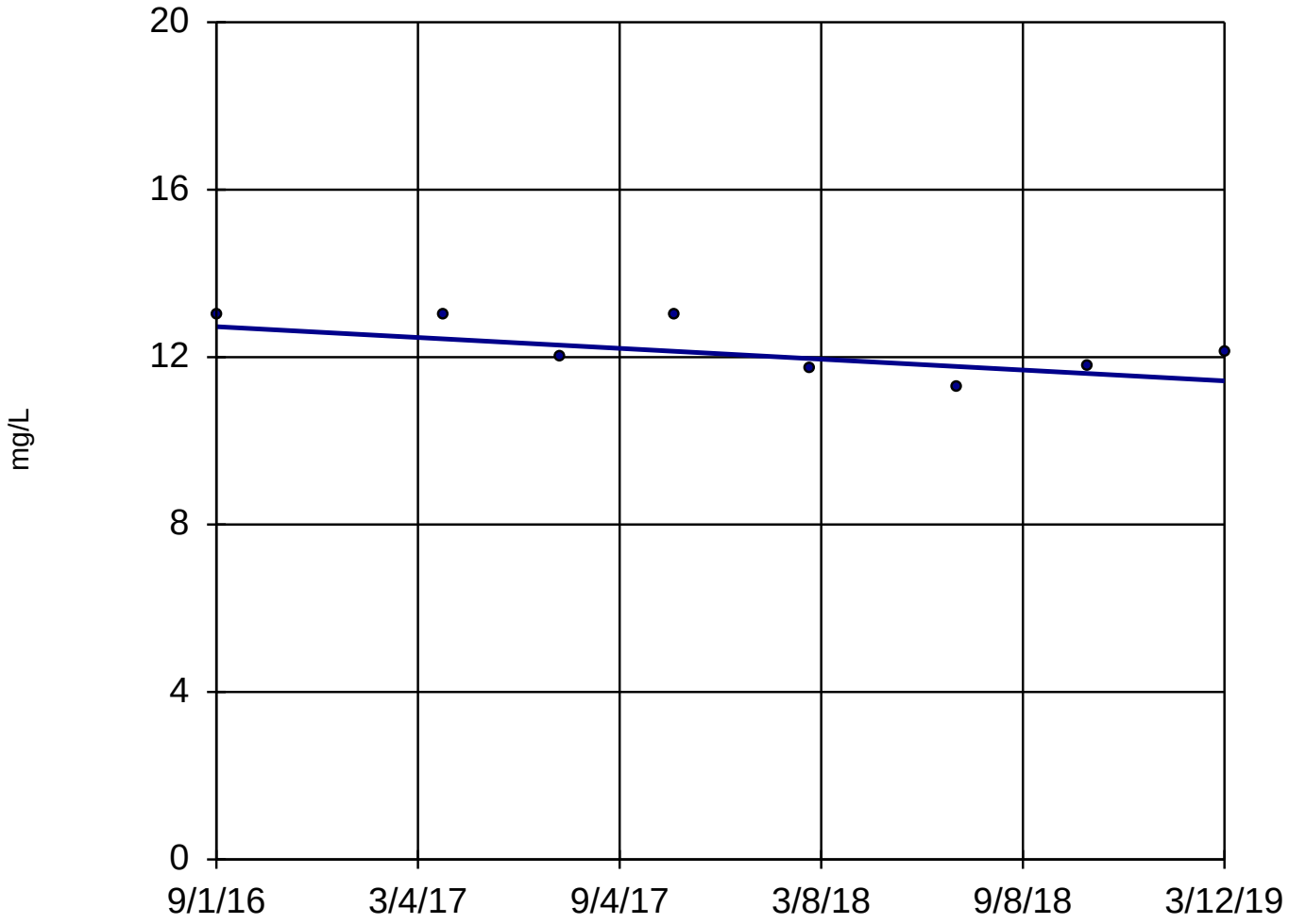
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-12



n = 8

Slope = -0.5128 units per year.

Mann-Kendall statistic = -11
critical = -21

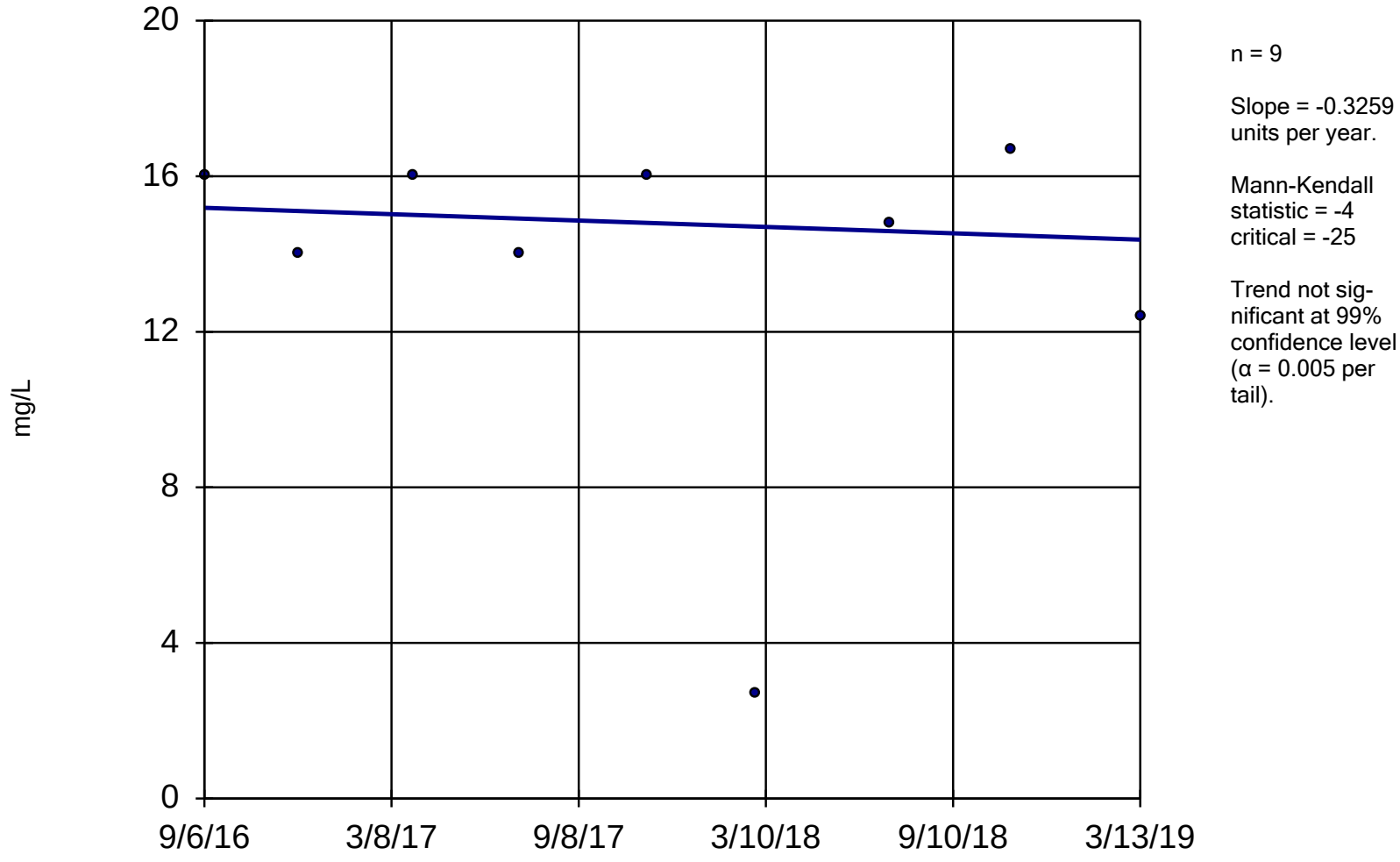
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-13

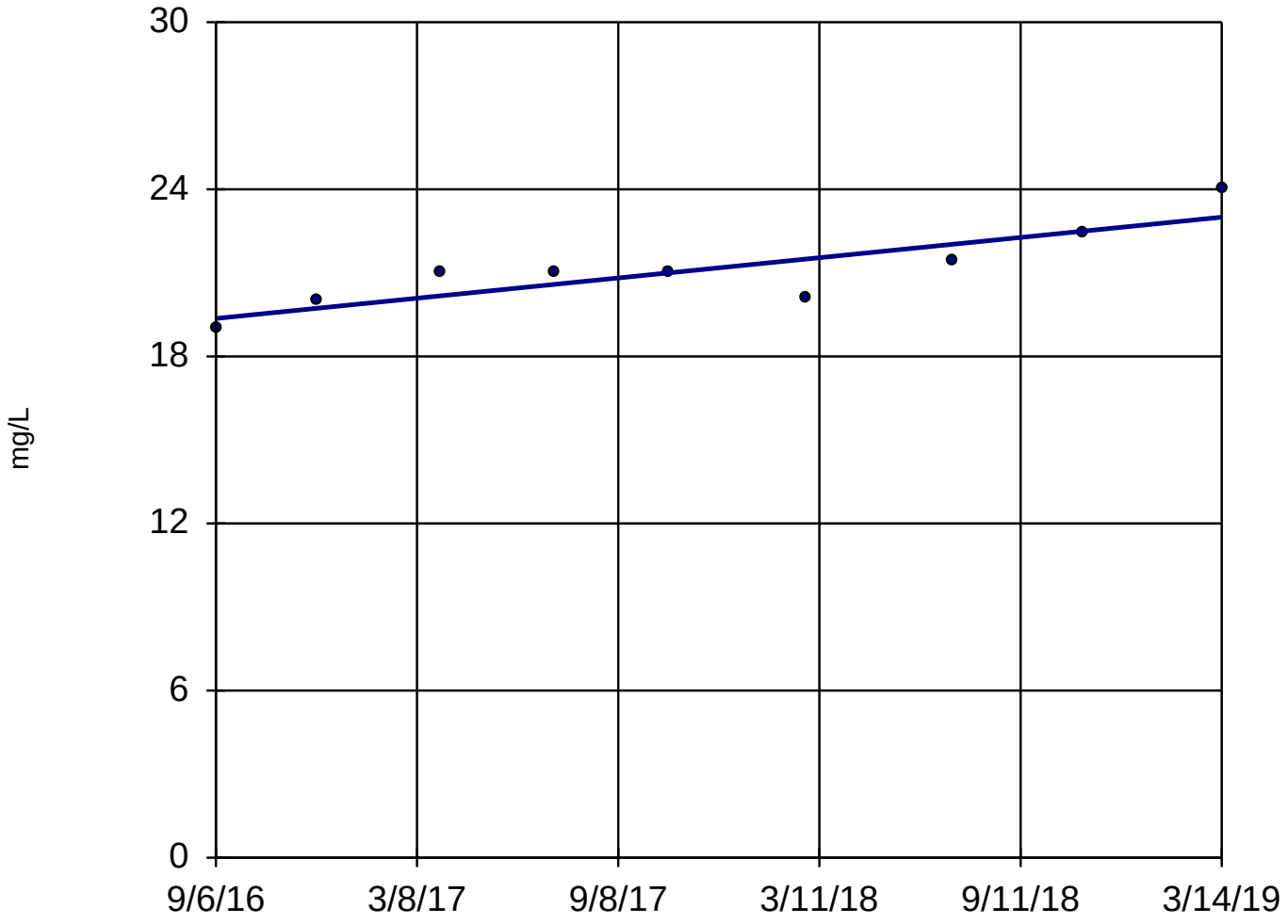


Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-15



n = 9

Slope = 1.443 units per year.

Mann-Kendall statistic = 27
critical = 25

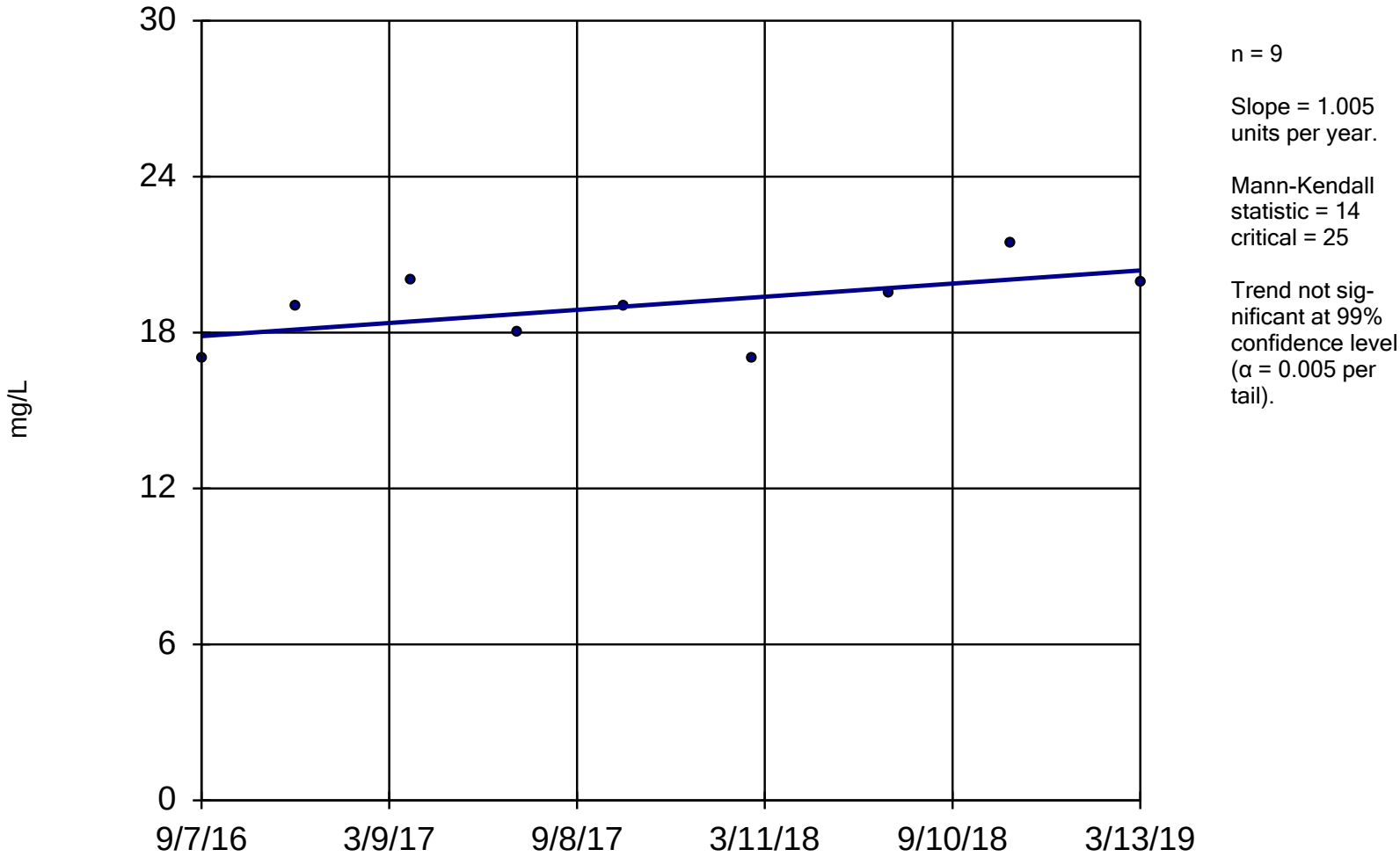
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-17



n = 9

Slope = 1.005 units per year.

Mann-Kendall statistic = 14
critical = 25

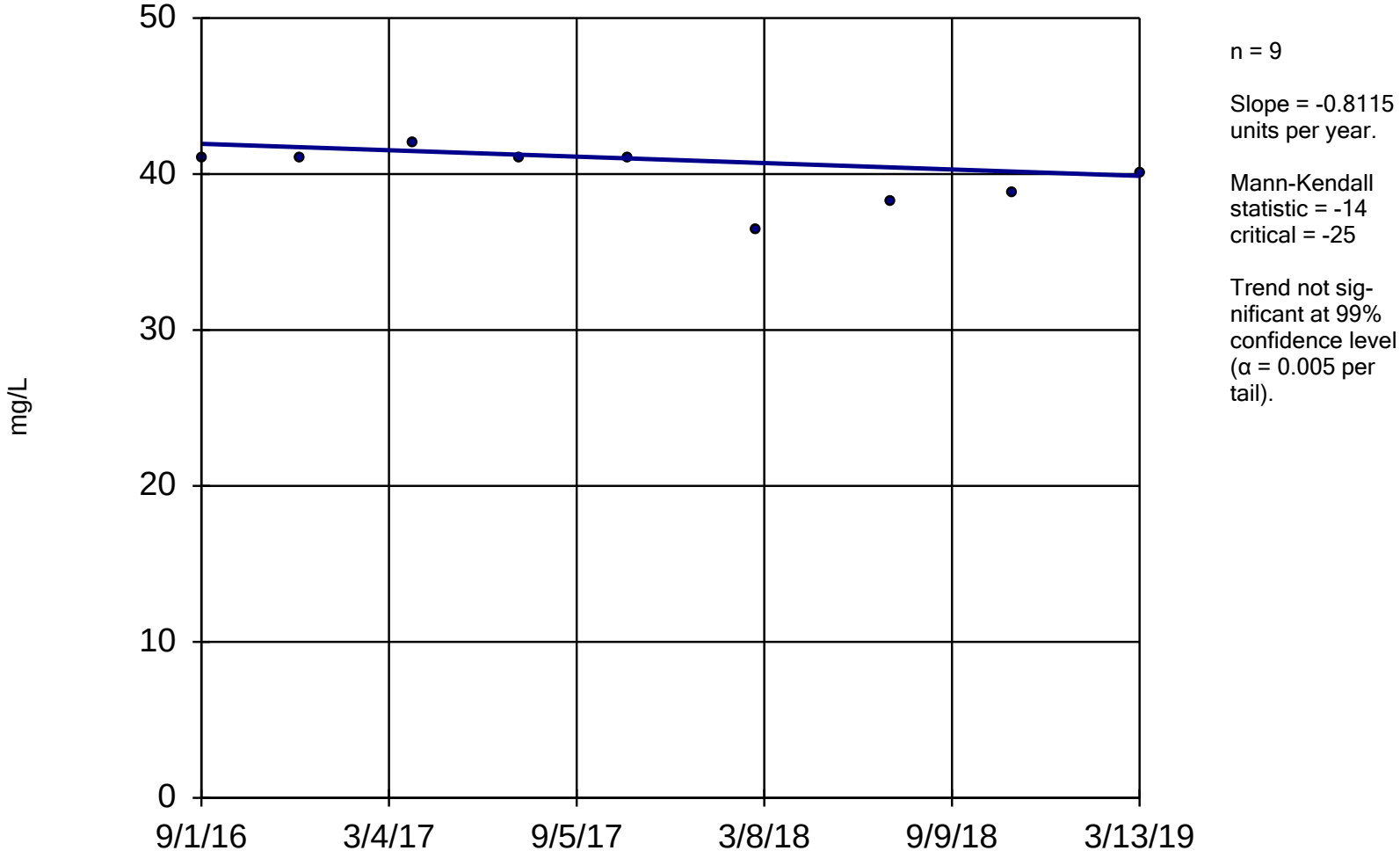
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-19



n = 9

Slope = -0.8115 units per year.

Mann-Kendall statistic = -14
critical = -25

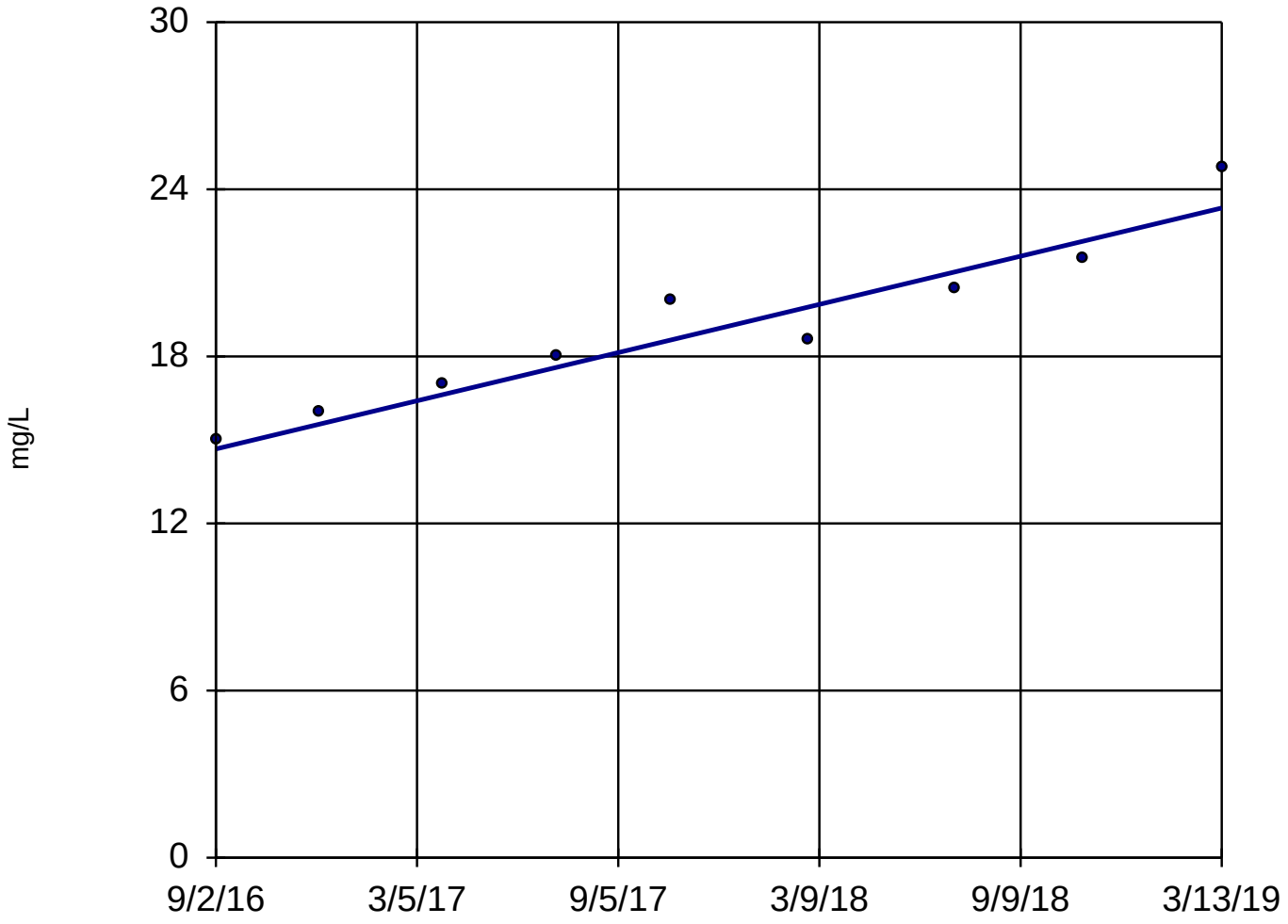
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-20



n = 9

Slope = 3.425 units per year.

Mann-Kendall statistic = 34
critical = 25

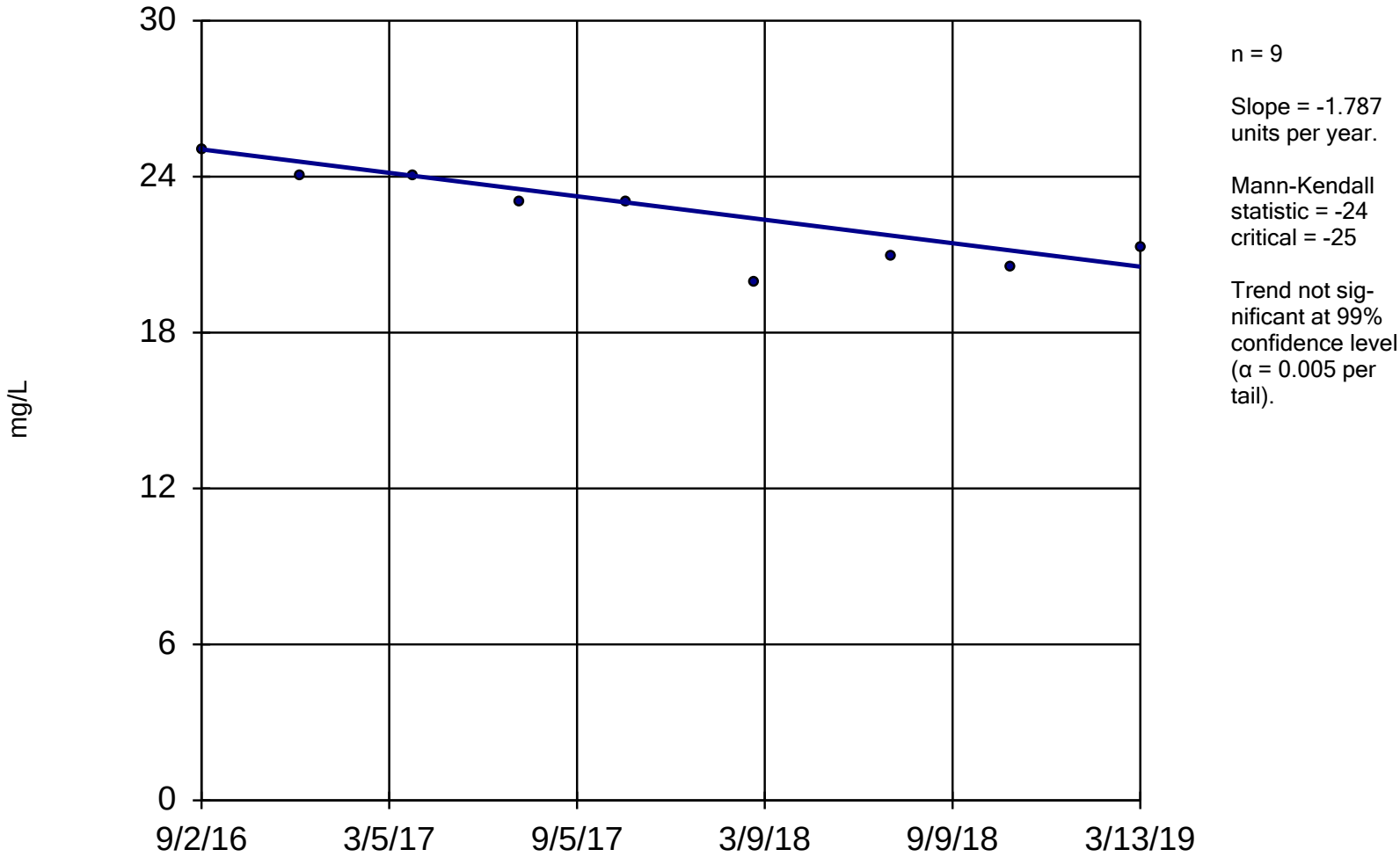
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-21



n = 9

Slope = -1.787 units per year.

Mann-Kendall statistic = -24
critical = -25

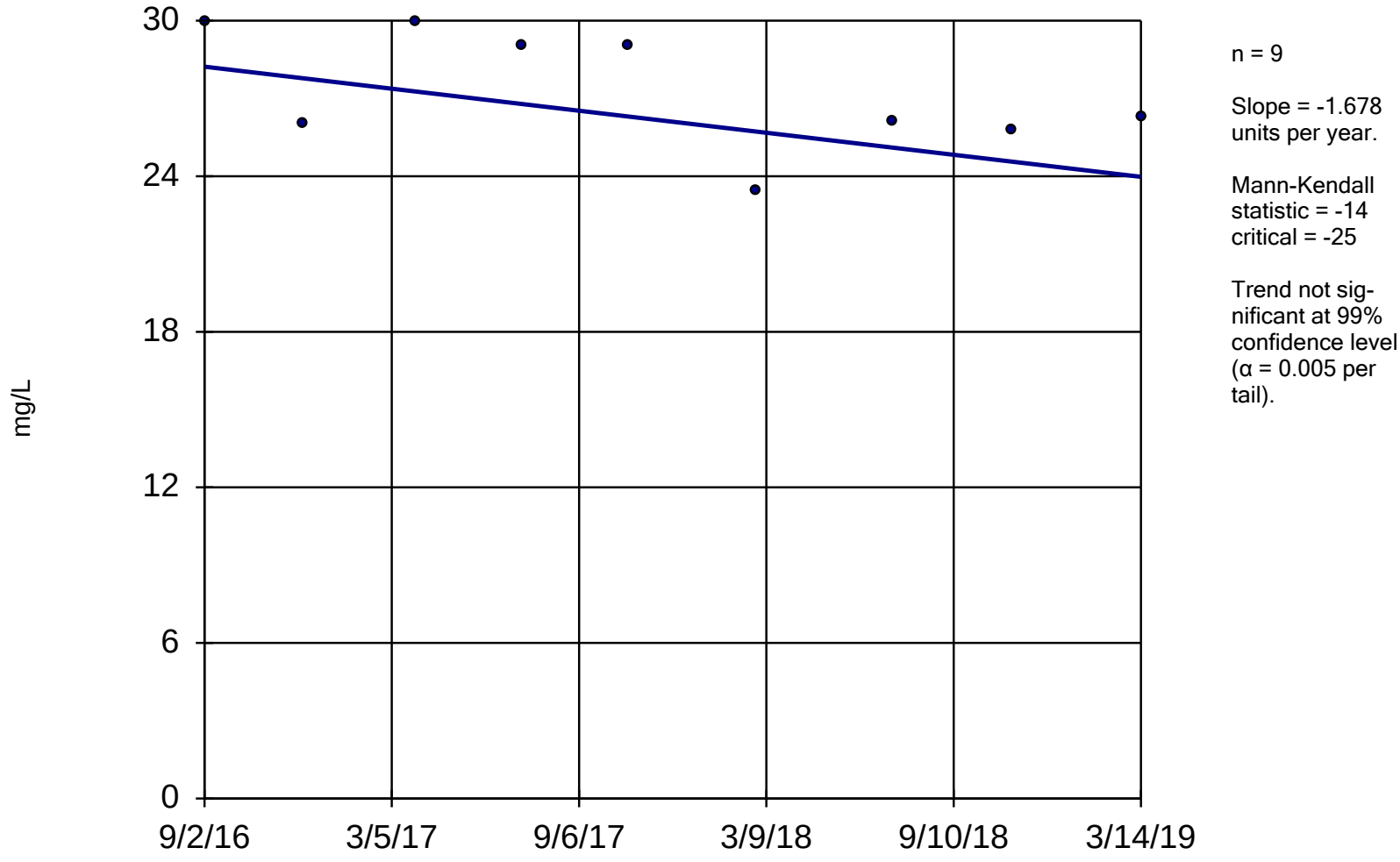
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-22



n = 9

Slope = -1.678 units per year.

Mann-Kendall statistic = -14
critical = -25

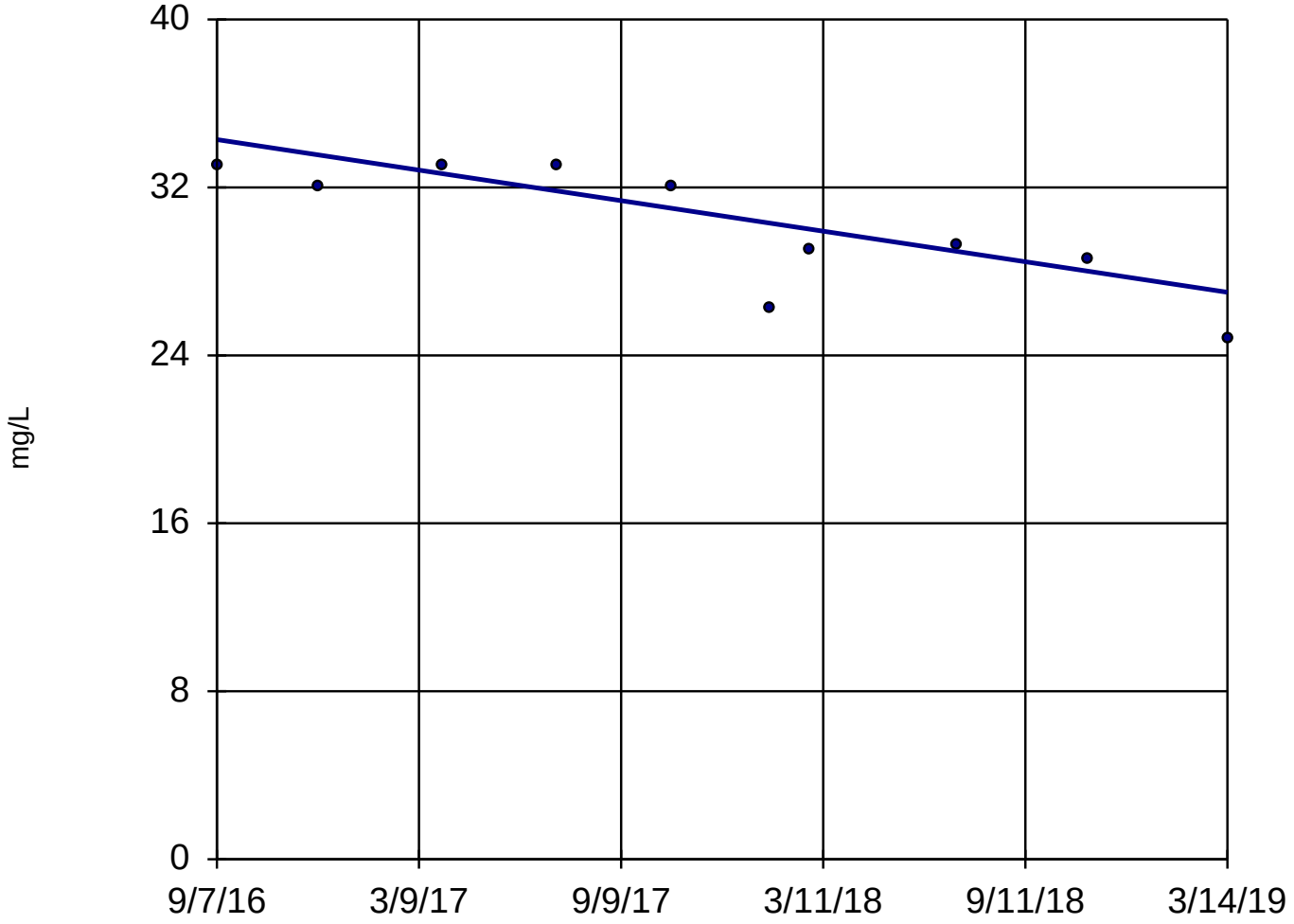
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-42



n = 10

Slope = -2.892 units per year.

Mann-Kendall statistic = -29
critical = -30

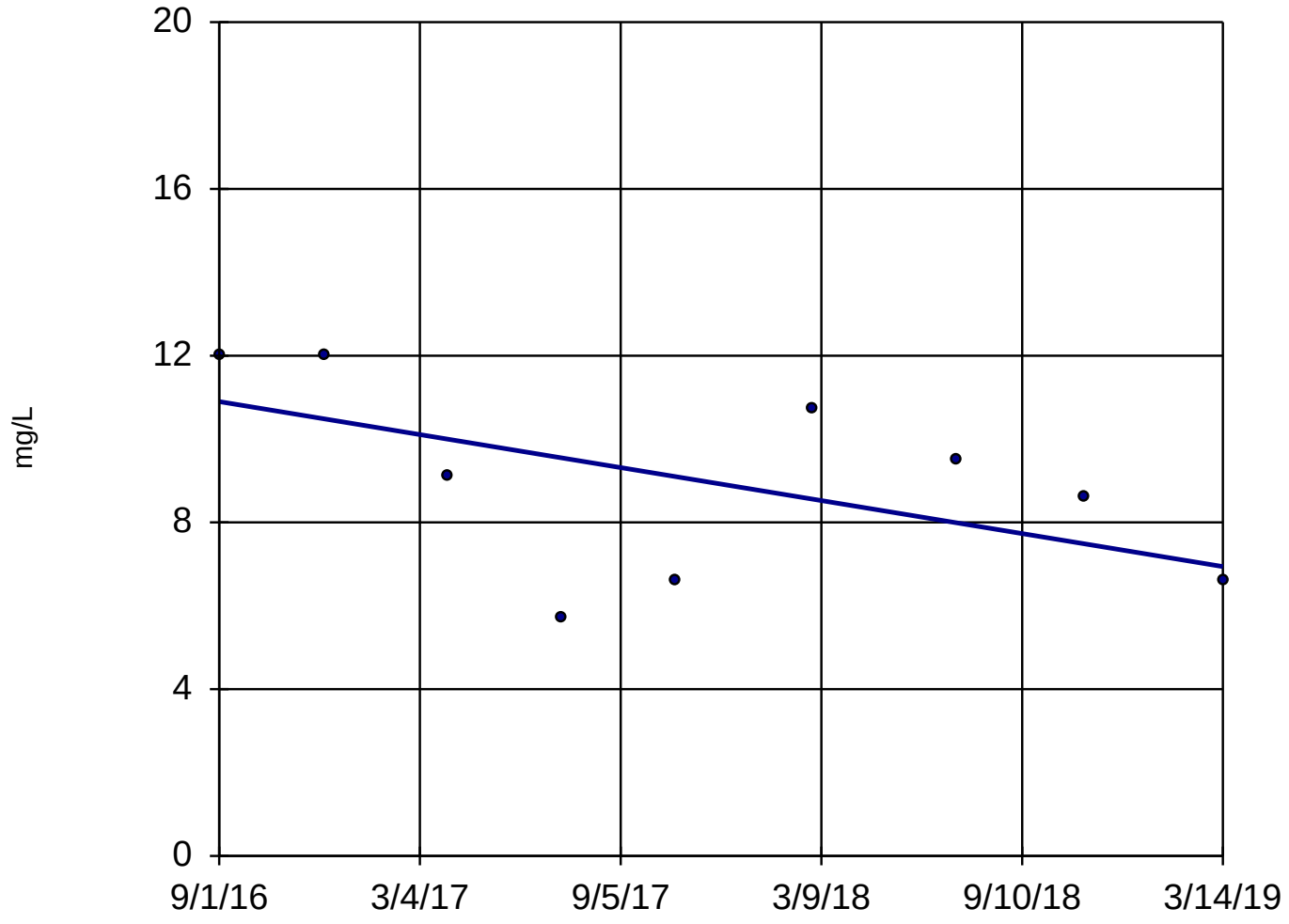
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-47



n = 9

Slope = -1.564 units per year.

Mann-Kendall statistic = -14
critical = -25

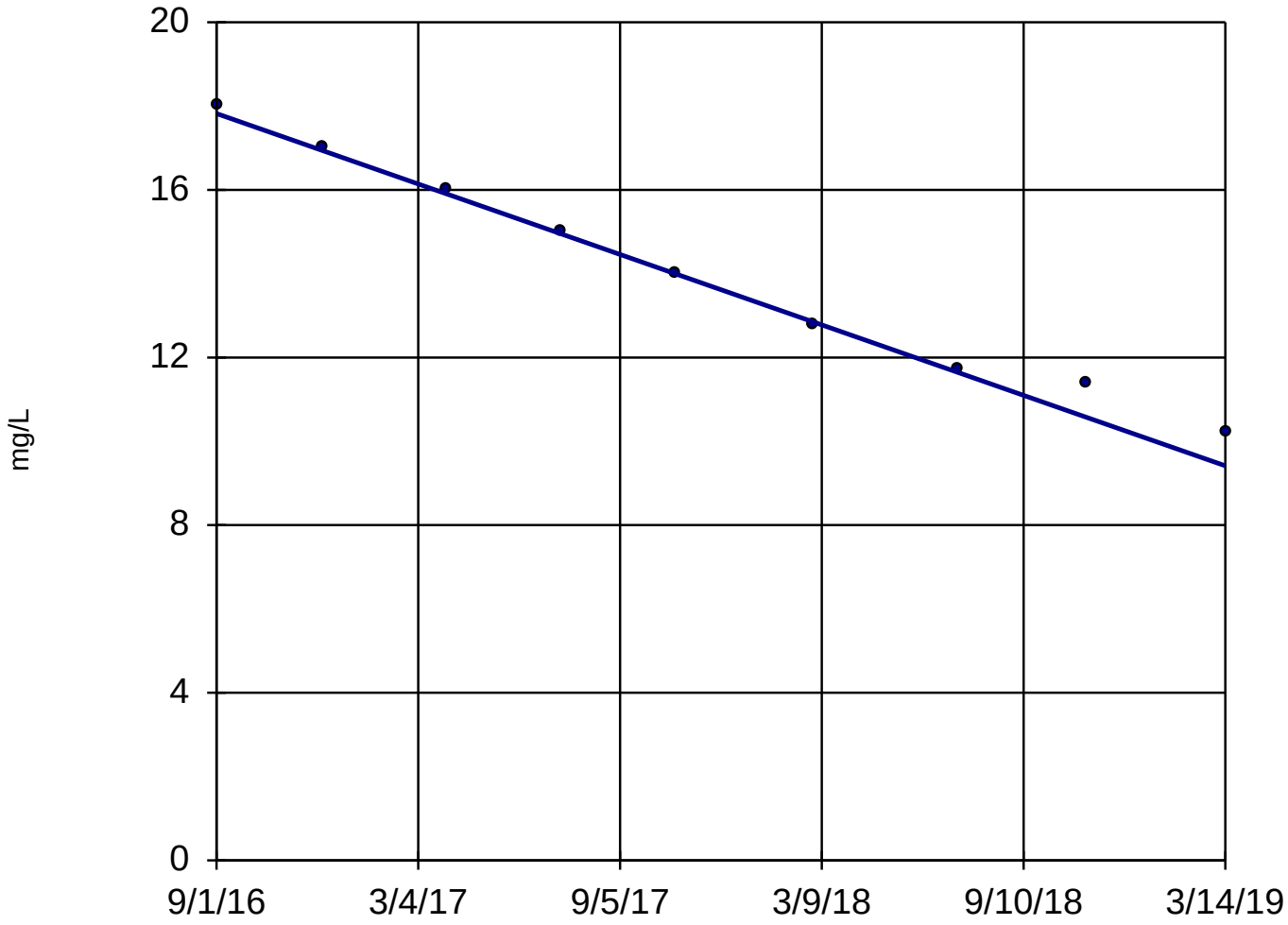
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-48



n = 9

Slope = -3.319 units per year.

Mann-Kendall statistic = -36
critical = -25

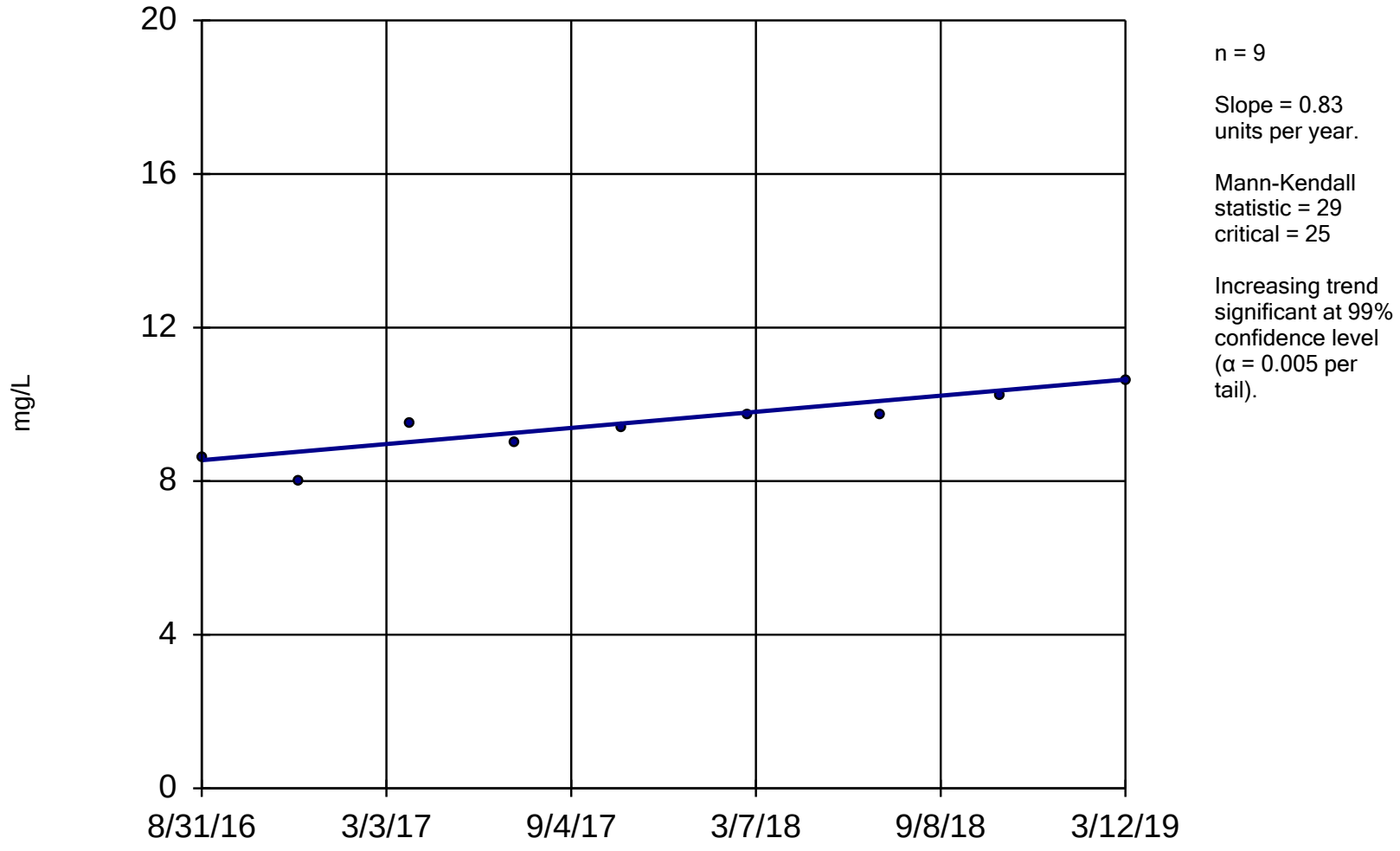
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-5



n = 9

Slope = 0.83 units per year.

Mann-Kendall statistic = 29
critical = 25

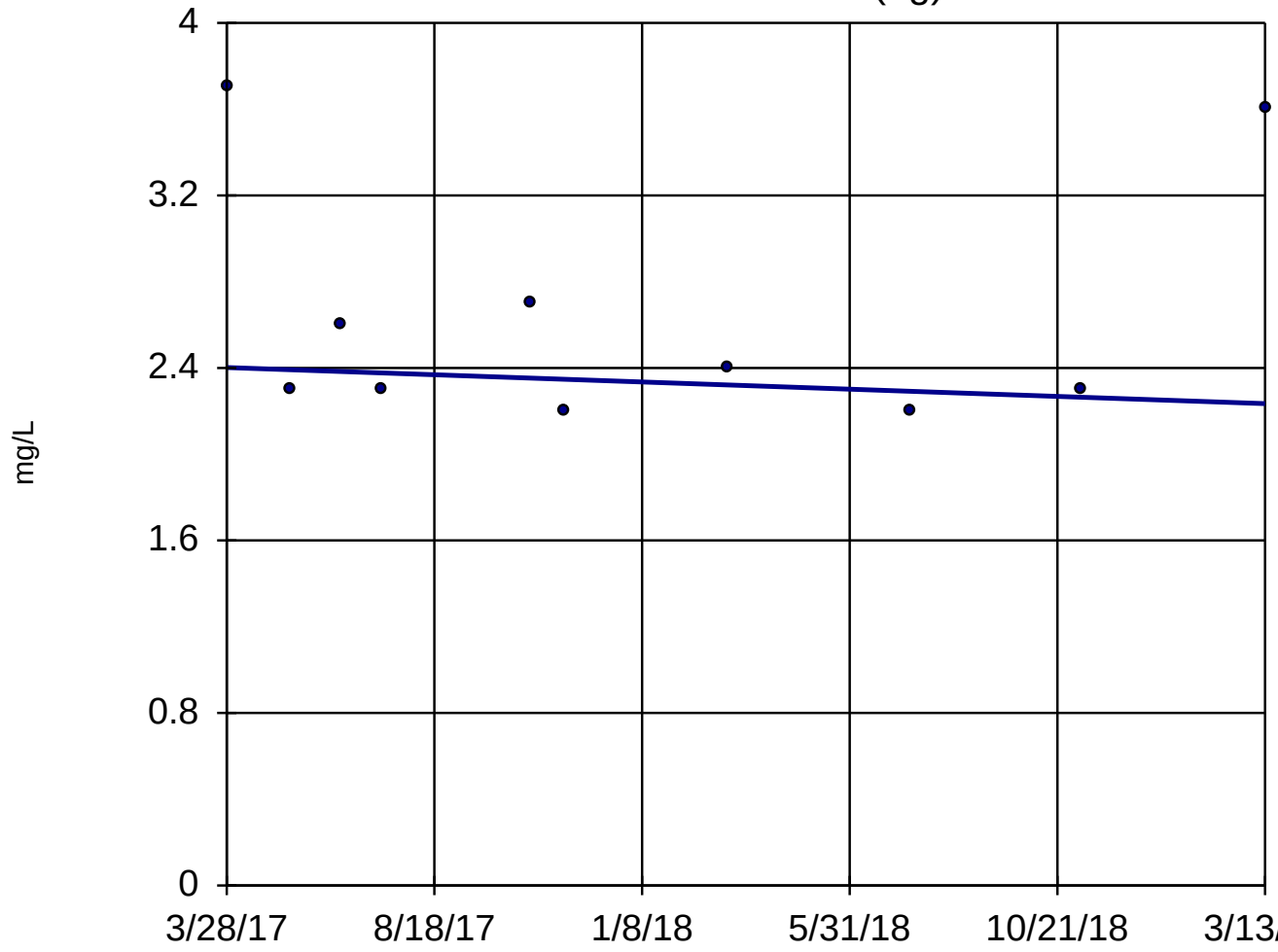
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWA-53 (bg)



n = 10

Slope = -0.08548 units per year.

Mann-Kendall statistic = -7
critical = -30

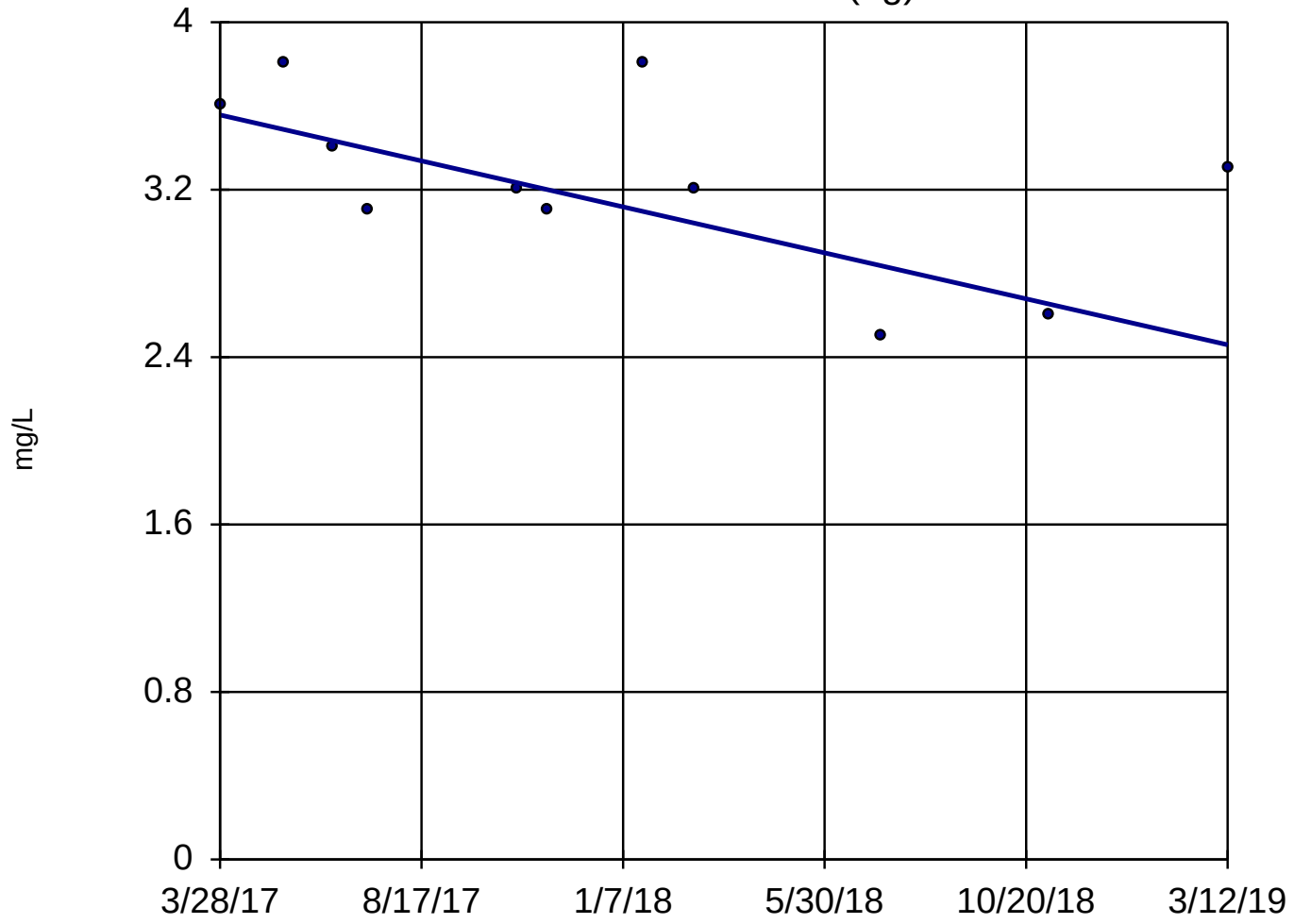
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWA-71 (bg)



n = 11

Slope = -0.5615 units per year.

Mann-Kendall statistic = -20
critical = -34

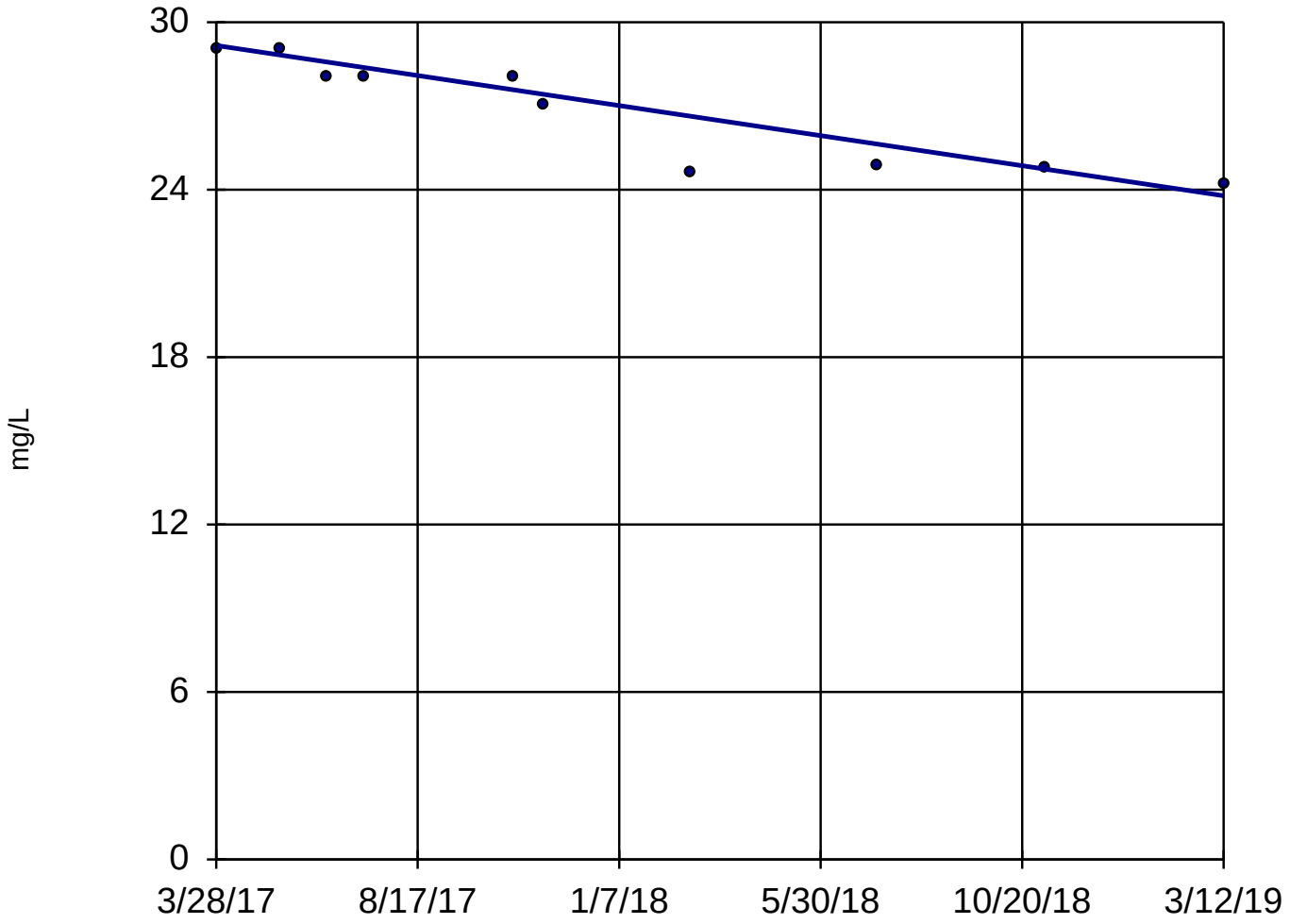
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-4



n = 10

Slope = -2.752 units per year.

Mann-Kendall statistic = -37
critical = -30

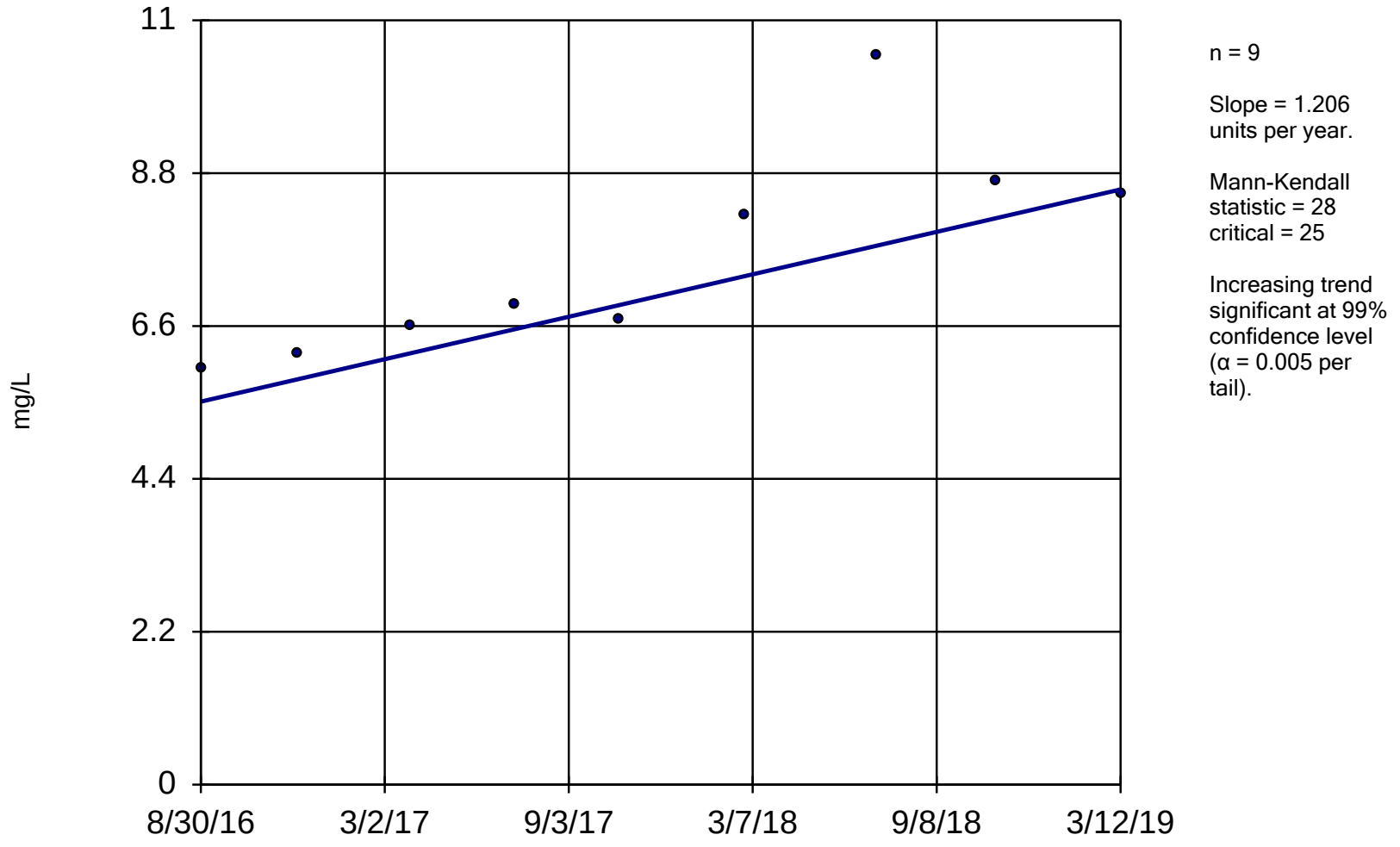
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-9



n = 9

Slope = 1.206 units per year.

Mann-Kendall statistic = 28
critical = 25

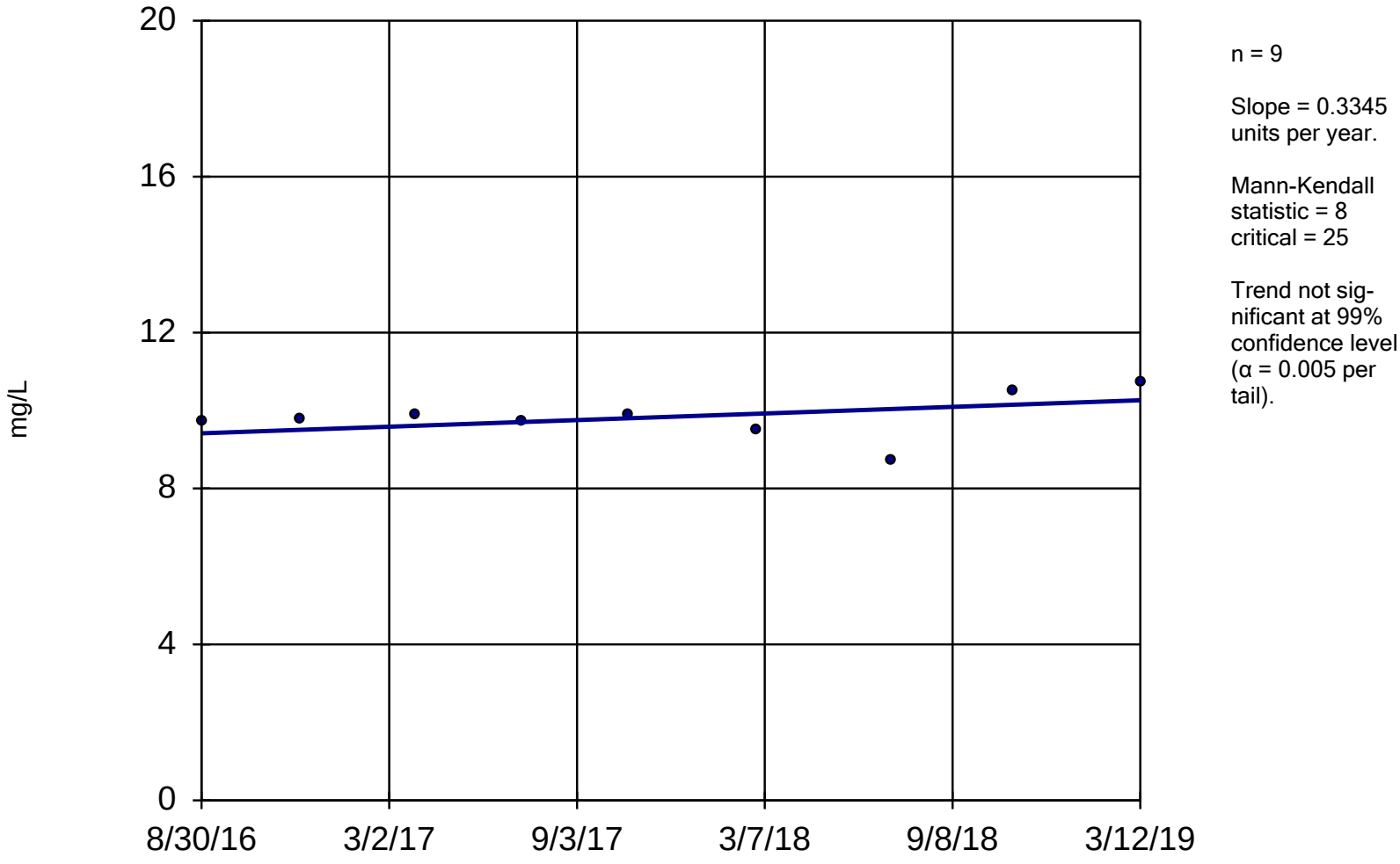
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:23 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-8



n = 9

Slope = 0.3345 units per year.

Mann-Kendall statistic = 8
critical = 25

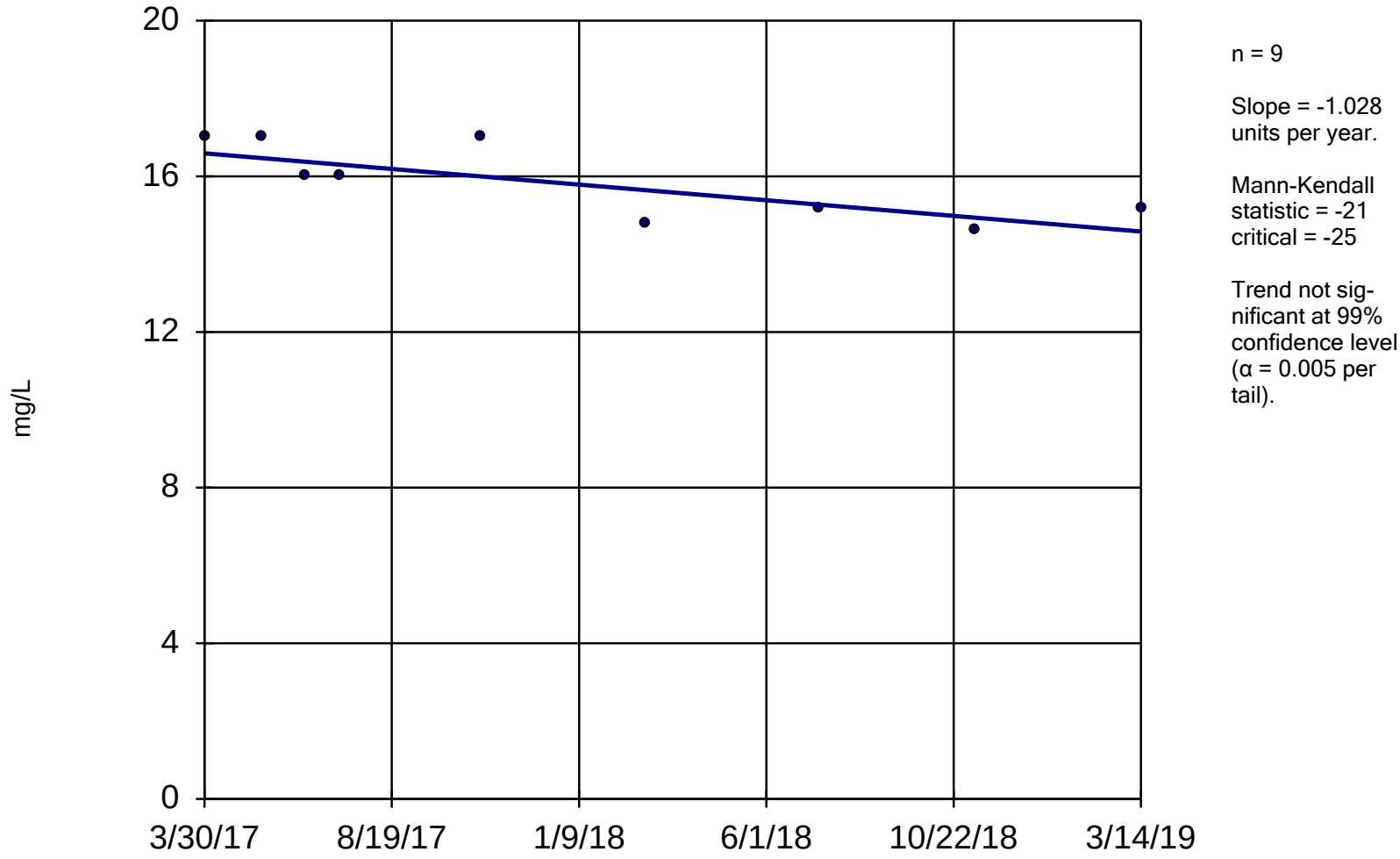
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-23



n = 9

Slope = -1.028 units per year.

Mann-Kendall statistic = -21
critical = -25

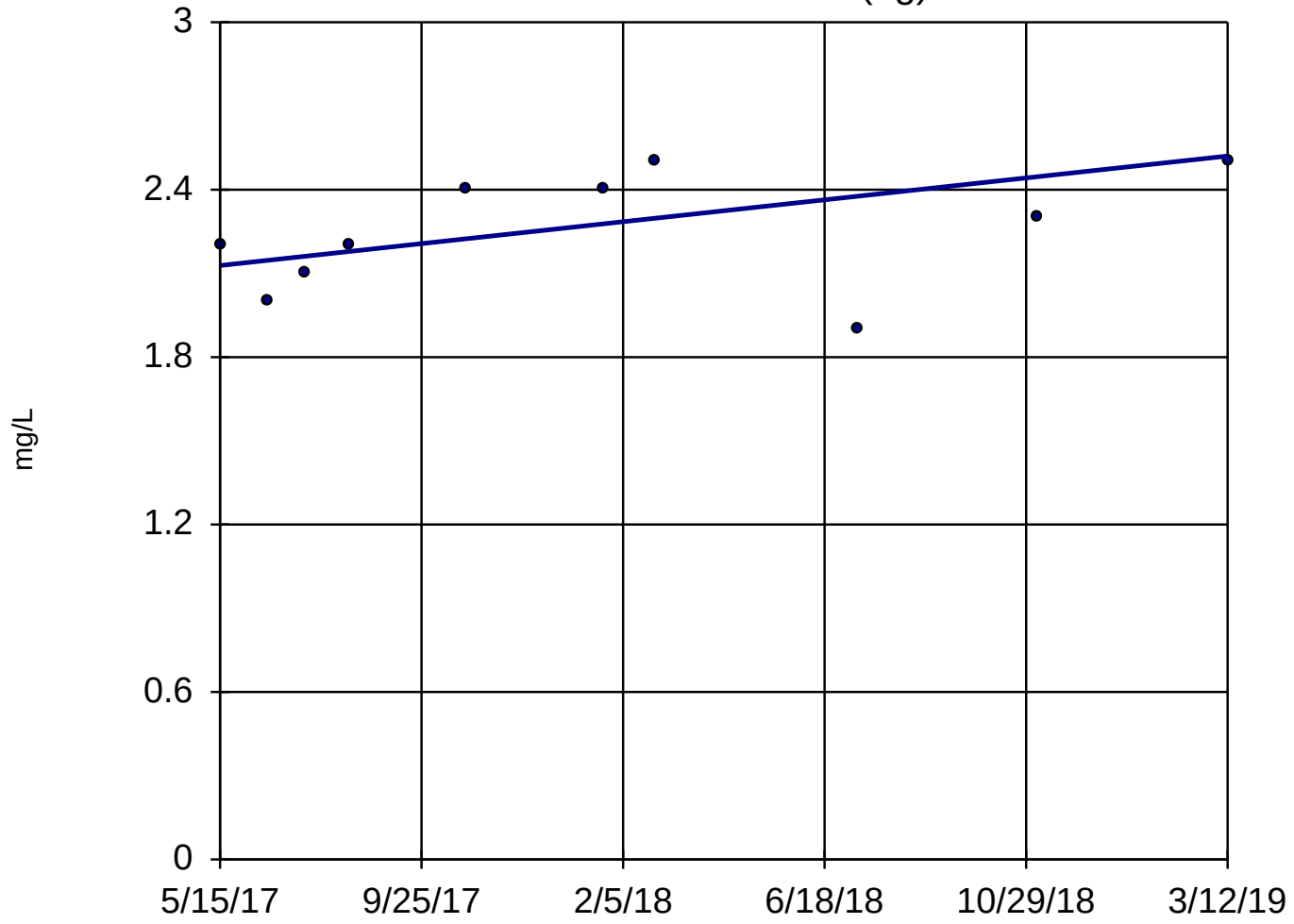
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWA-70A (bg)



n = 10

Slope = 0.2151 units per year.

Mann-Kendall statistic = 18
critical = 30

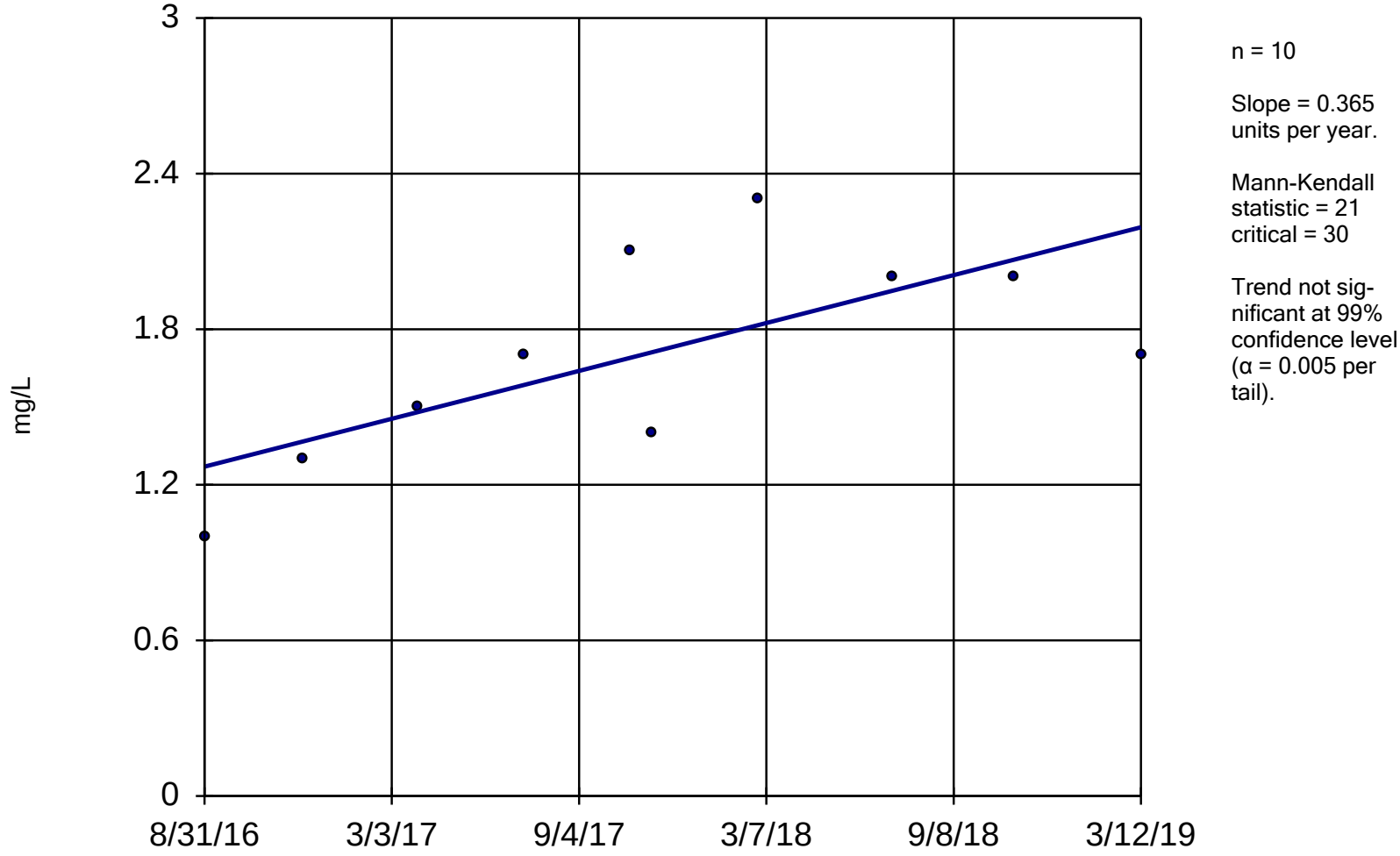
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-10



n = 10

Slope = 0.365 units per year.

Mann-Kendall statistic = 21
critical = 30

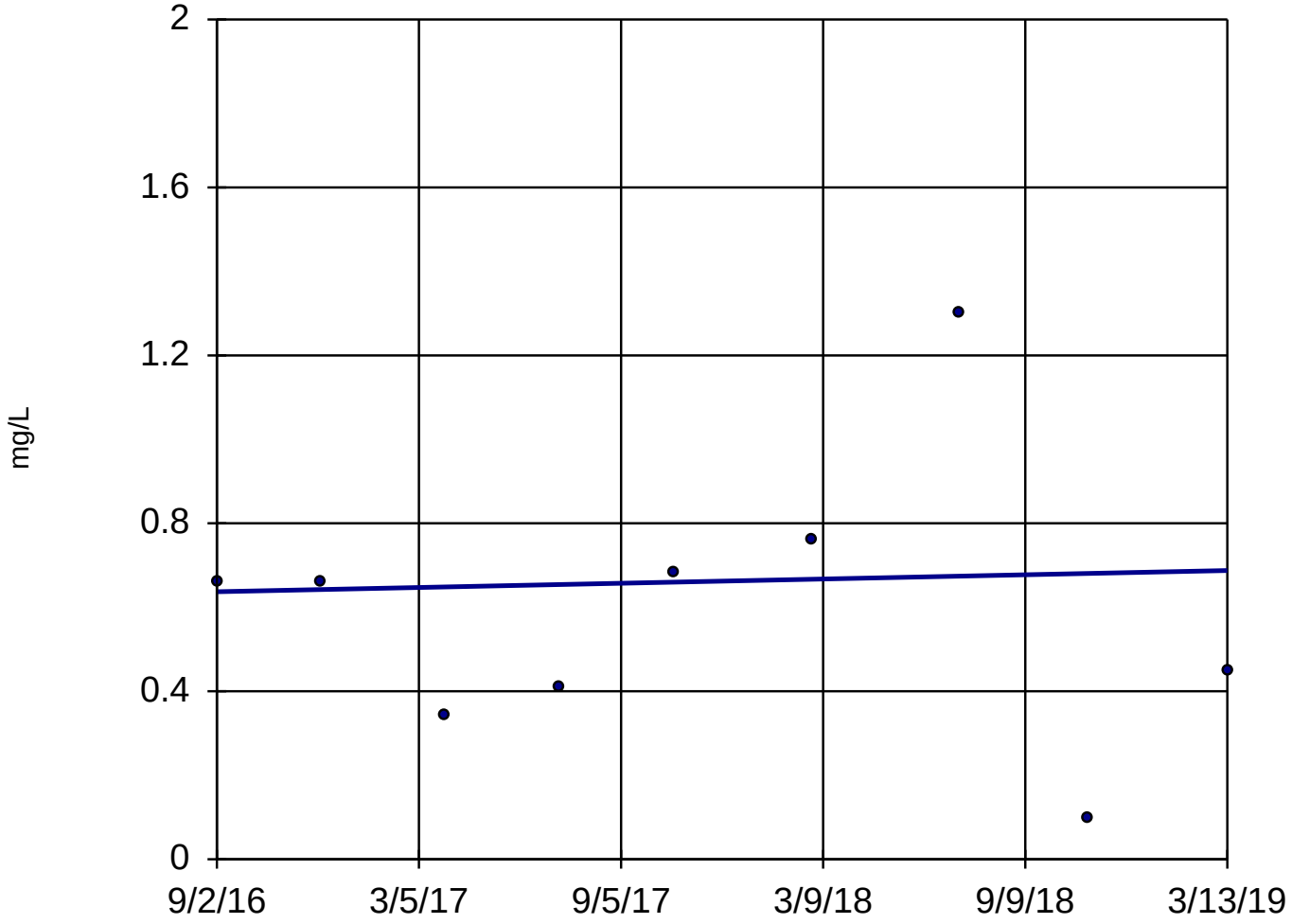
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Fluoride Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-20



n = 9

Slope = 0.02007 units per year.

Mann-Kendall statistic = 3
critical = 25

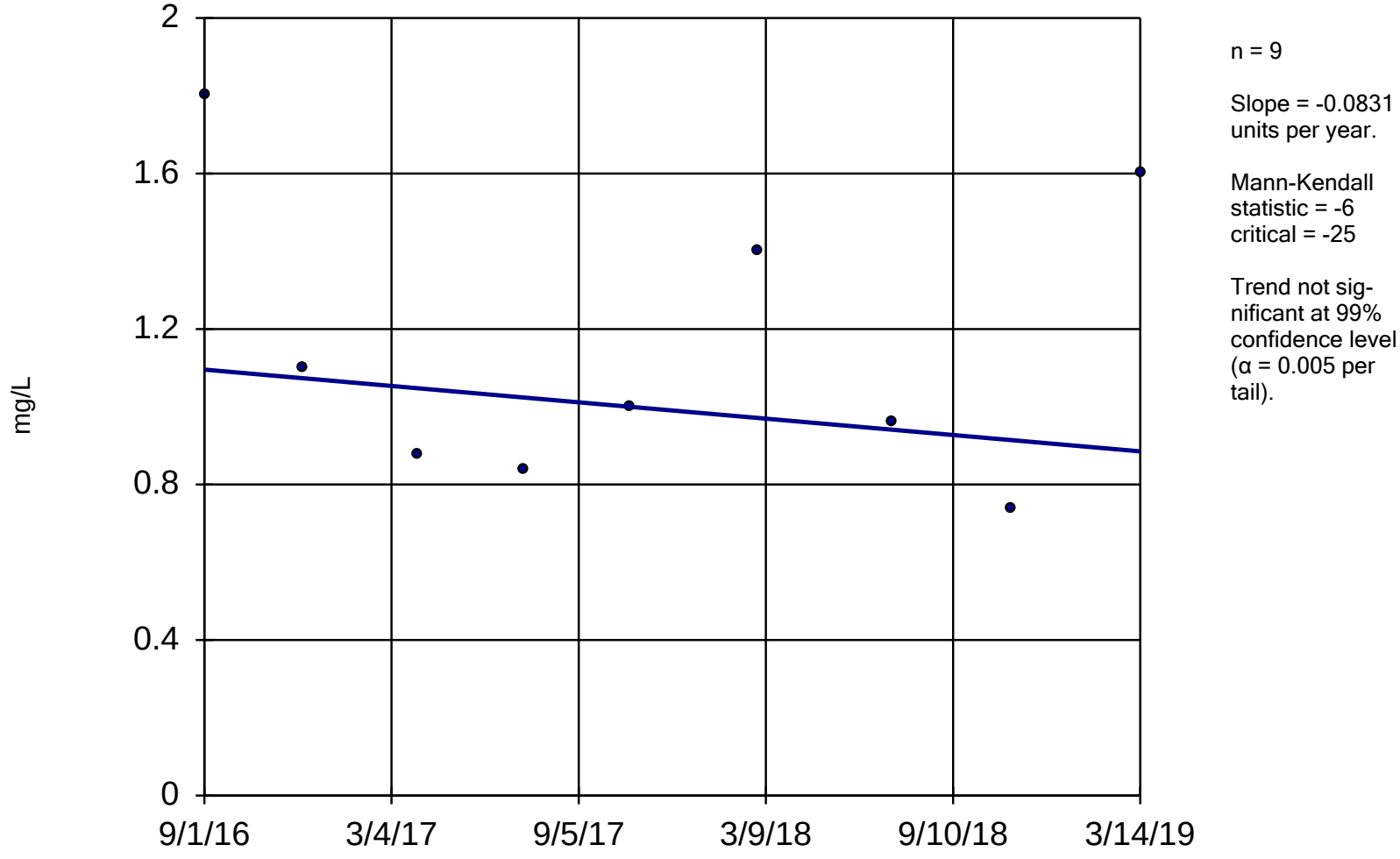
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Fluoride Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-47



n = 9

Slope = -0.0831 units per year.

Mann-Kendall statistic = -6
critical = -25

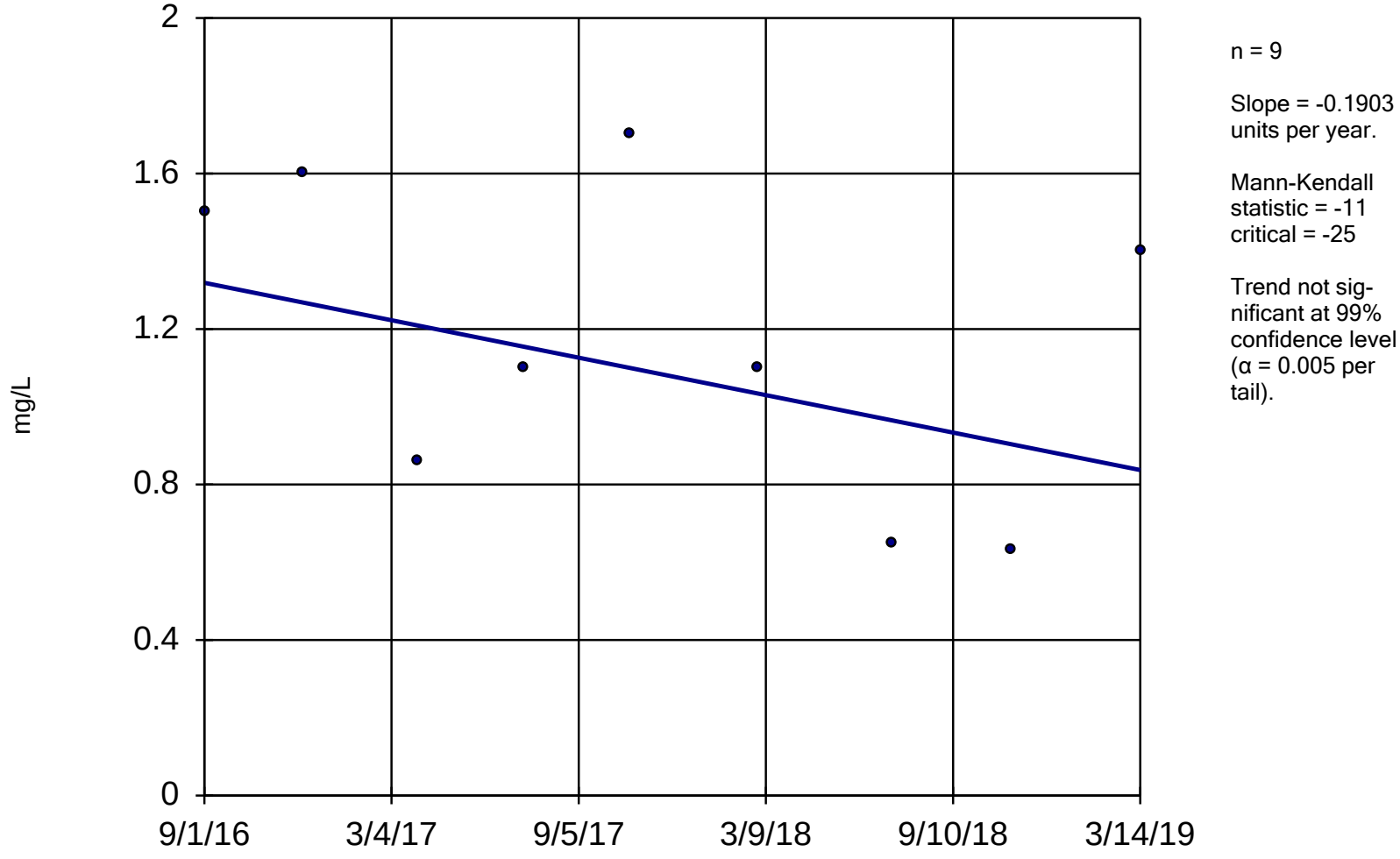
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Fluoride Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-48



n = 9

Slope = -0.1903 units per year.

Mann-Kendall statistic = -11
critical = -25

Trend not significant at 99% confidence level (α = 0.005 per tail).

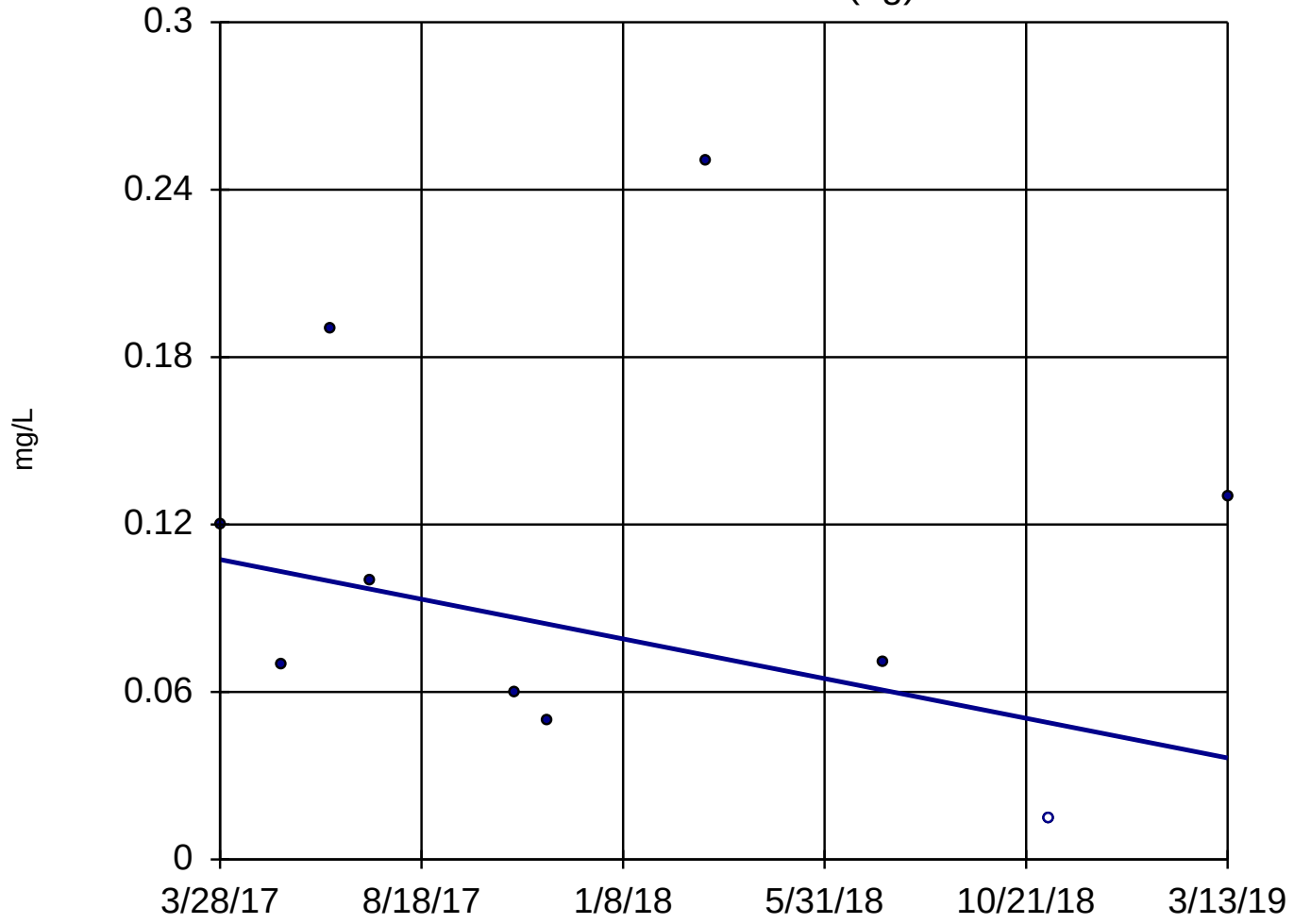
Constituent: Fluoride Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sanitas™ v.9.6.18 For the statistical analyses of ground water by Golder Associates only. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

DGWA-53 (bg)



n = 10

Slope = -0.0363 units per year.

Mann-Kendall statistic = -7
critical = -30

Trend not significant at 99% confidence level (α = 0.005 per tail).

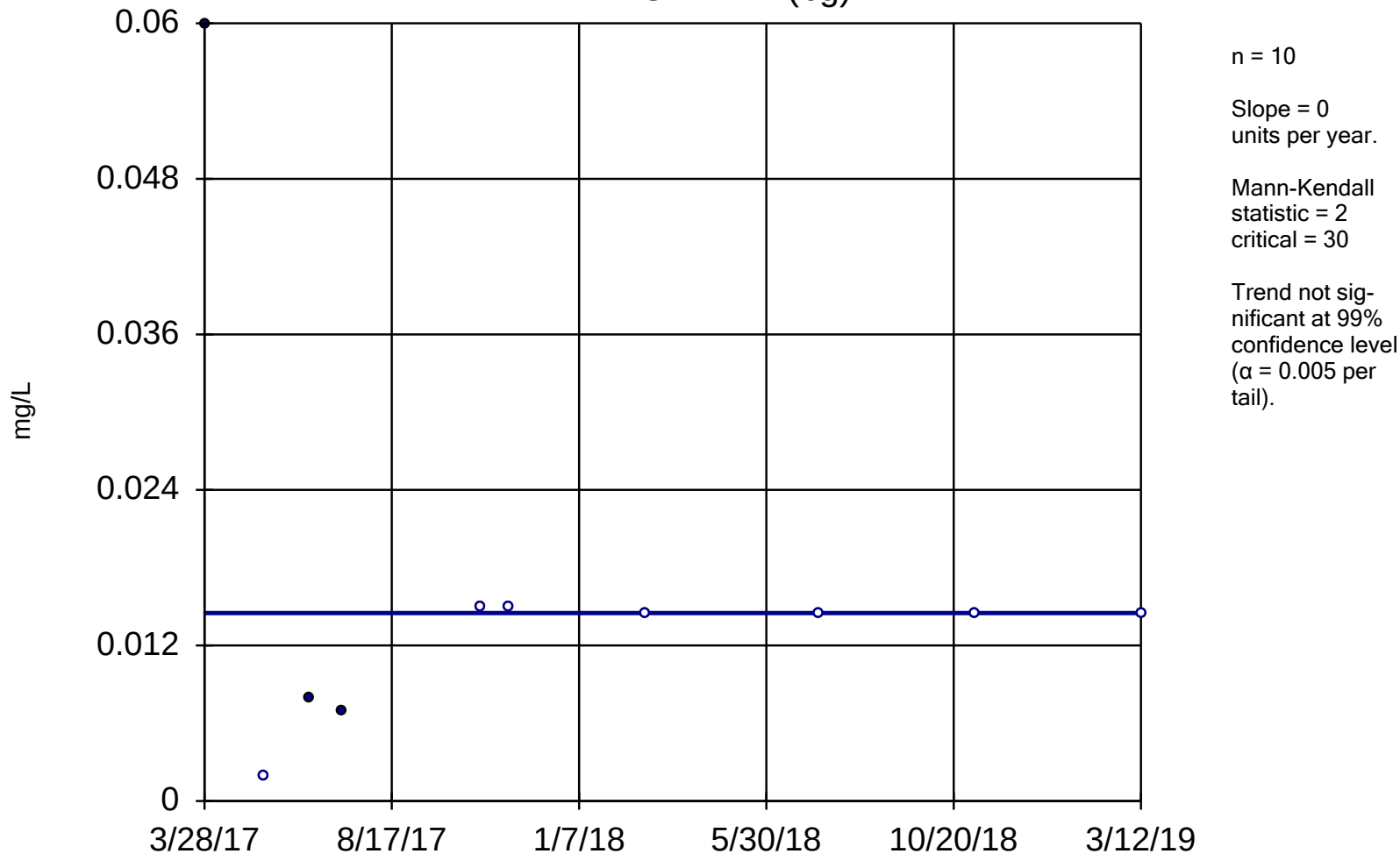
Constituent: Fluoride Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sanitas™ v.9.6.18 For the statistical analyses of ground water by Golder Associates only. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

DGWA-71 (bg)



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = 2
critical = 30

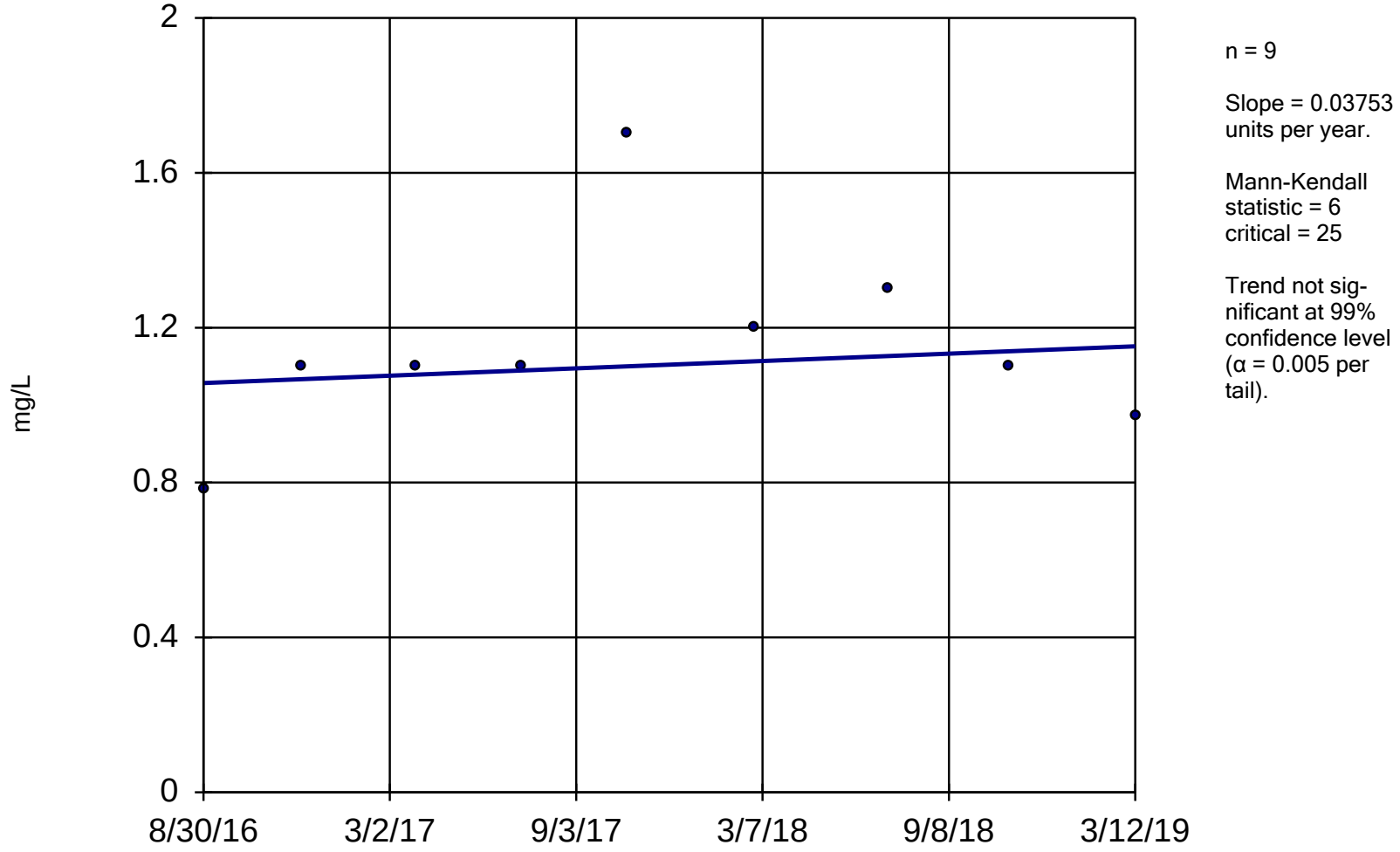
Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

Constituent: Fluoride Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-9



n = 9

Slope = 0.03753 units per year.

Mann-Kendall statistic = 6
critical = 25

Trend not significant at 99% confidence level (α = 0.005 per tail).

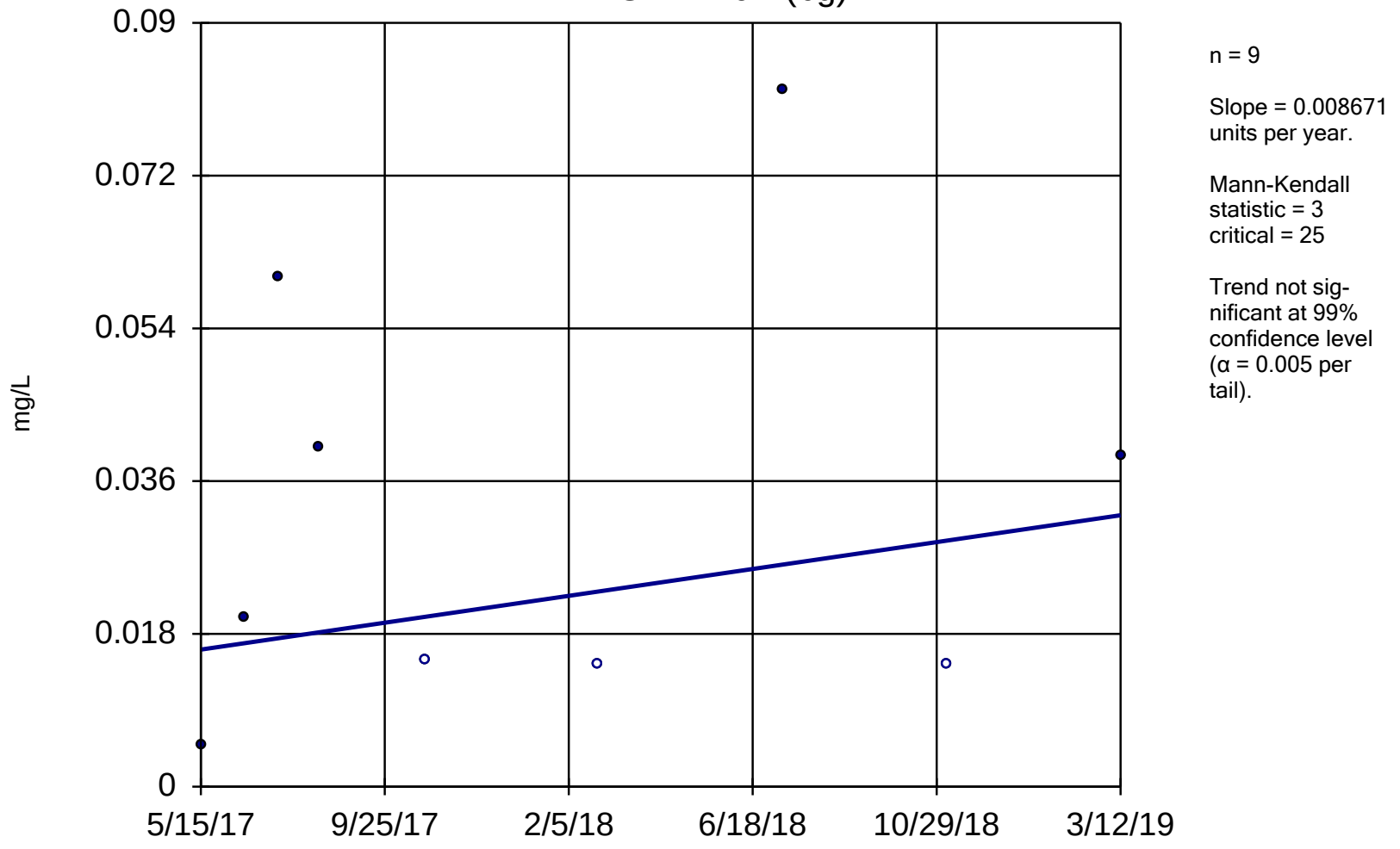
Constituent: Fluoride Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sanitas™ v.9.6.18 For the statistical analyses of ground water by Golder Associates only. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

DGWA-70A (bg)



n = 9

Slope = 0.008671 units per year.

Mann-Kendall statistic = 3
critical = 25

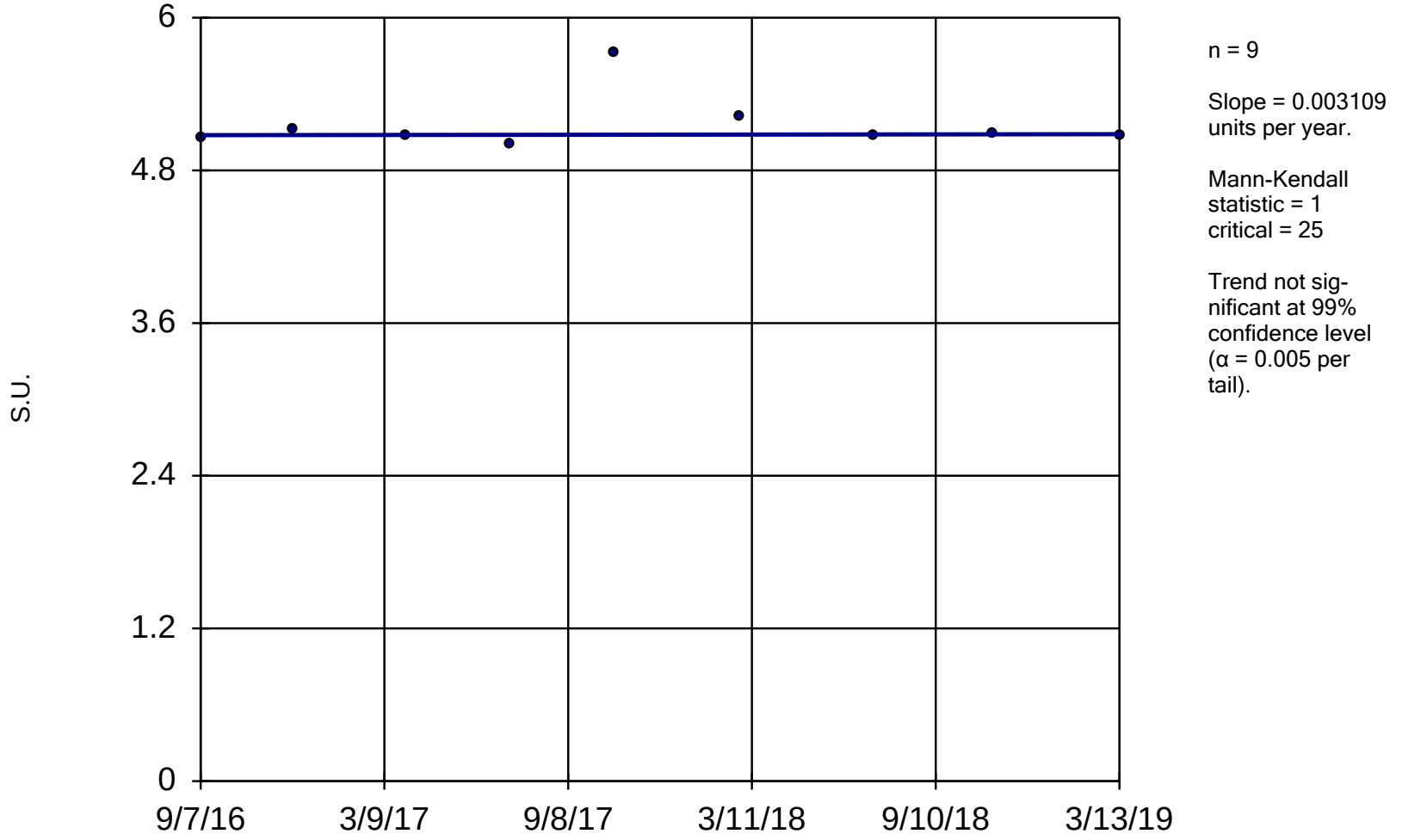
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Fluoride Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-17



n = 9

Slope = 0.003109 units per year.

Mann-Kendall statistic = 1
critical = 25

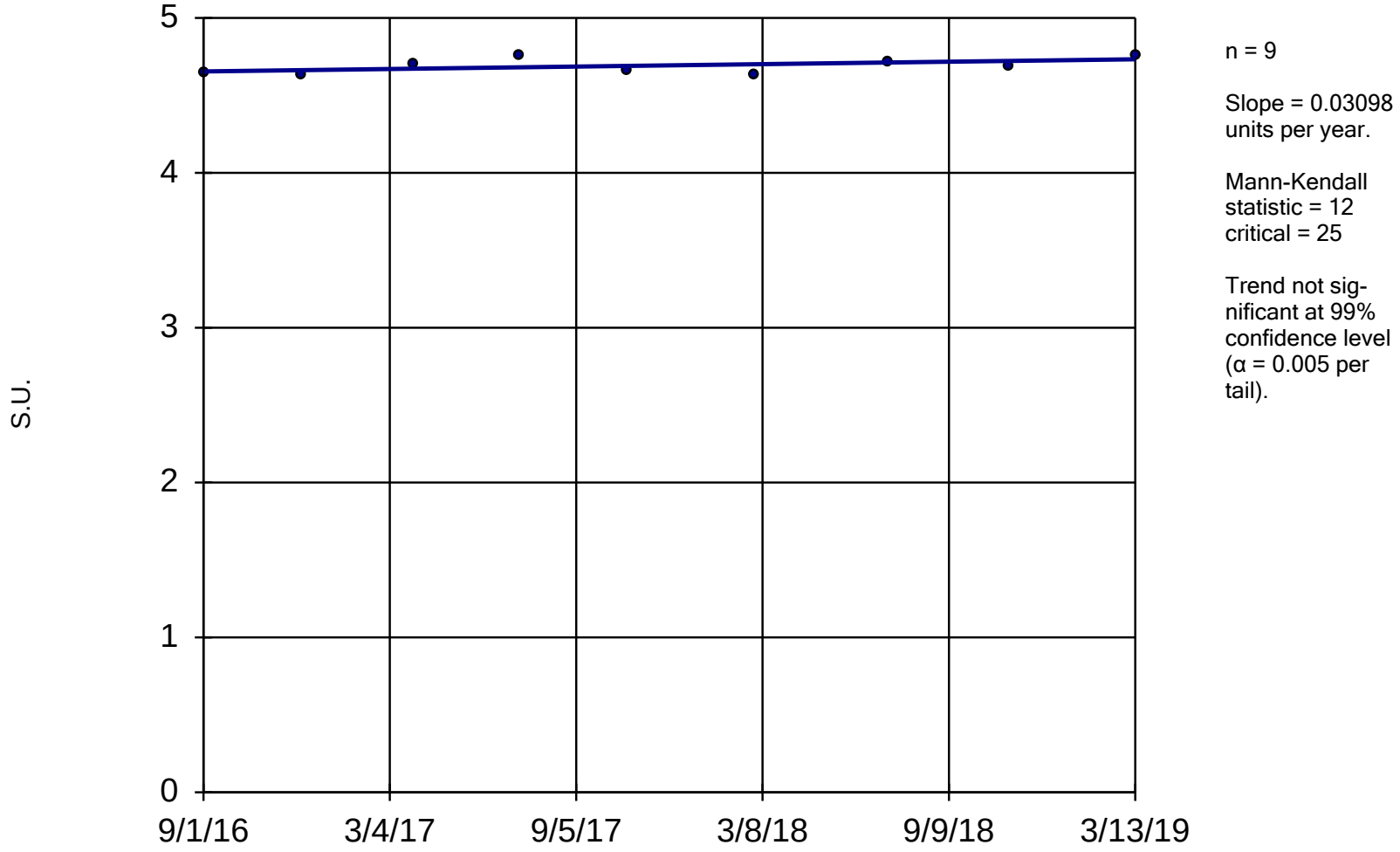
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH [field] Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-19



n = 9

Slope = 0.03098 units per year.

Mann-Kendall statistic = 12
critical = 25

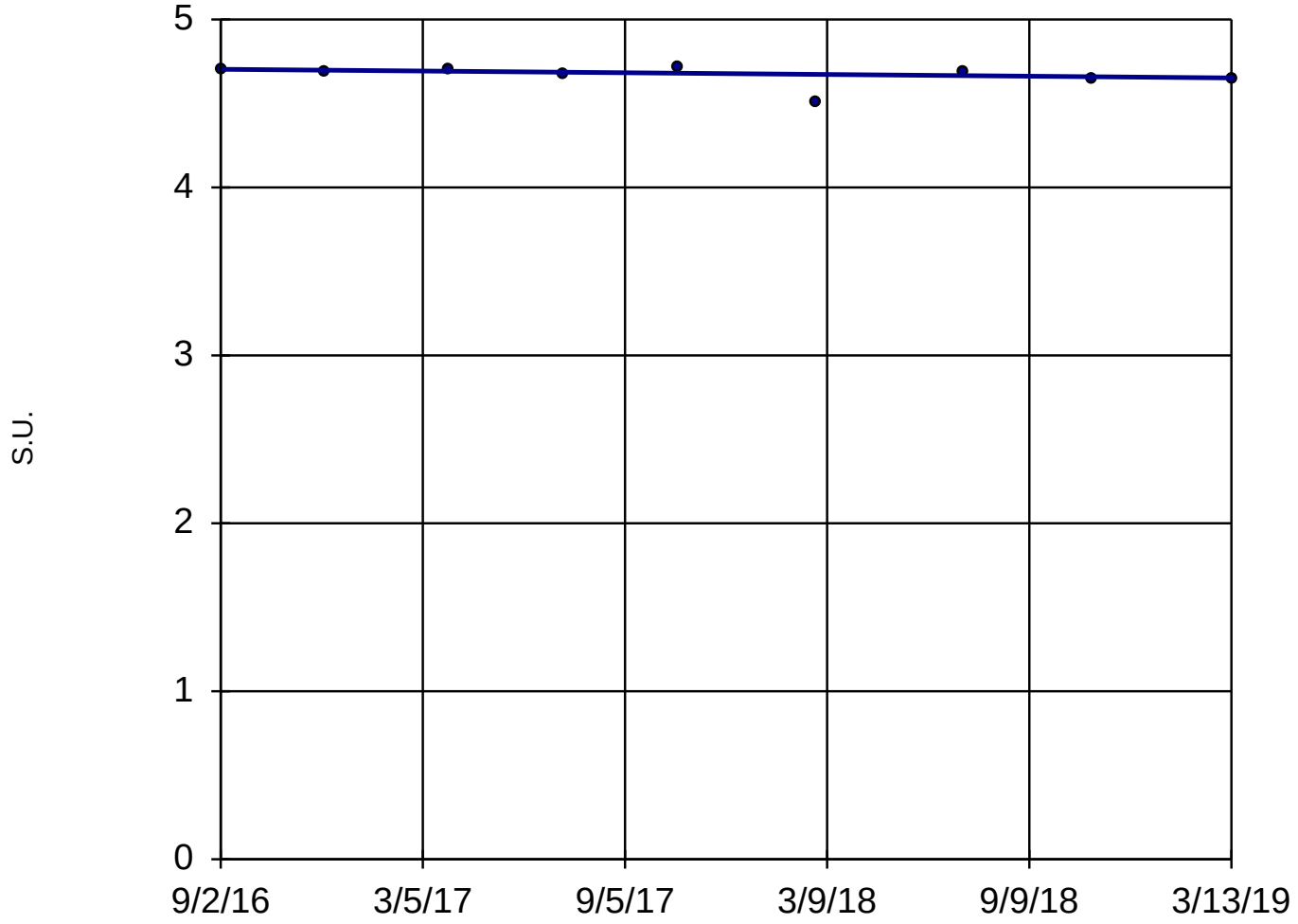
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH [field] Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-20



n = 9

Slope = -0.02033 units per year.

Mann-Kendall statistic = -14
critical = -25

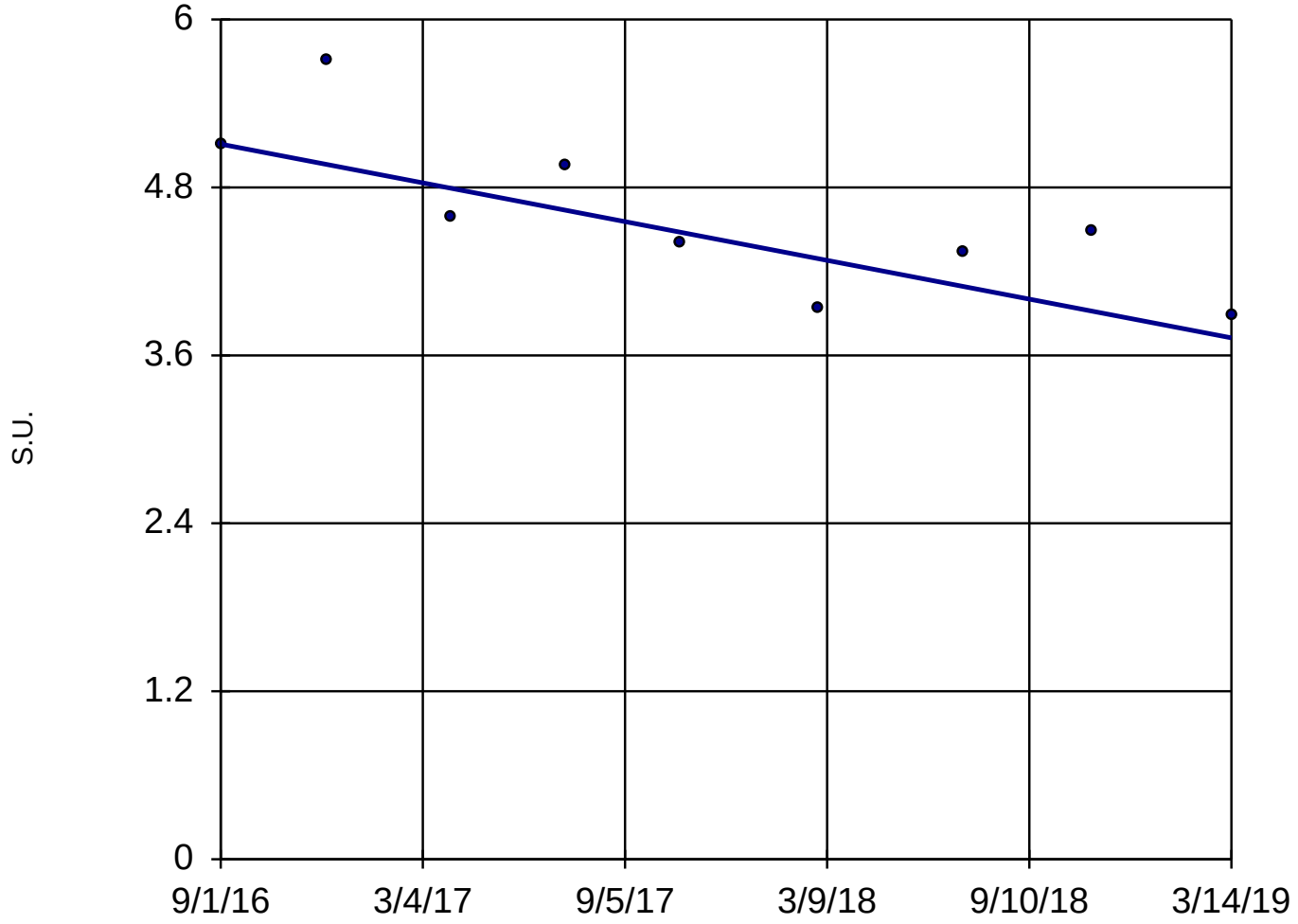
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH [field] Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-47



n = 9

Slope = -0.5471 units per year.

Mann-Kendall statistic = -24
critical = -25

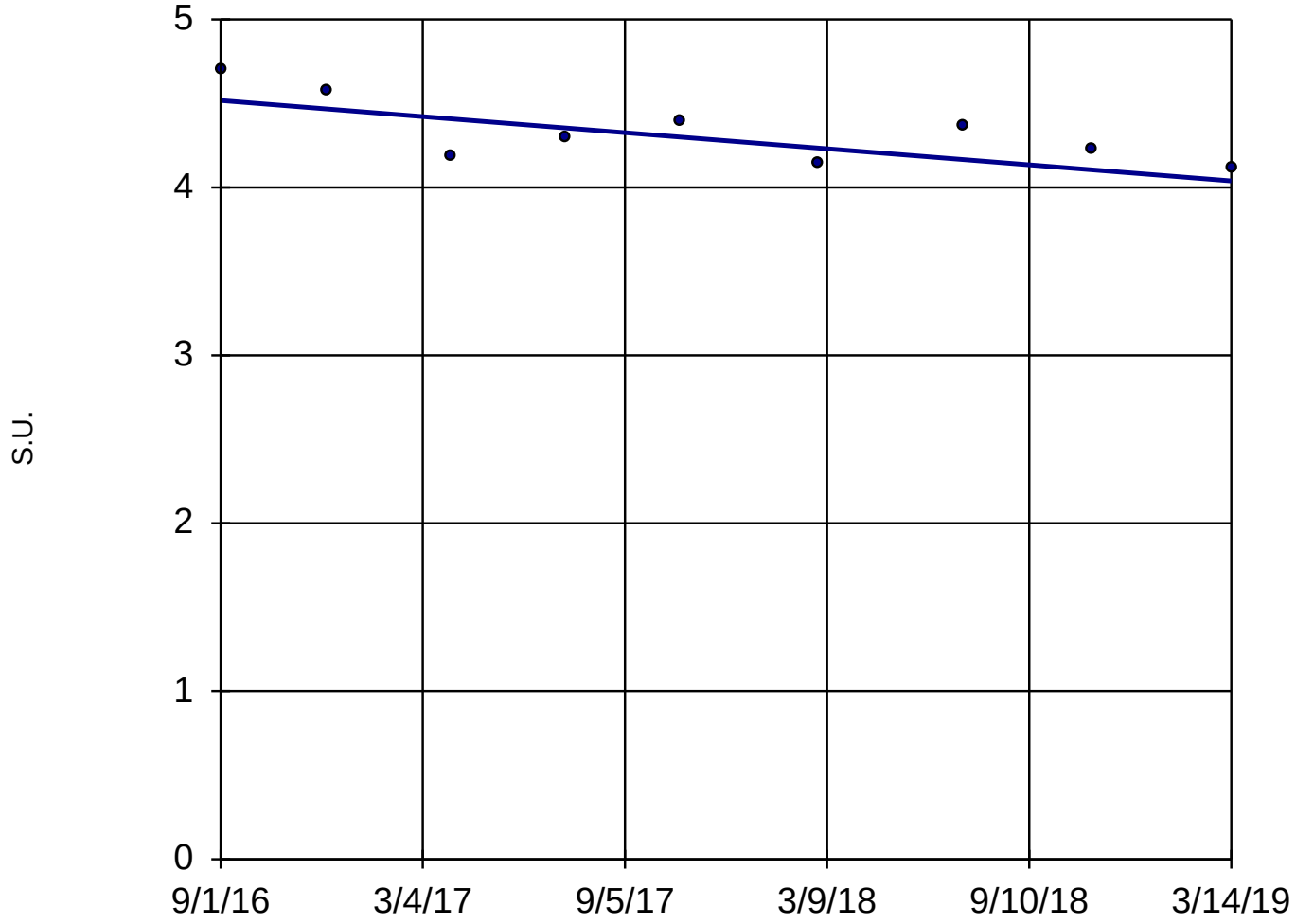
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH [field] Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-48



n = 9

Slope = -0.1892 units per year.

Mann-Kendall statistic = -20
critical = -25

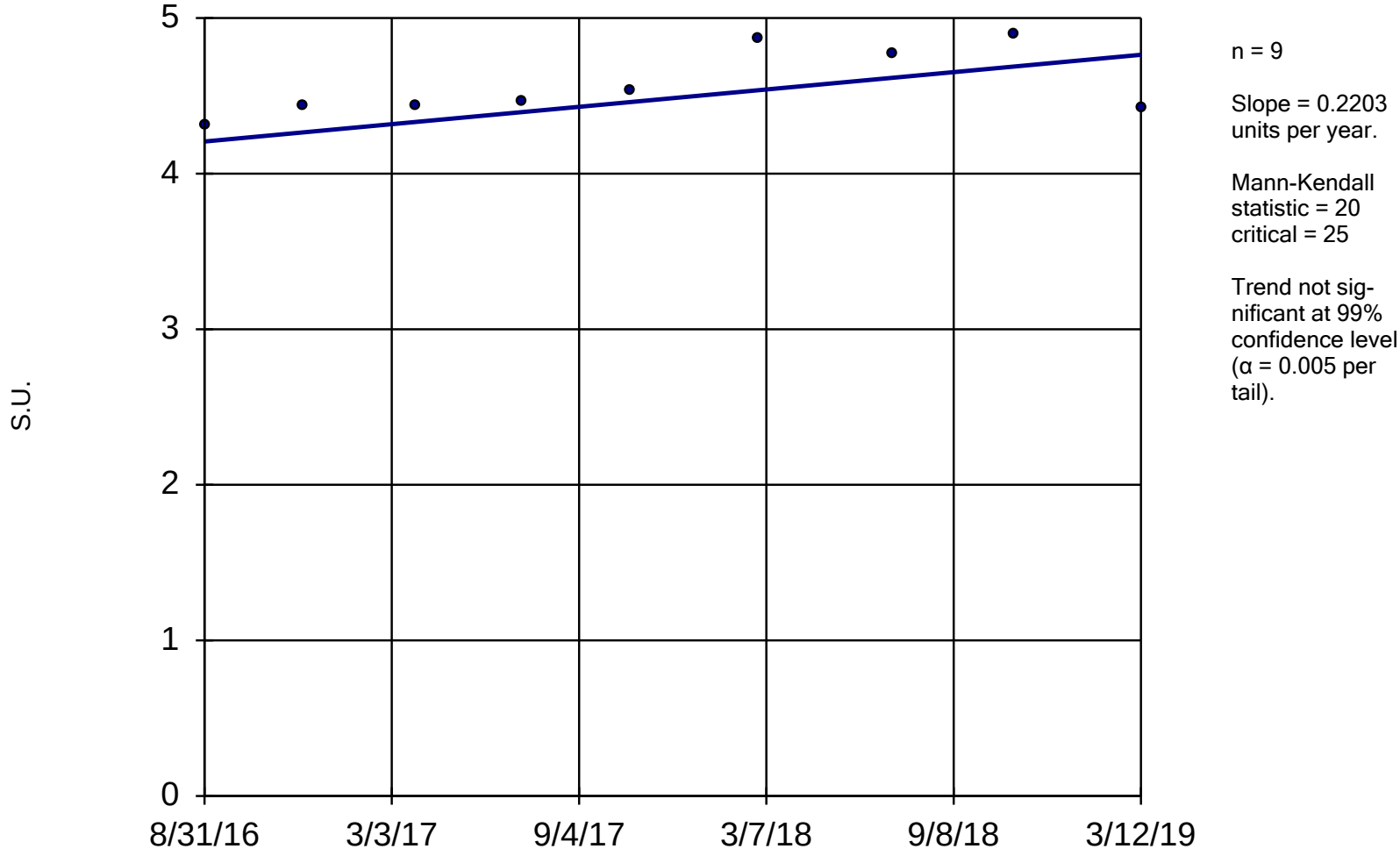
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH [field] Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-5



n = 9

Slope = 0.2203 units per year.

Mann-Kendall statistic = 20
critical = 25

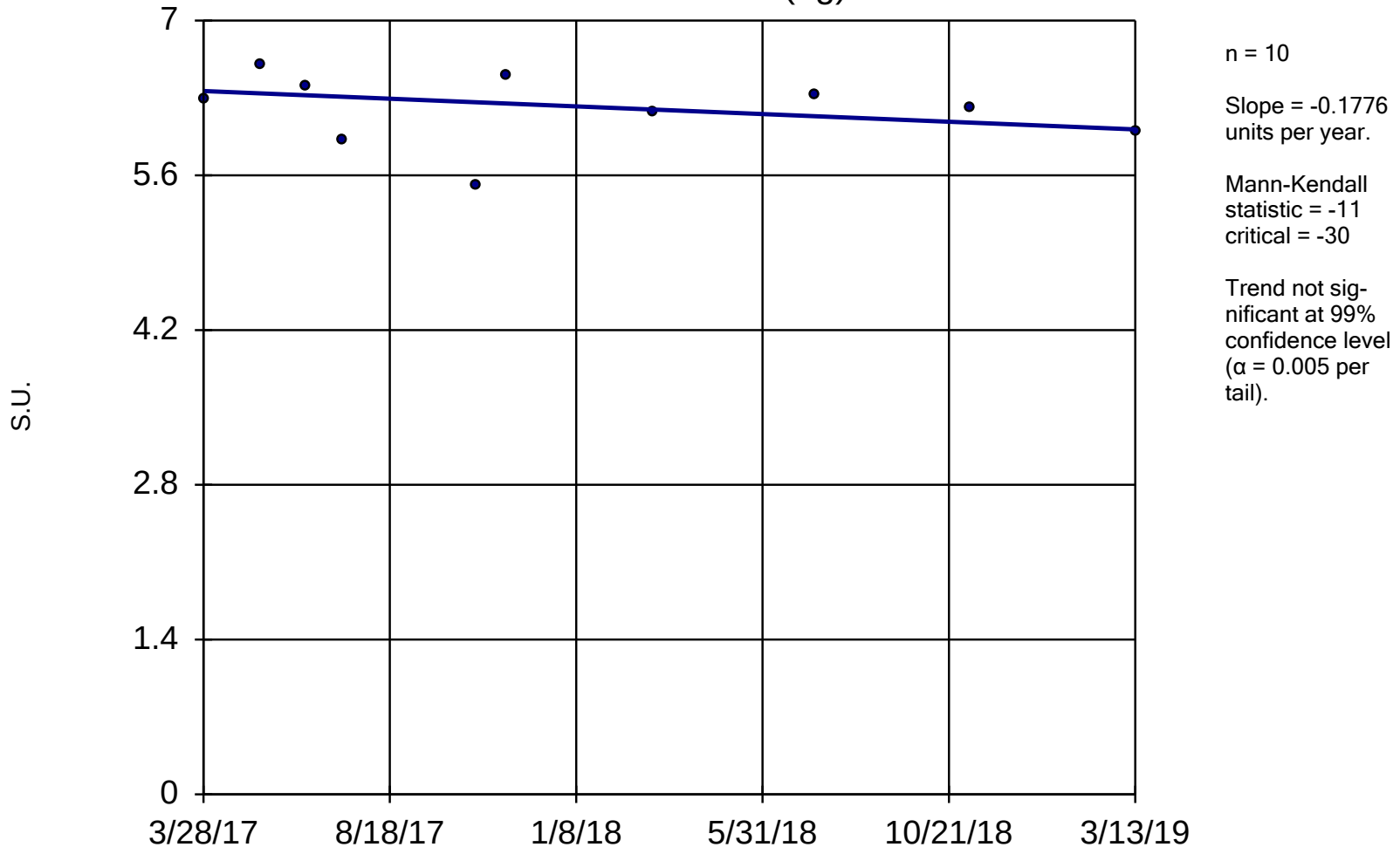
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH [field] Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWA-53 (bg)



n = 10

Slope = -0.1776 units per year.

Mann-Kendall statistic = -11
critical = -30

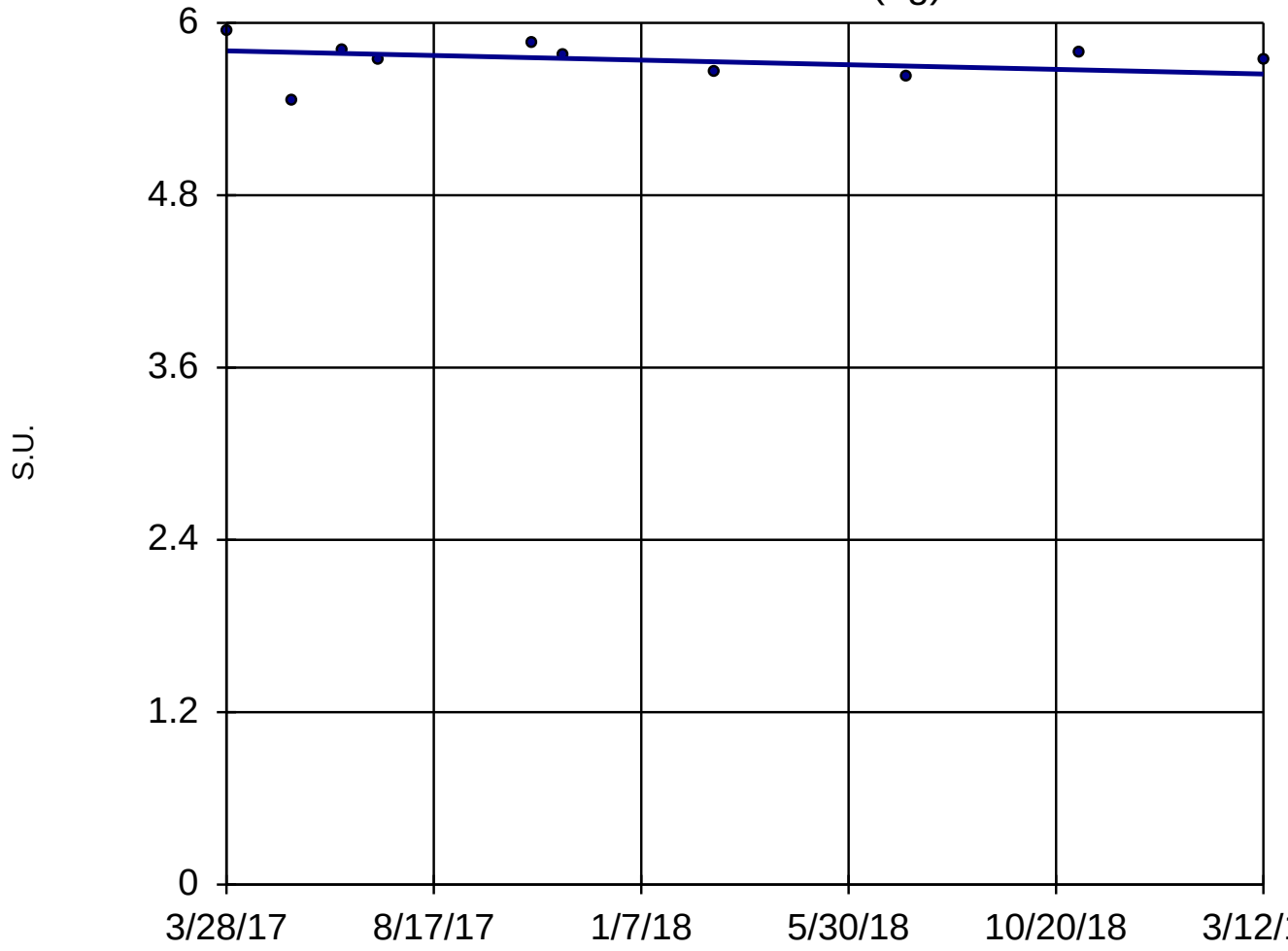
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH [field] Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWA-71 (bg)



n = 10

Slope = -0.08233 units per year.

Mann-Kendall statistic = -10
critical = -30

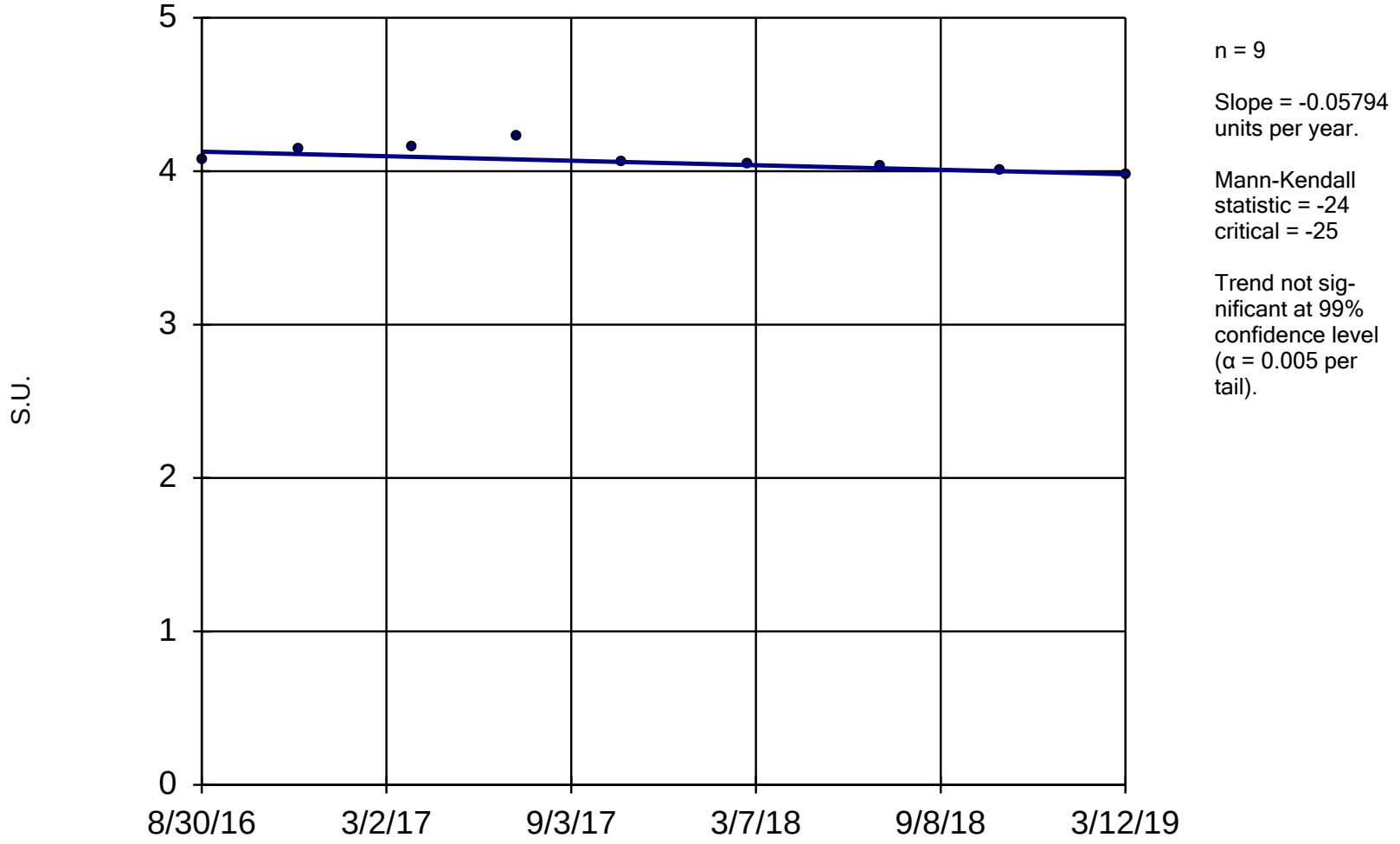
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH [field] Analysis Run 7/26/2019 1:24 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-9



n = 9

Slope = -0.05794 units per year.

Mann-Kendall statistic = -24
critical = -25

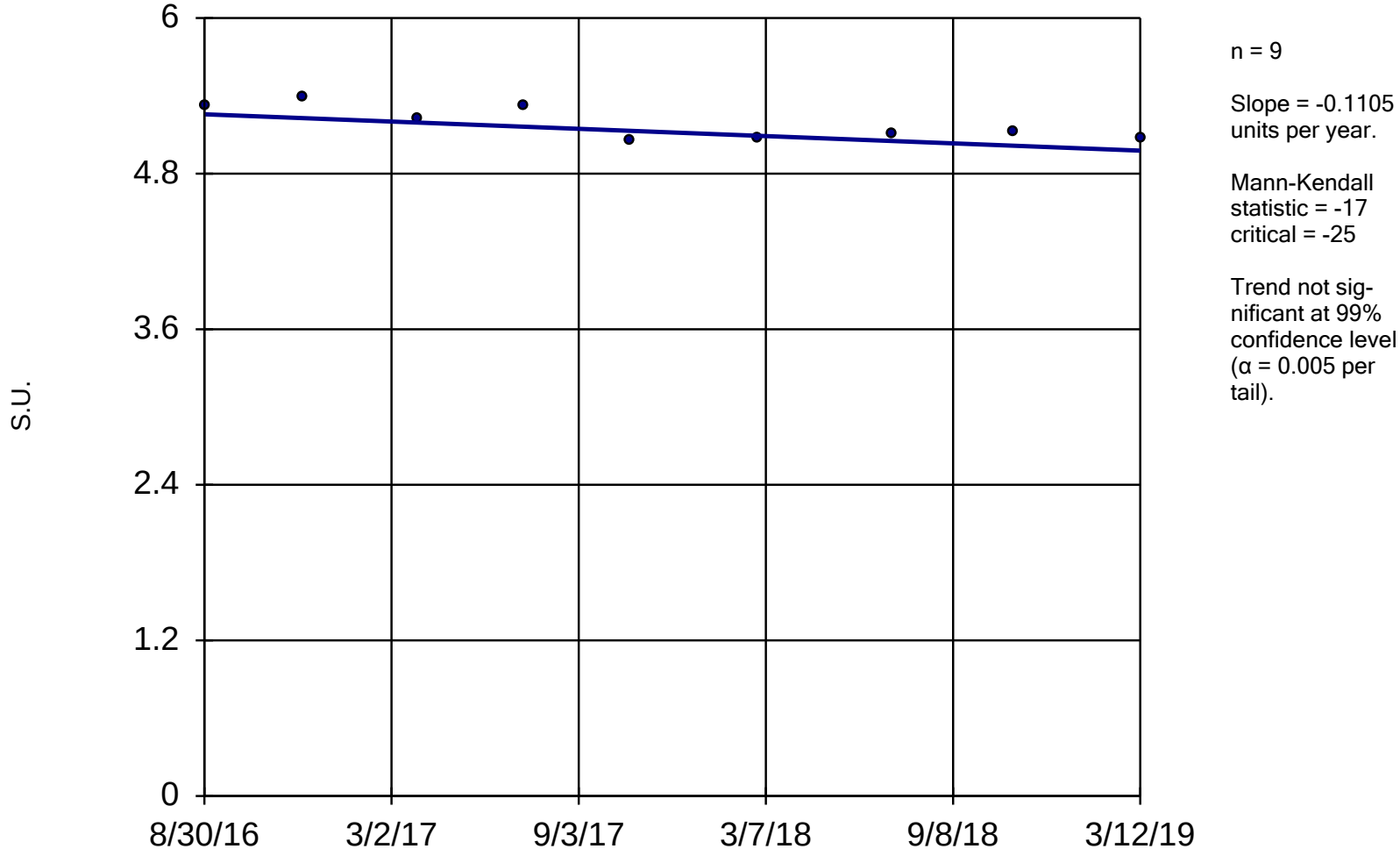
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH [field] Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-8



n = 9

Slope = -0.1105 units per year.

Mann-Kendall statistic = -17
critical = -25

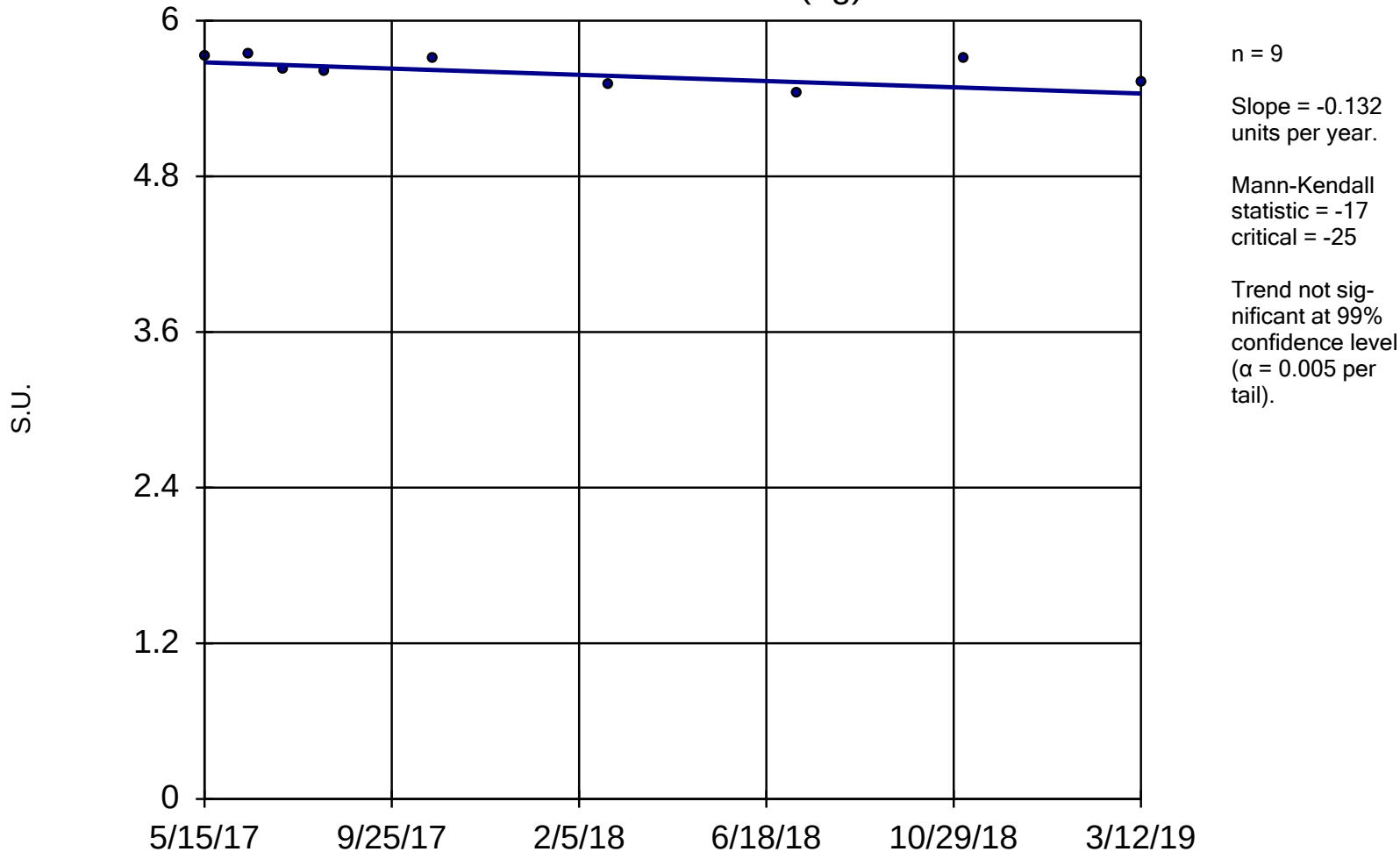
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH [field] Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWA-70A (bg)



n = 9

Slope = -0.132 units per year.

Mann-Kendall statistic = -17
critical = -25

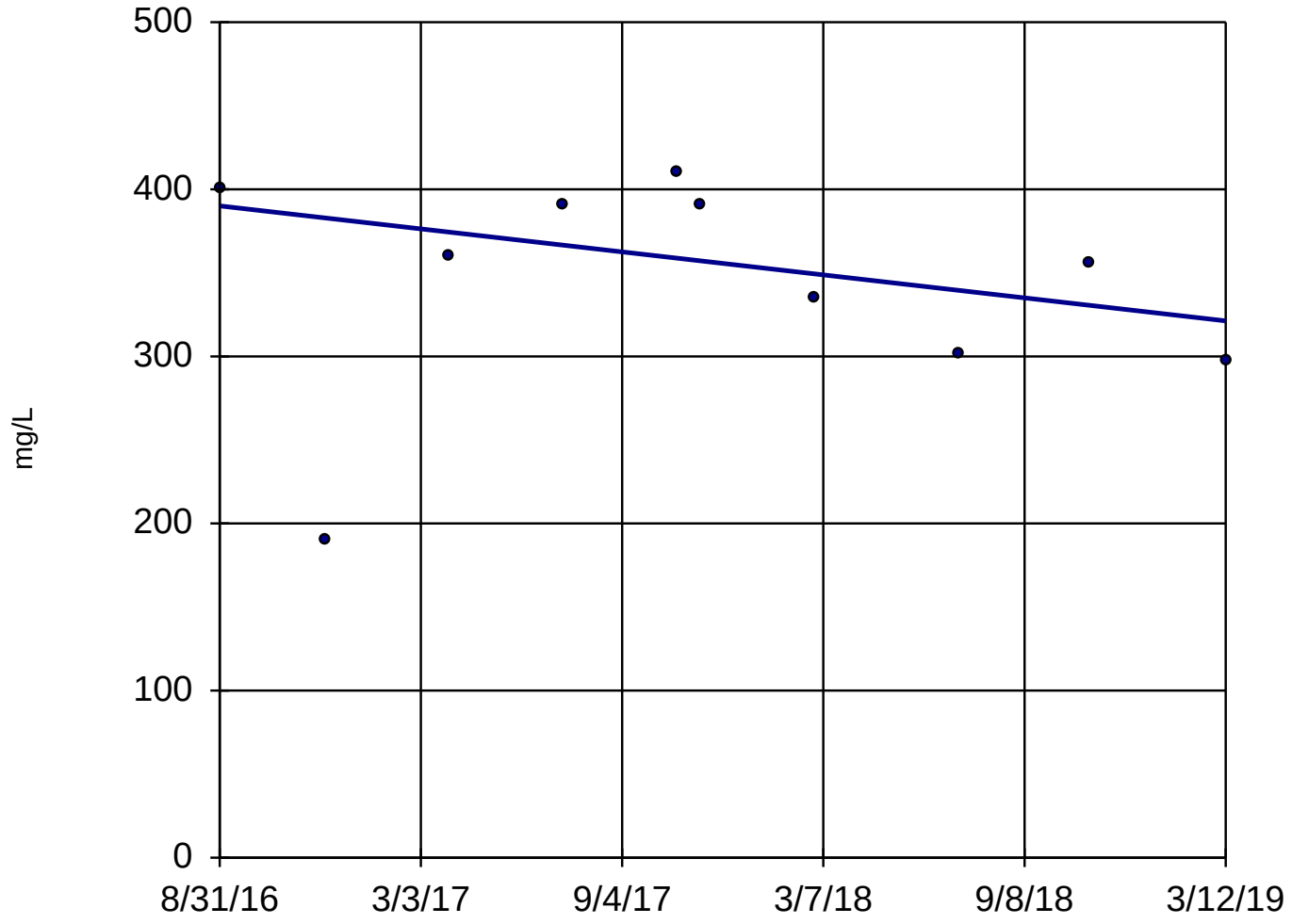
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH [field] Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-10



n = 10

Slope = -27.24 units per year.

Mann-Kendall statistic = -14
critical = -30

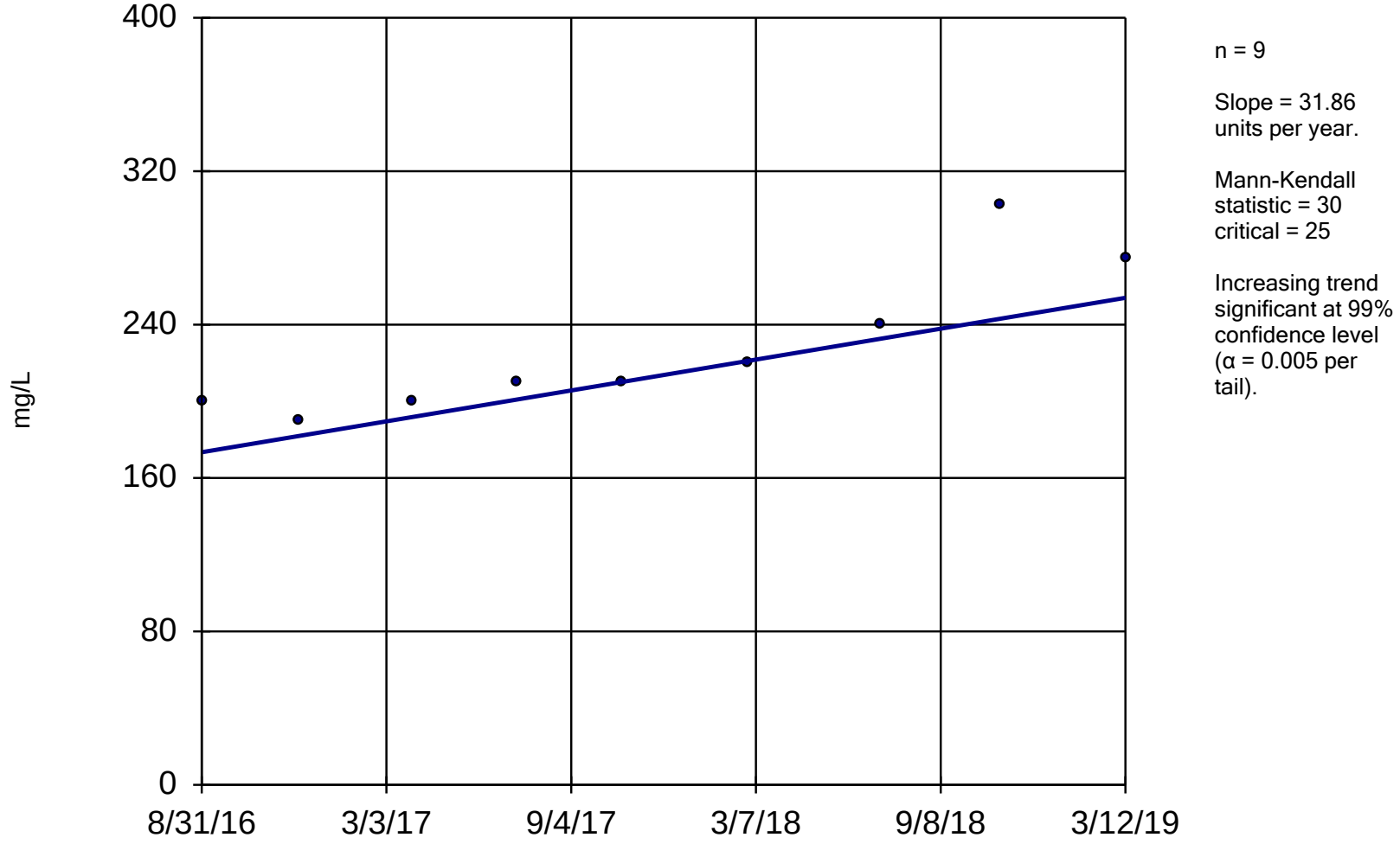
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-11



n = 9

Slope = 31.86 units per year.

Mann-Kendall statistic = 30
critical = 25

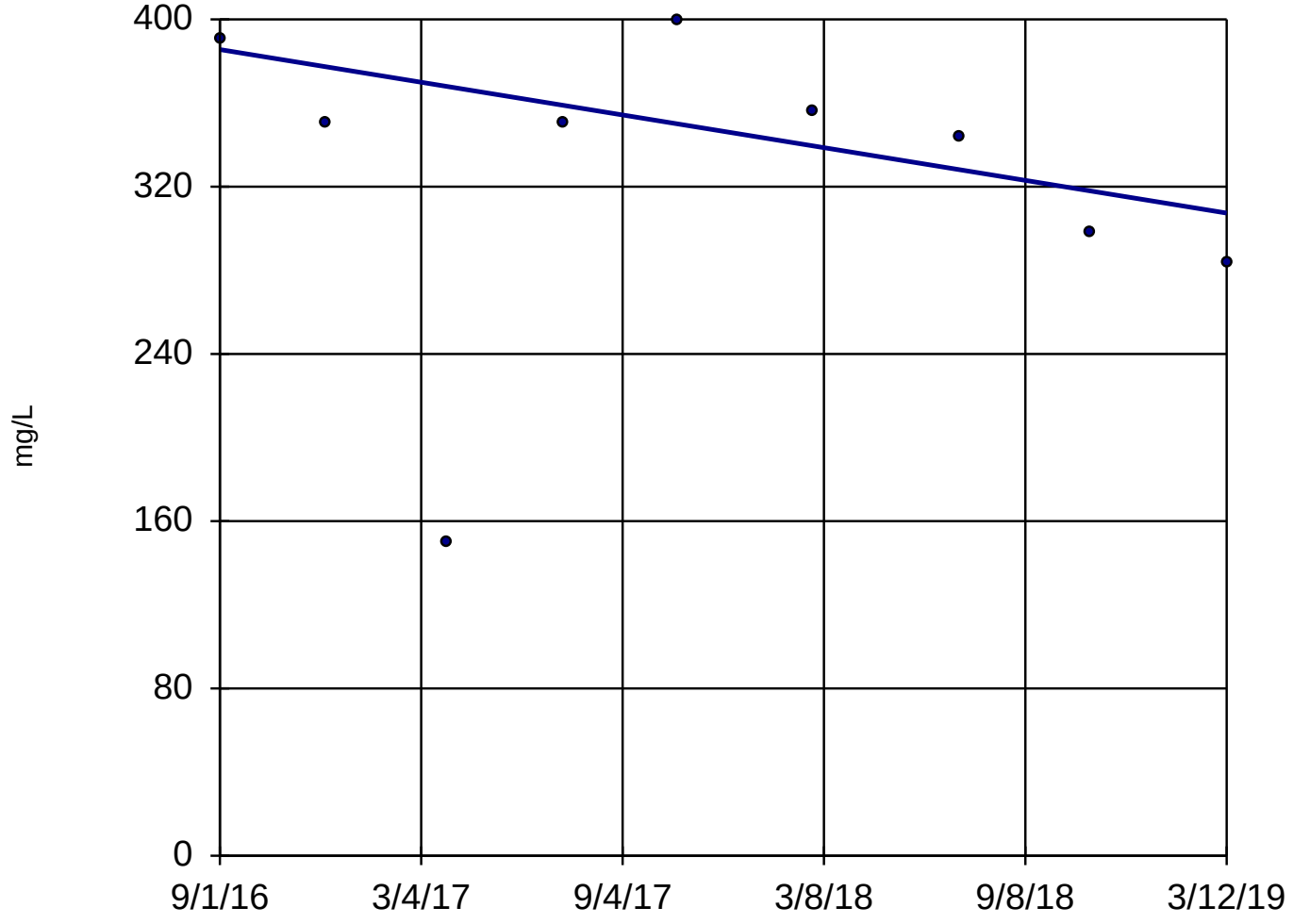
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-12



n = 9

Slope = -30.94 units per year.

Mann-Kendall statistic = -13
critical = -25

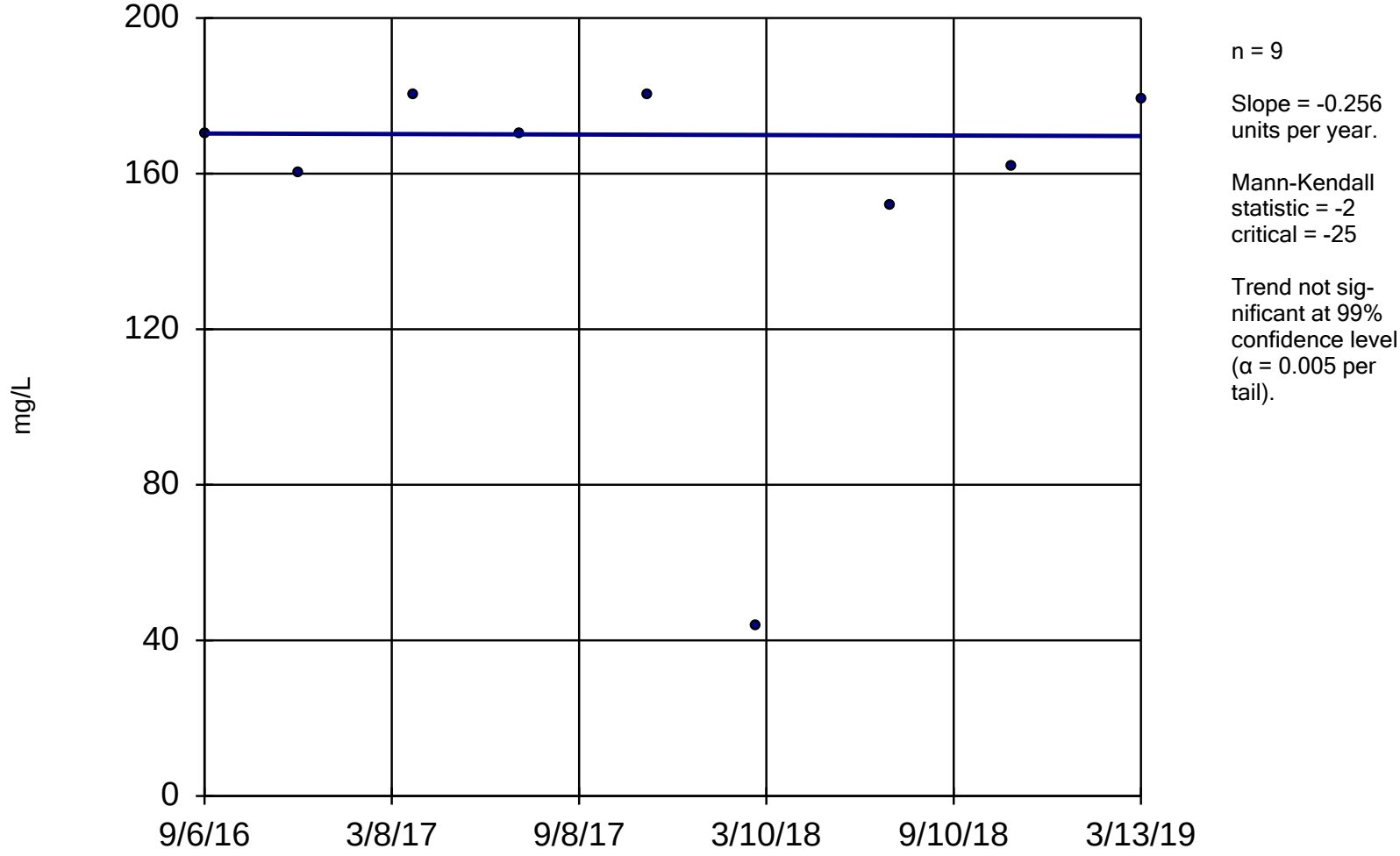
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-13

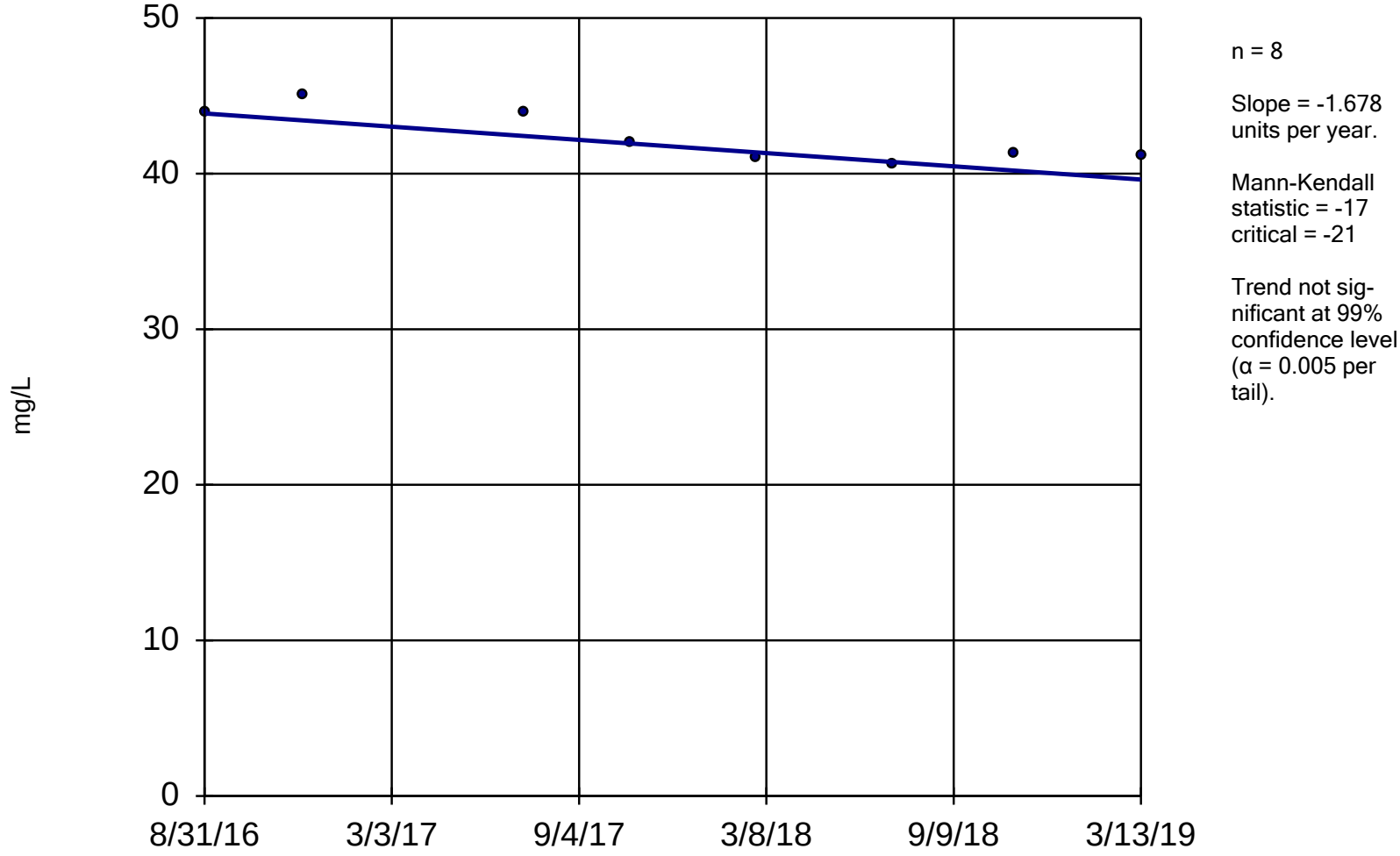


Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-14



n = 8

Slope = -1.678 units per year.

Mann-Kendall statistic = -17
critical = -21

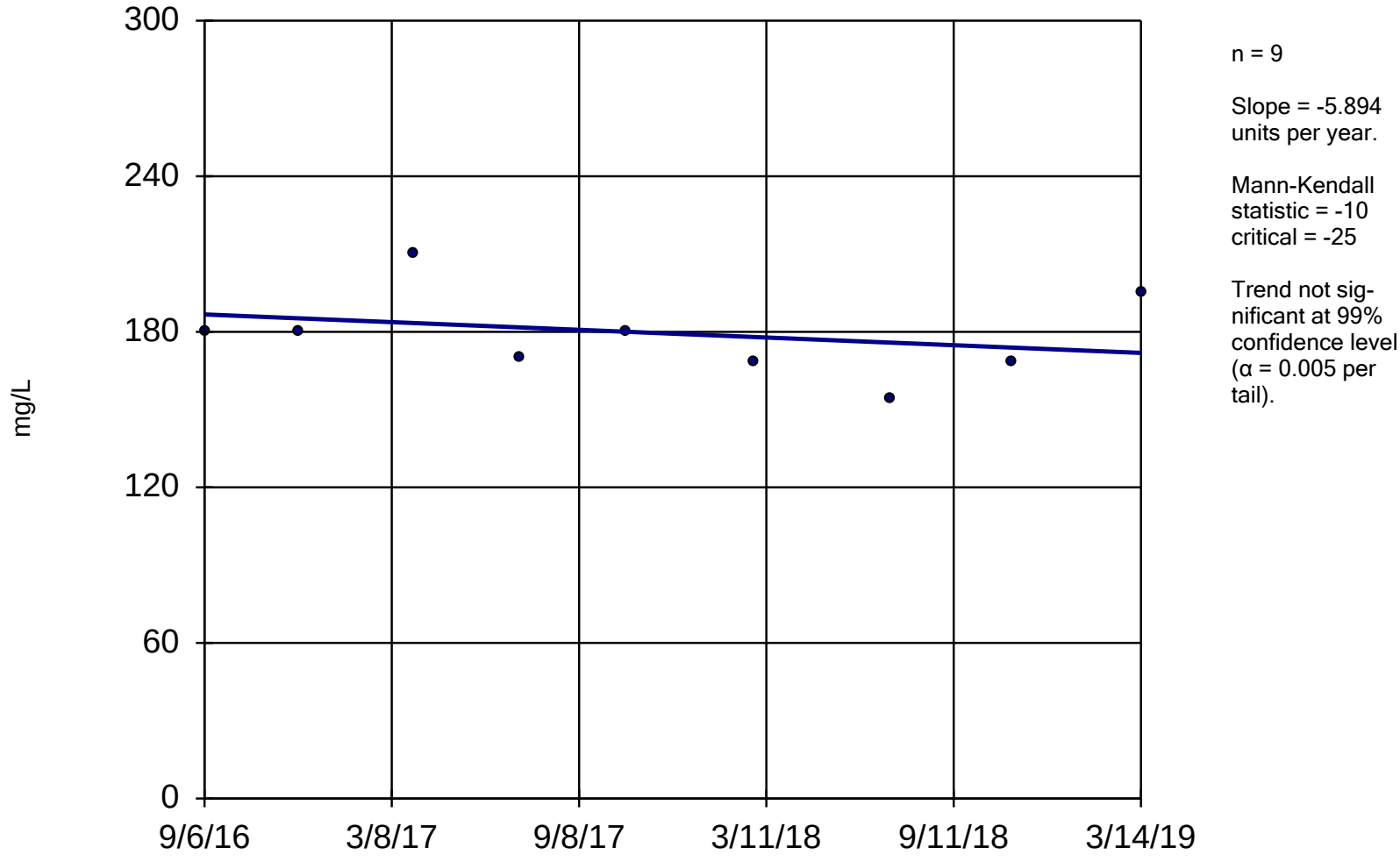
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-15

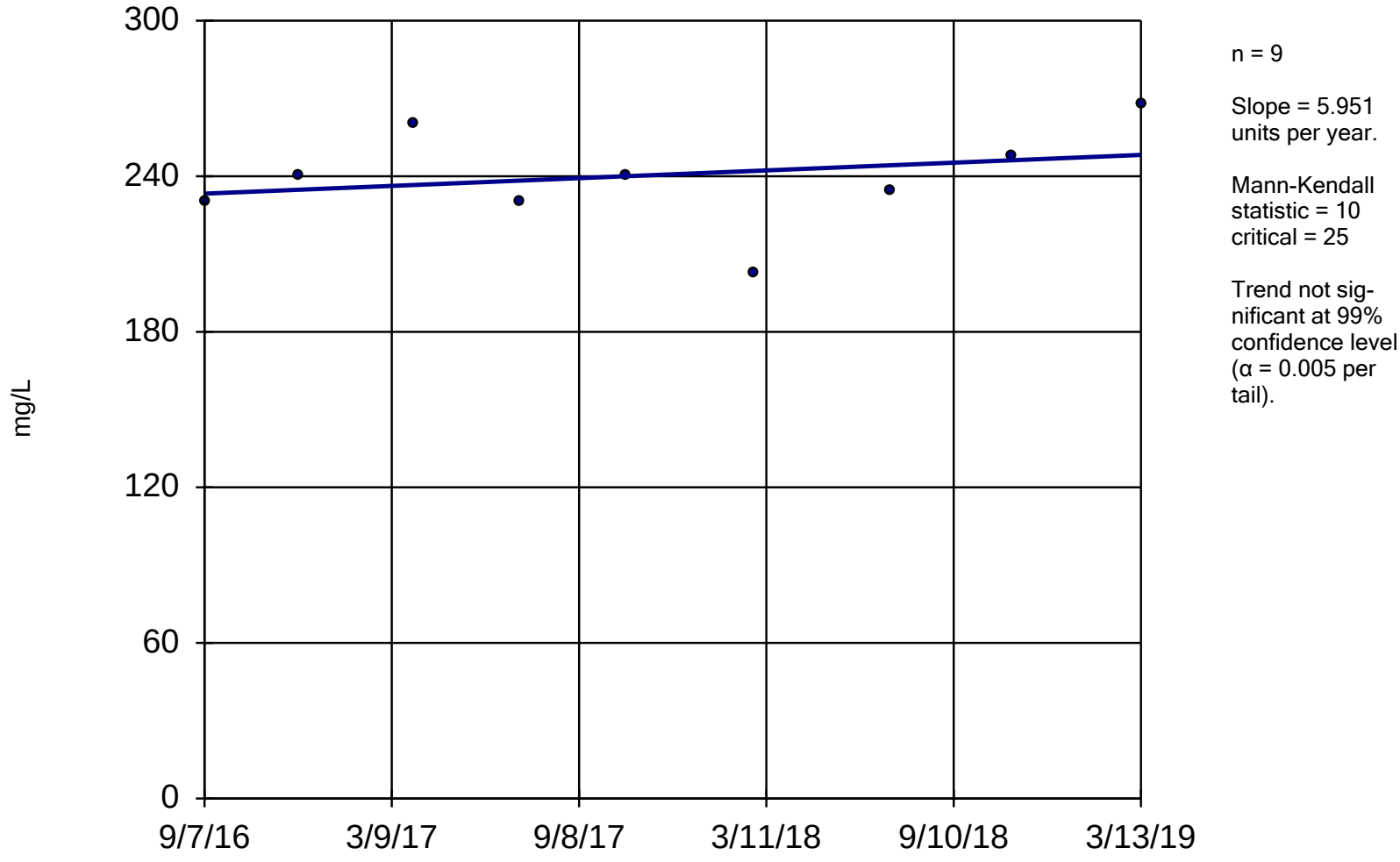


Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-17

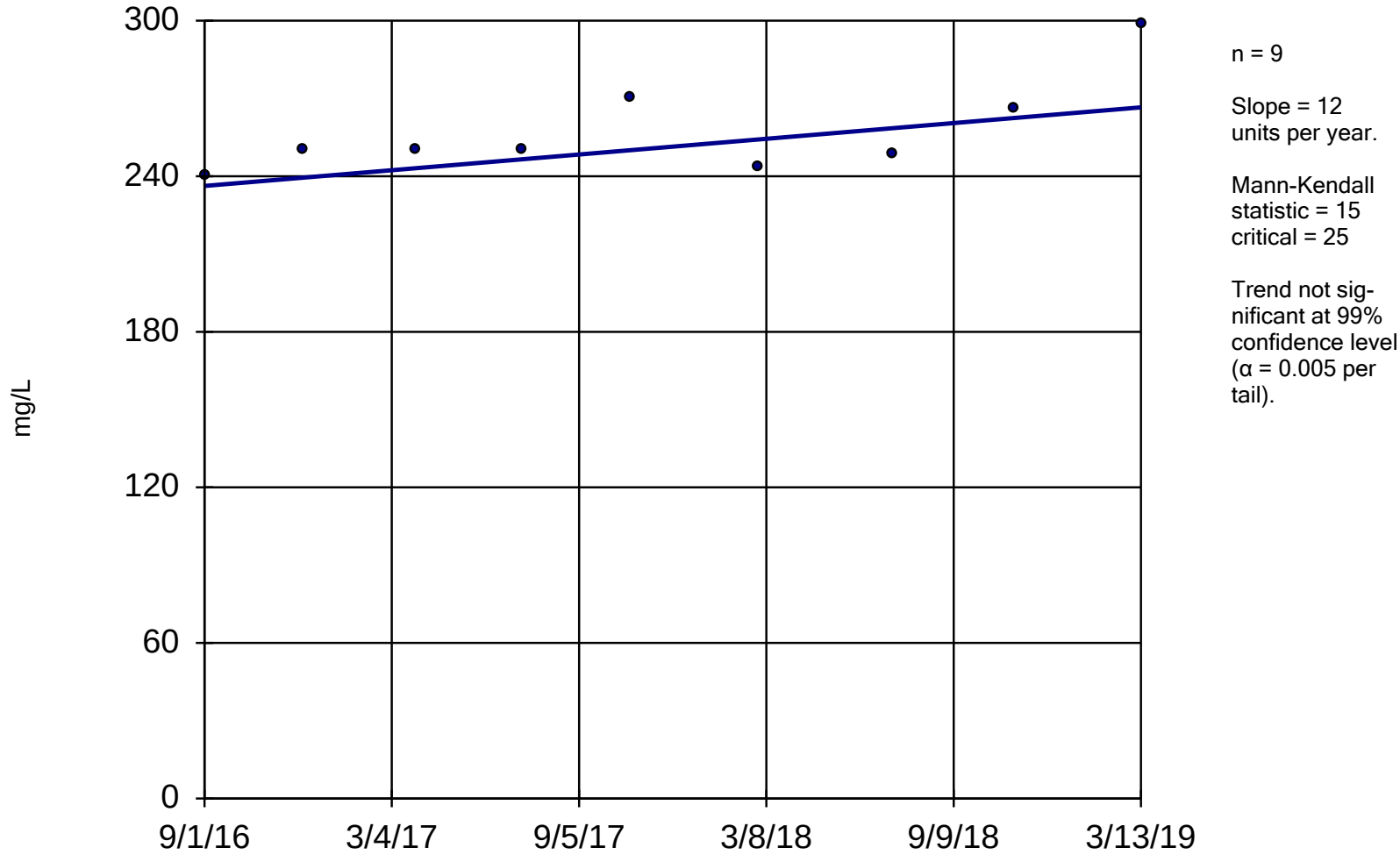


Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-19



n = 9

Slope = 12 units per year.

Mann-Kendall statistic = 15 critical = 25

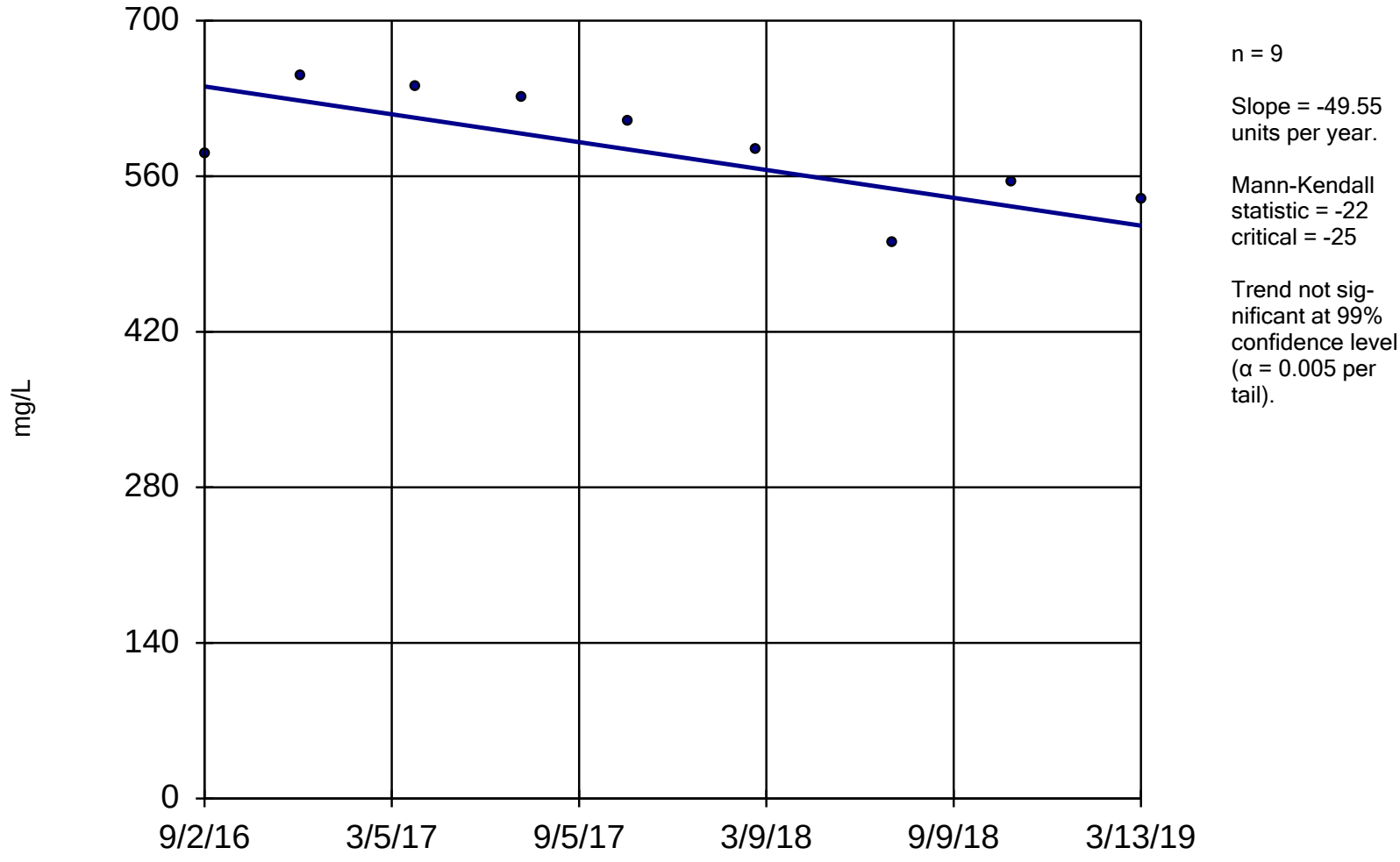
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-20



n = 9

Slope = -49.55 units per year.

Mann-Kendall statistic = -22
critical = -25

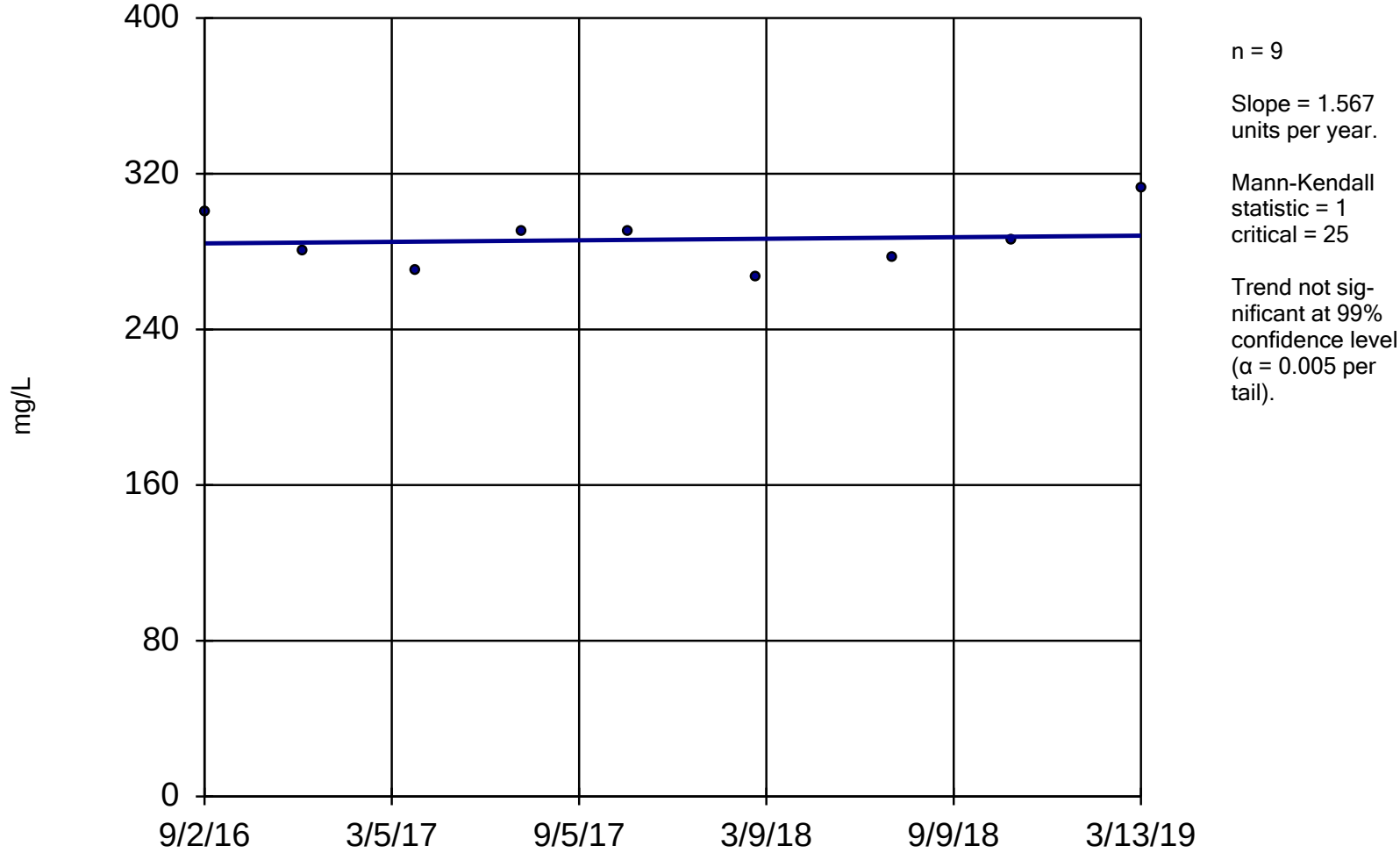
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-21



n = 9

Slope = 1.567 units per year.

Mann-Kendall statistic = 1
critical = 25

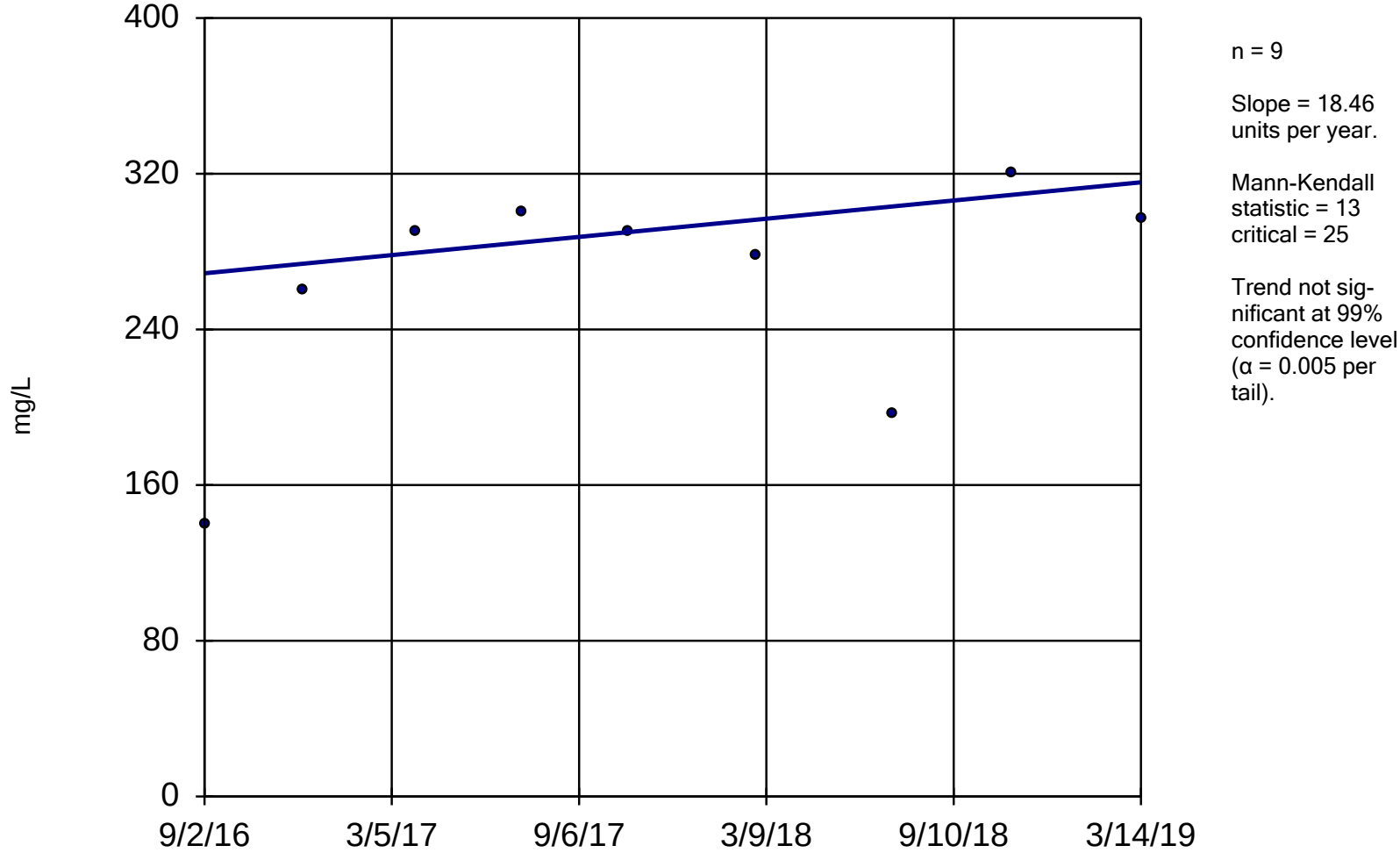
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-22



n = 9

Slope = 18.46 units per year.

Mann-Kendall statistic = 13
critical = 25

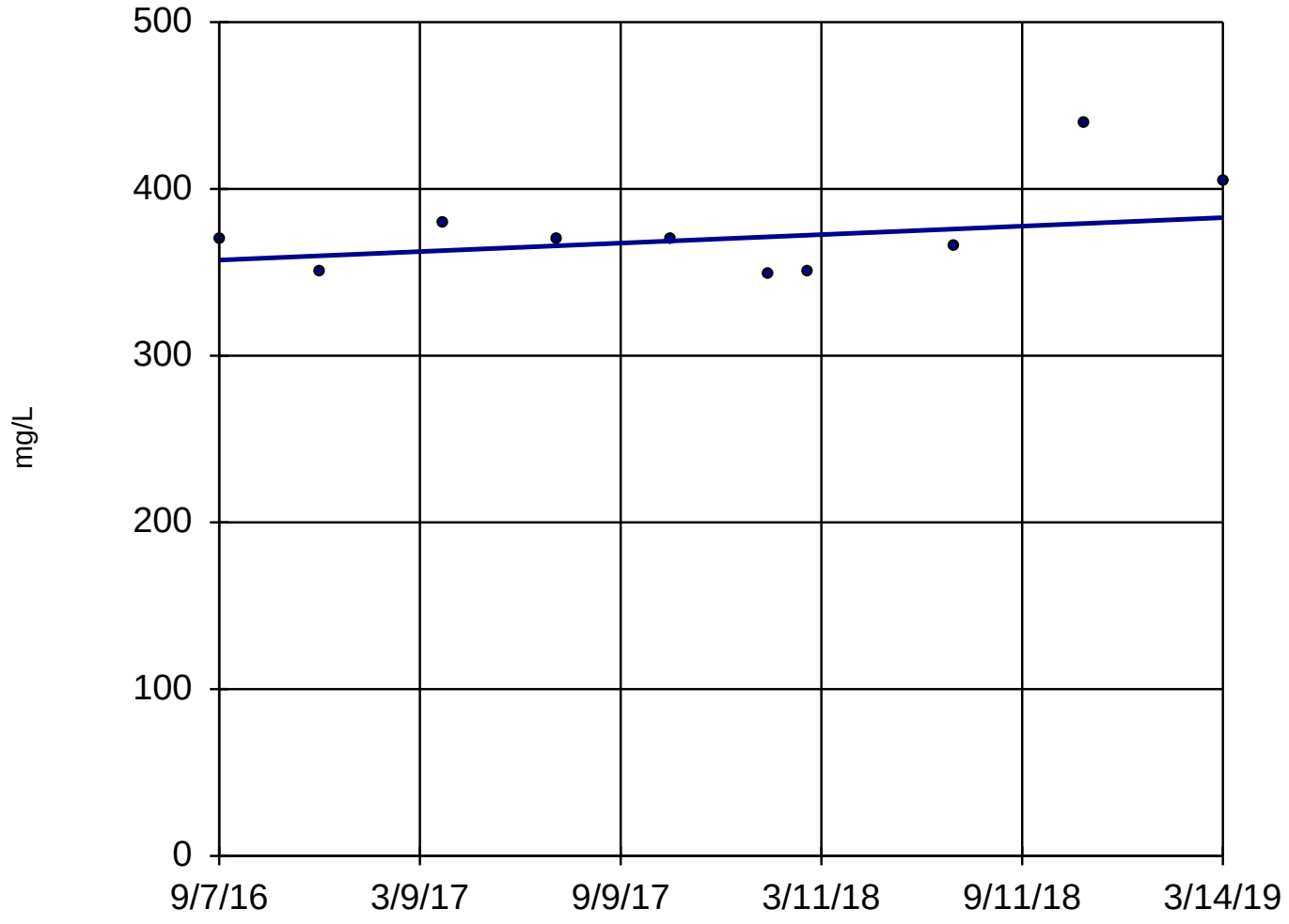
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-42



n = 10

Slope = 10.14 units per year.

Mann-Kendall statistic = 7
critical = 30

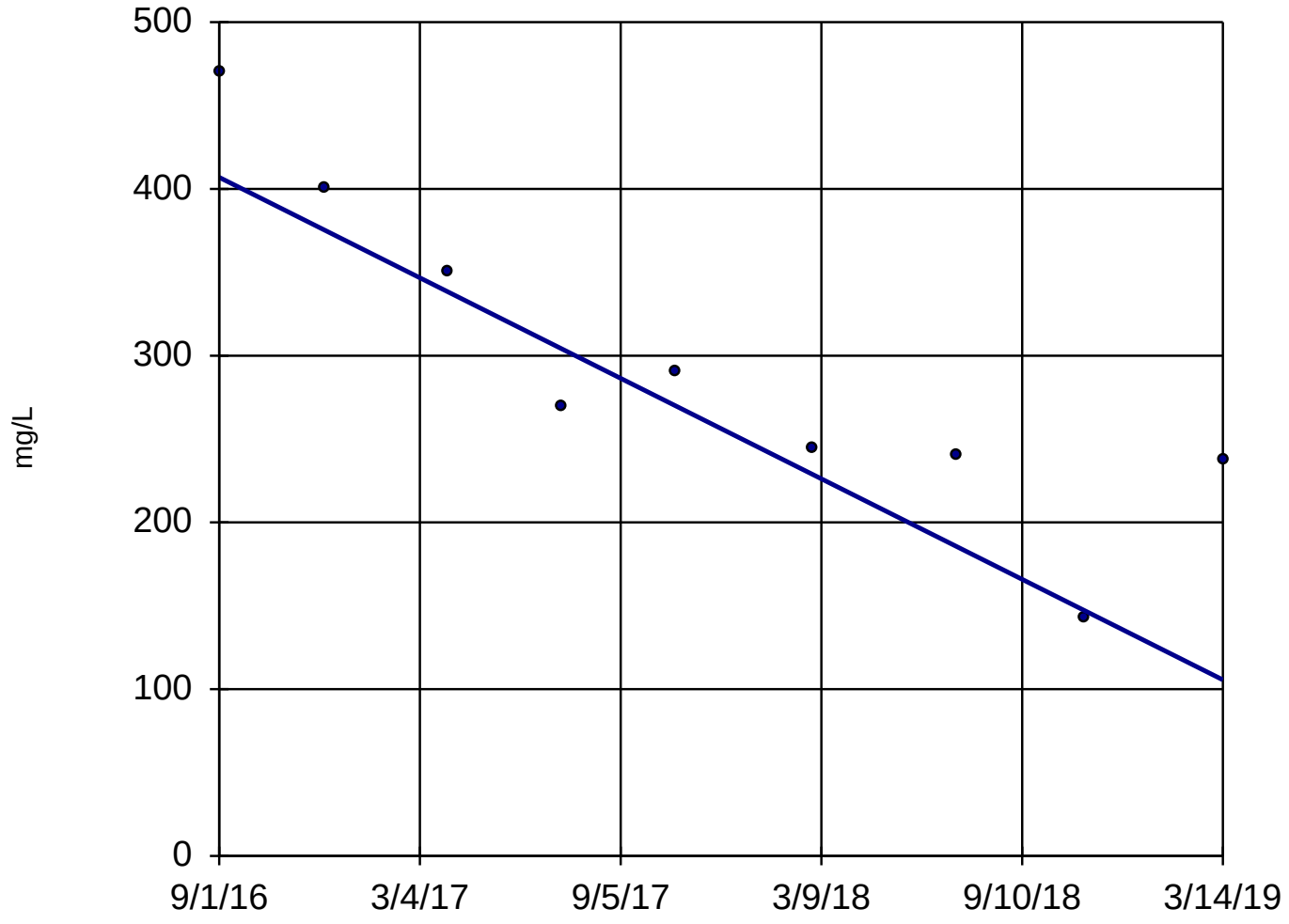
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-47



n = 9

Slope = -119 units per year.

Mann-Kendall statistic = -32
critical = -25

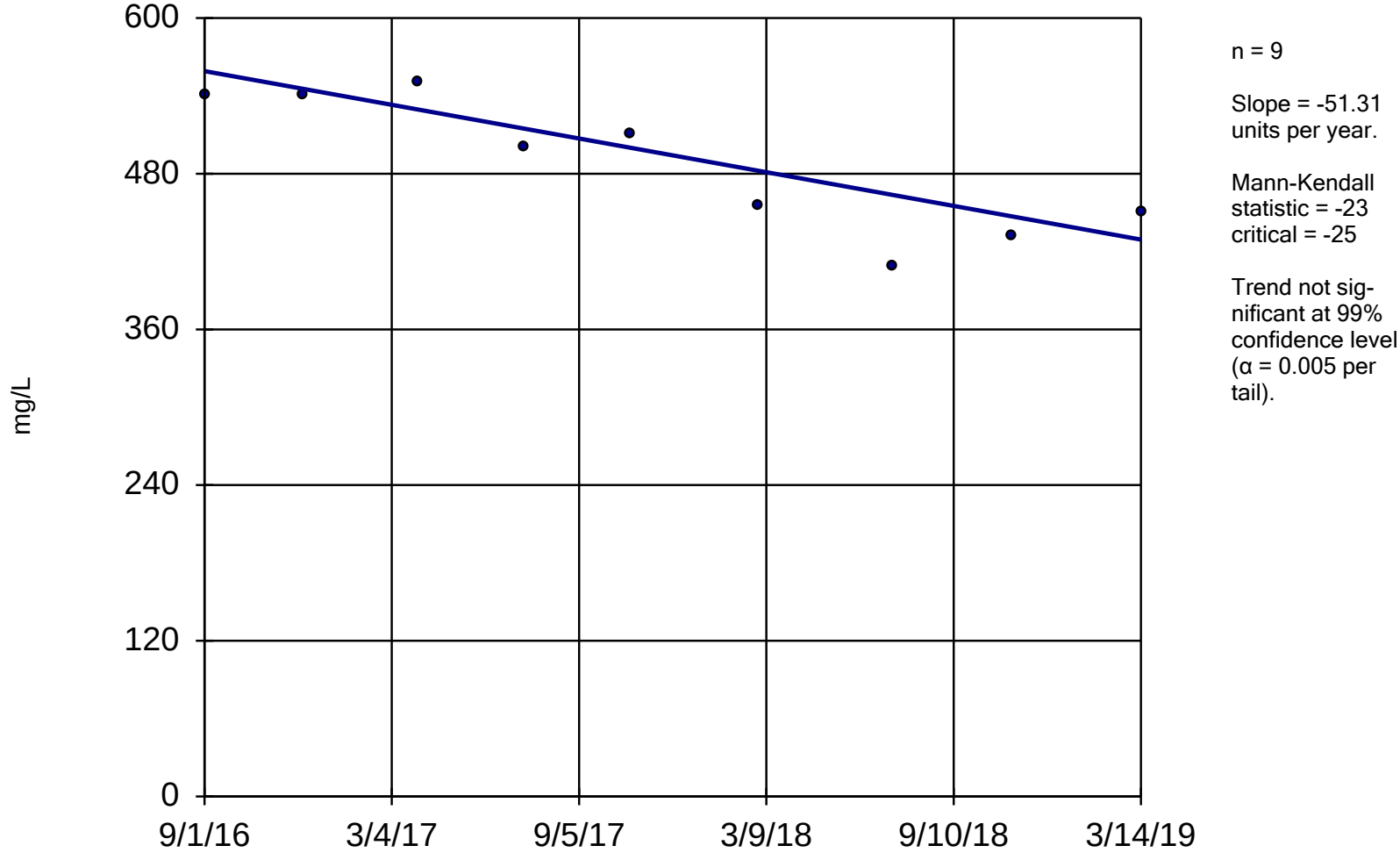
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-48



n = 9

Slope = -51.31 units per year.

Mann-Kendall statistic = -23
critical = -25

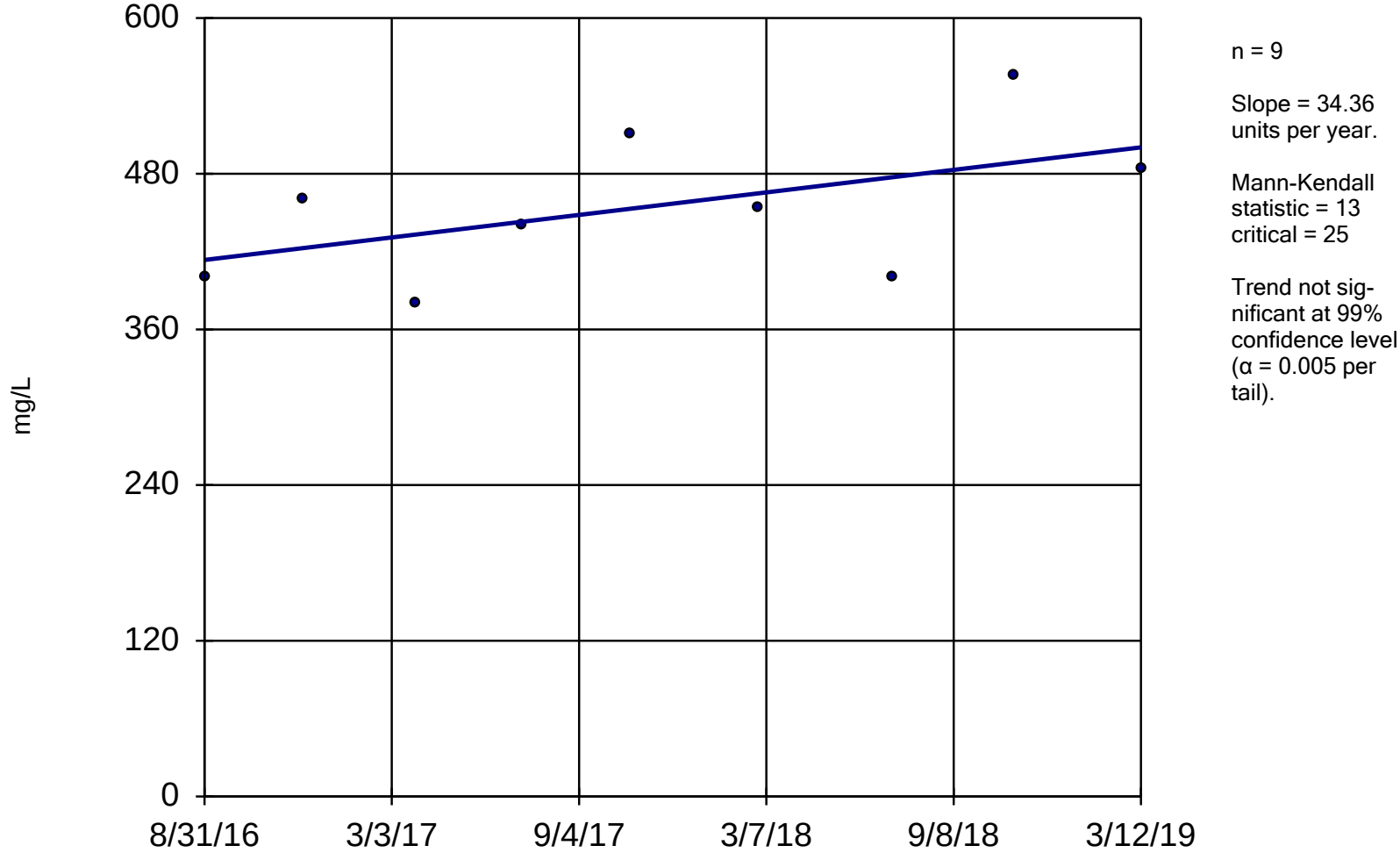
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-5



n = 9

Slope = 34.36 units per year.

Mann-Kendall statistic = 13
critical = 25

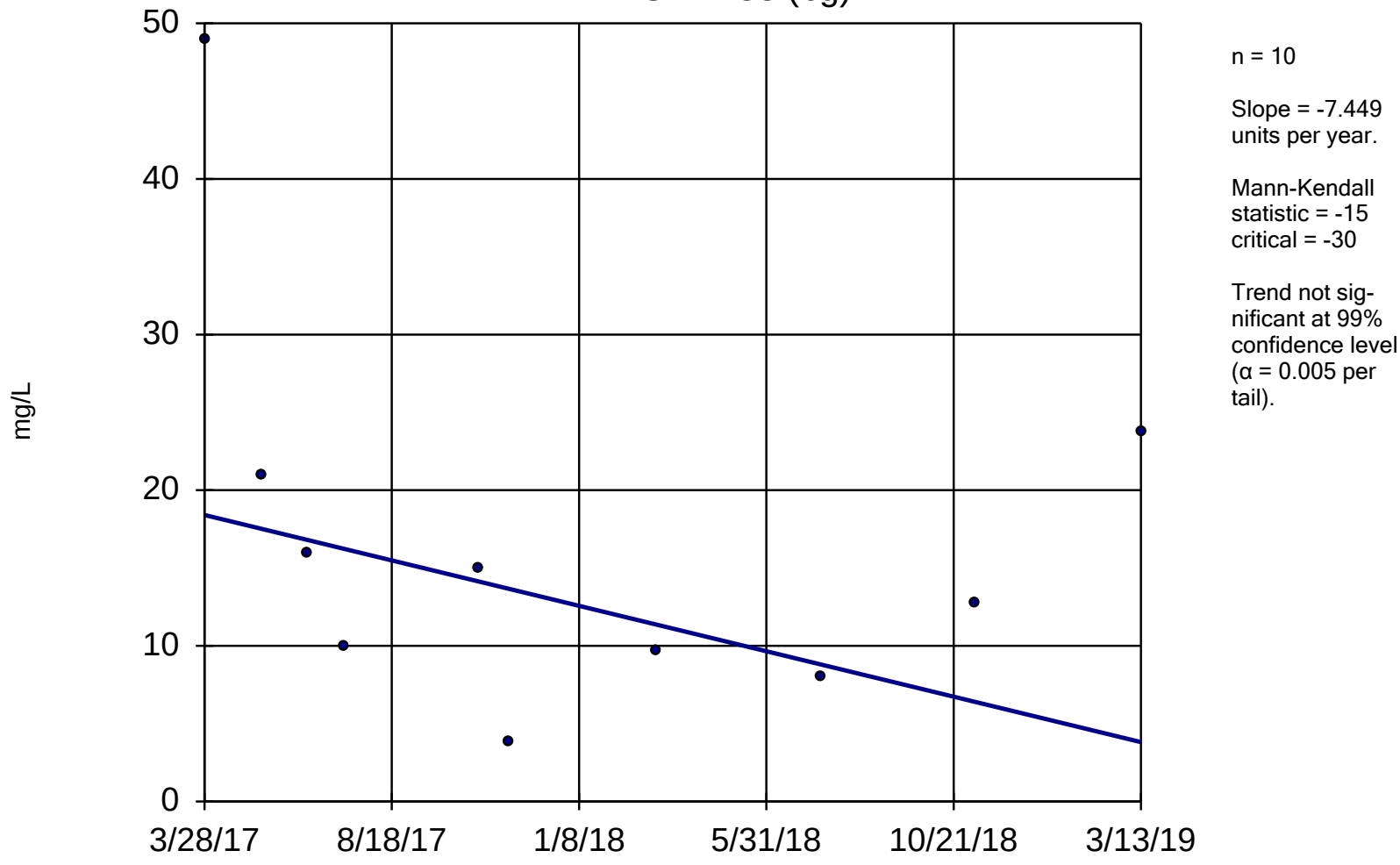
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWA-53 (bg)



n = 10

Slope = -7.449 units per year.

Mann-Kendall statistic = -15
critical = -30

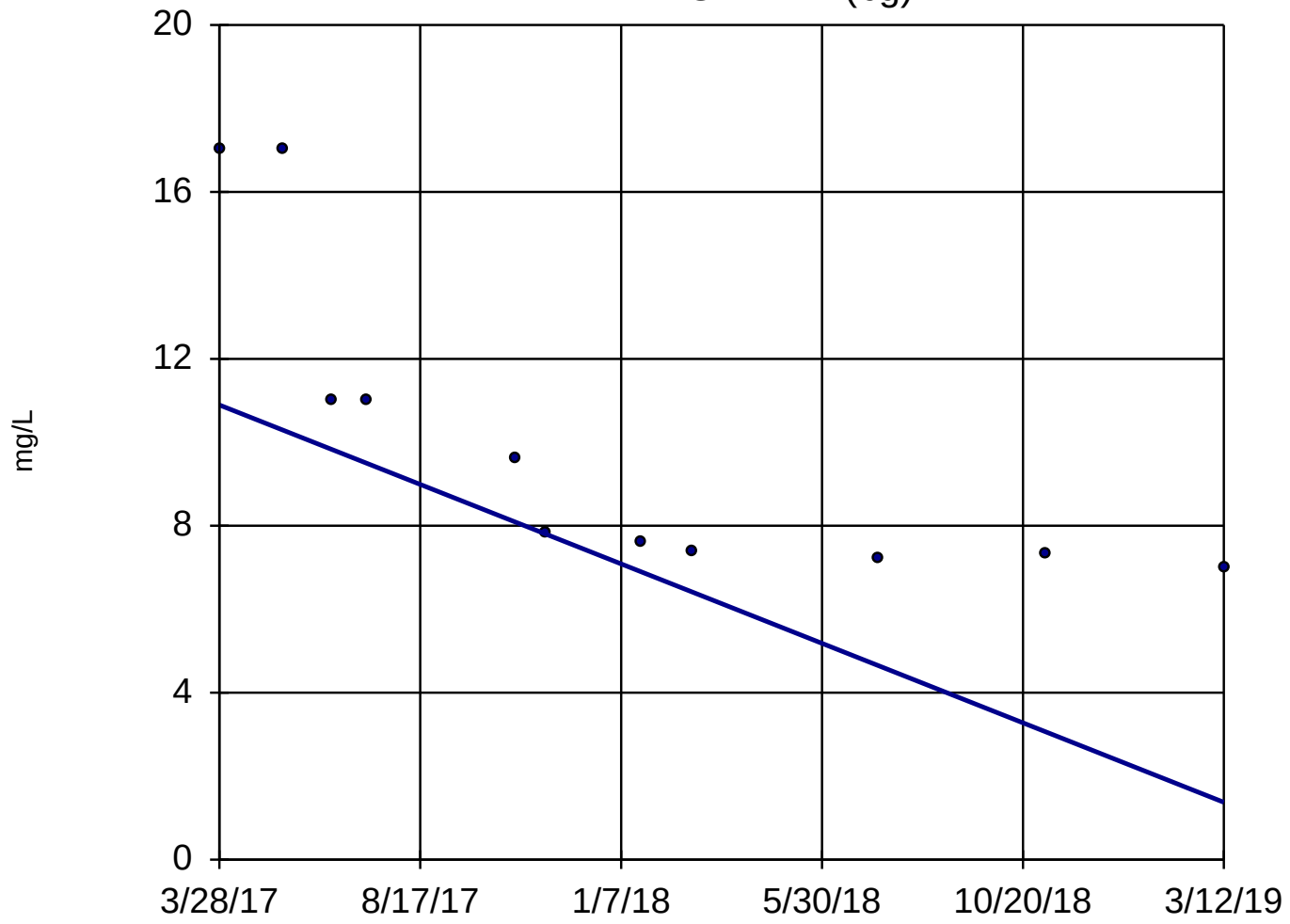
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWA-71 (bg)



n = 11

Slope = -4.867 units per year.

Mann-Kendall statistic = -51
critical = -34

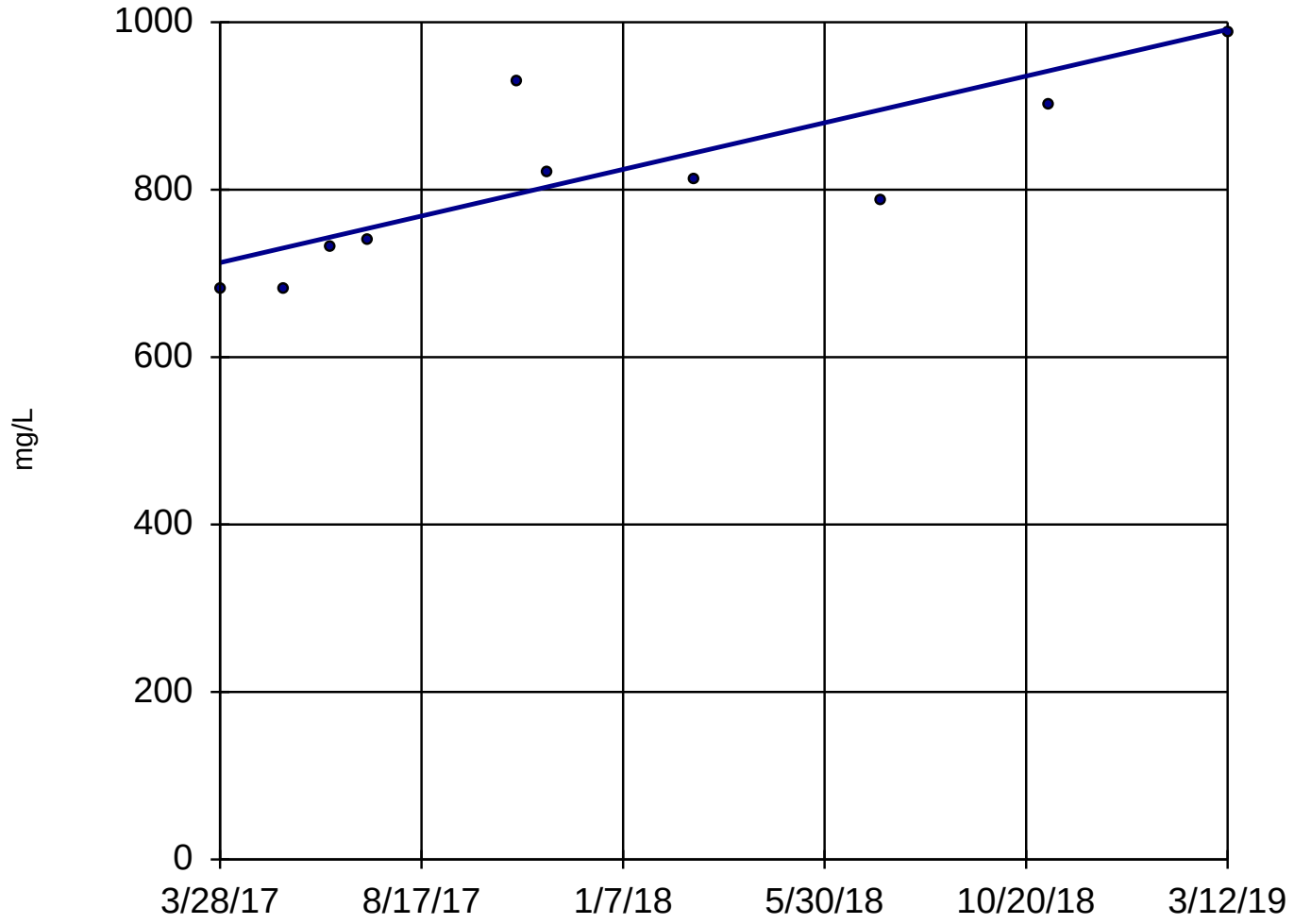
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-4



n = 10

Slope = 142.3 units per year.

Mann-Kendall statistic = 30
critical = 30

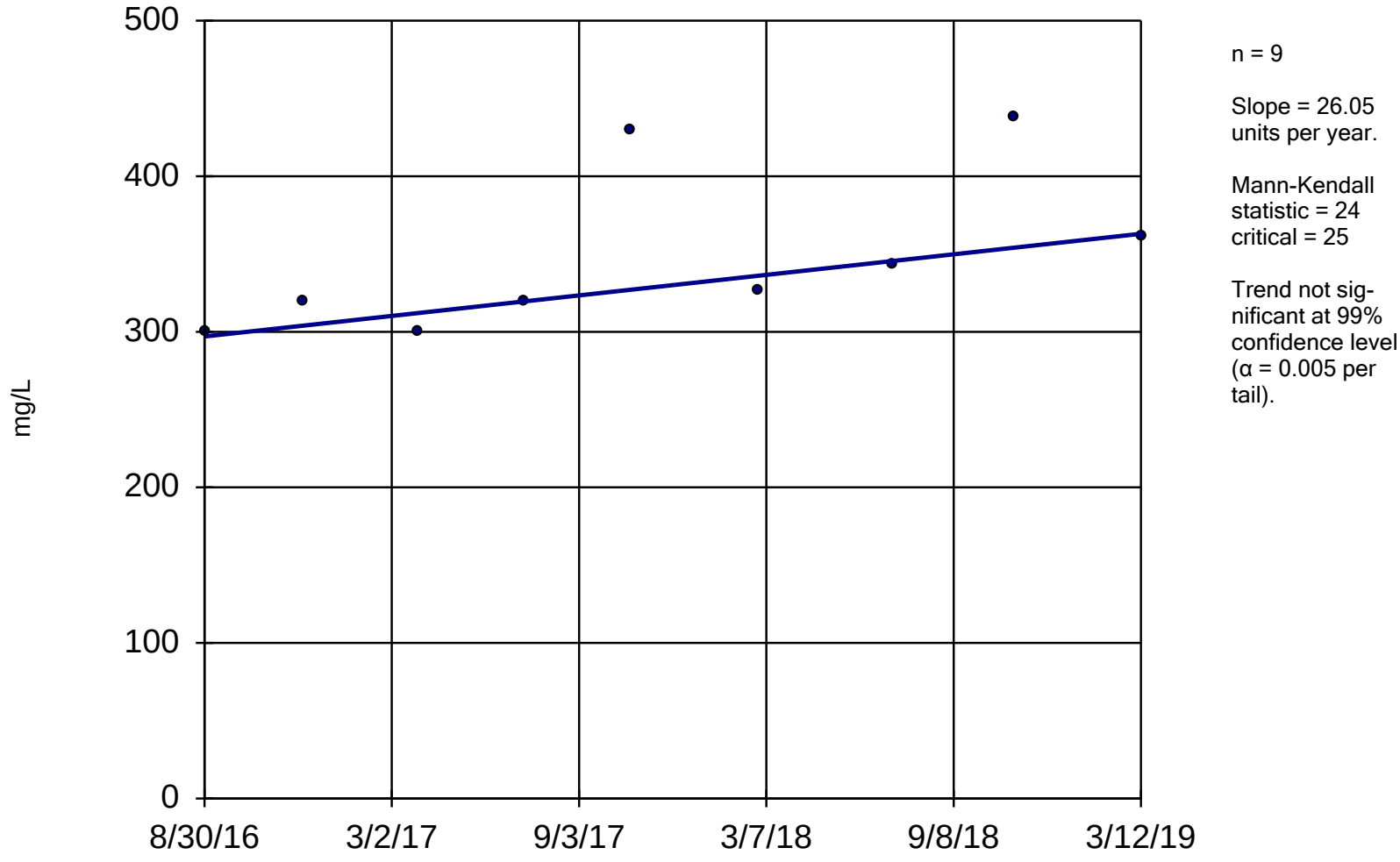
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-9



n = 9

Slope = 26.05 units per year.

Mann-Kendall statistic = 24
critical = 25

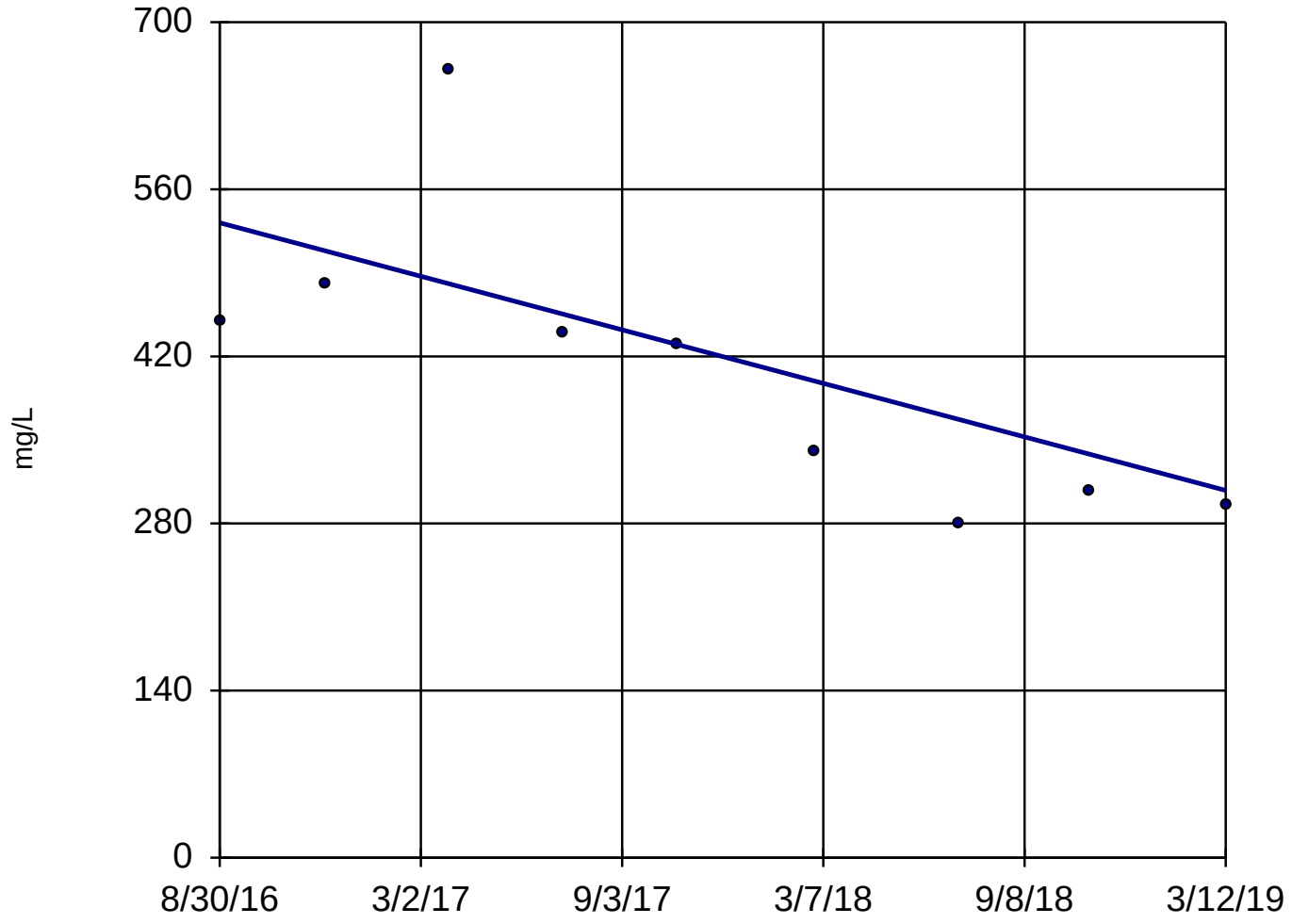
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-8



n = 9

Slope = -88.56 units per year.

Mann-Kendall statistic = -26
critical = -25

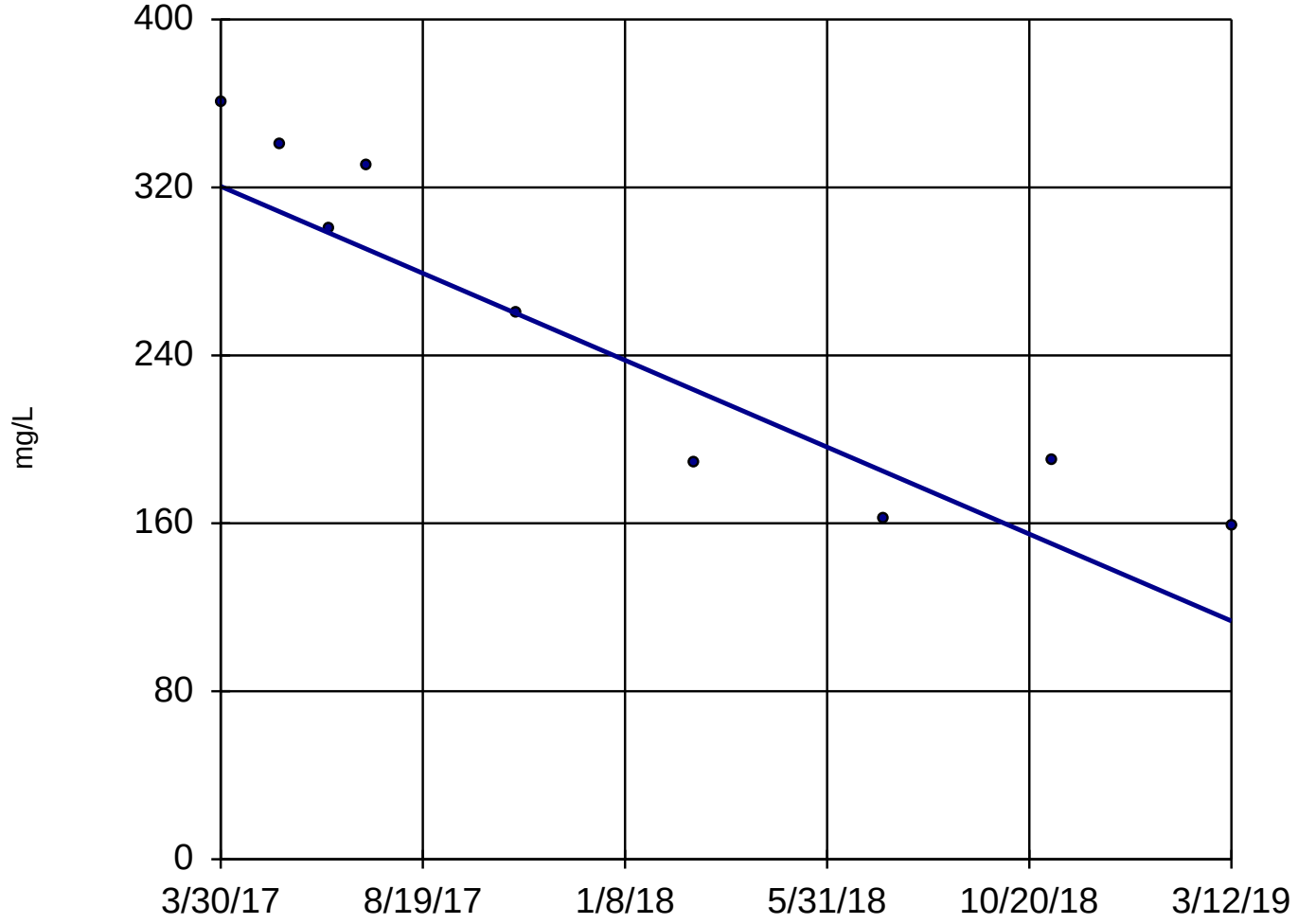
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-2



n = 9

Slope = -106.1 units per year.

Mann-Kendall statistic = -30
critical = -25

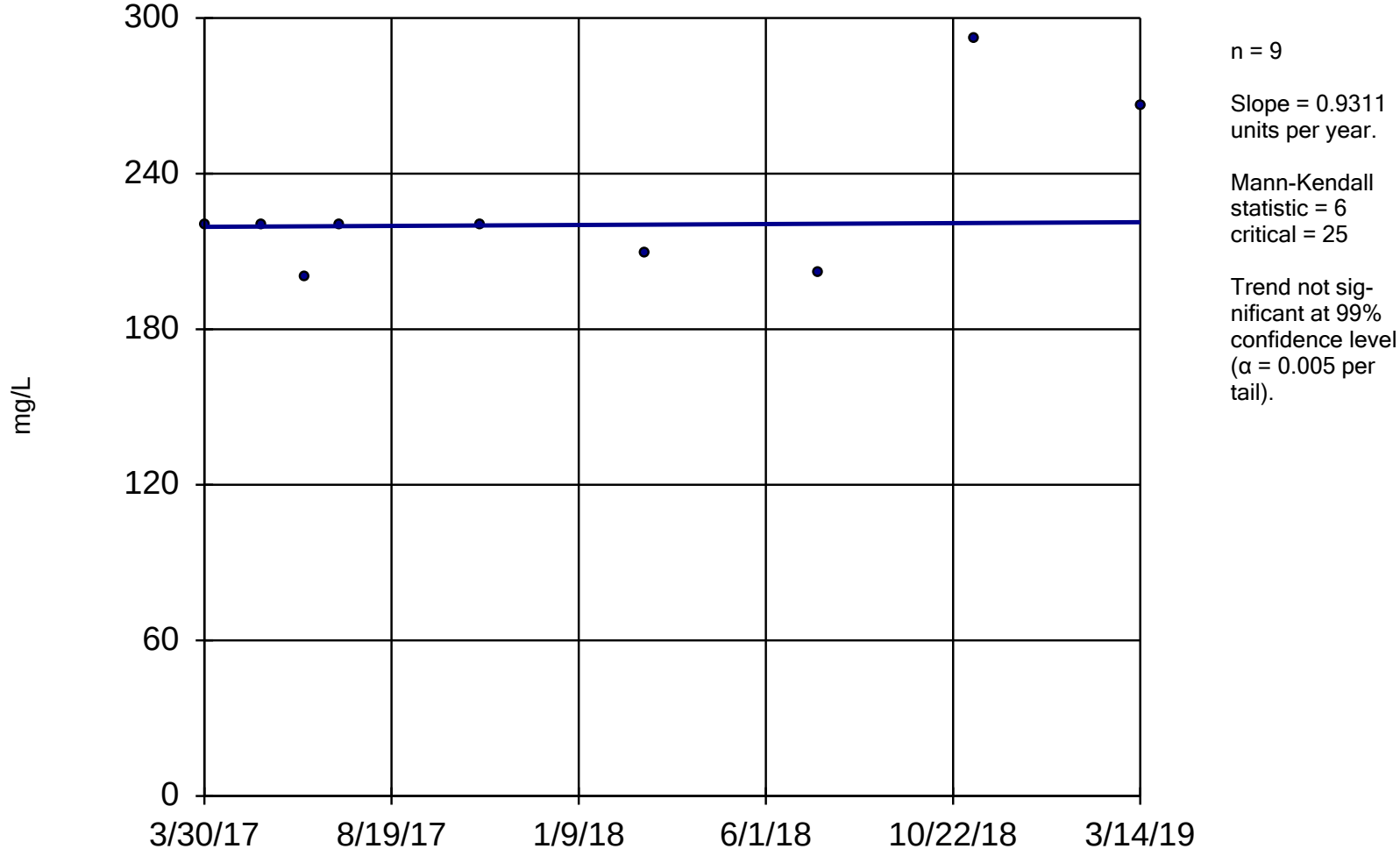
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-23

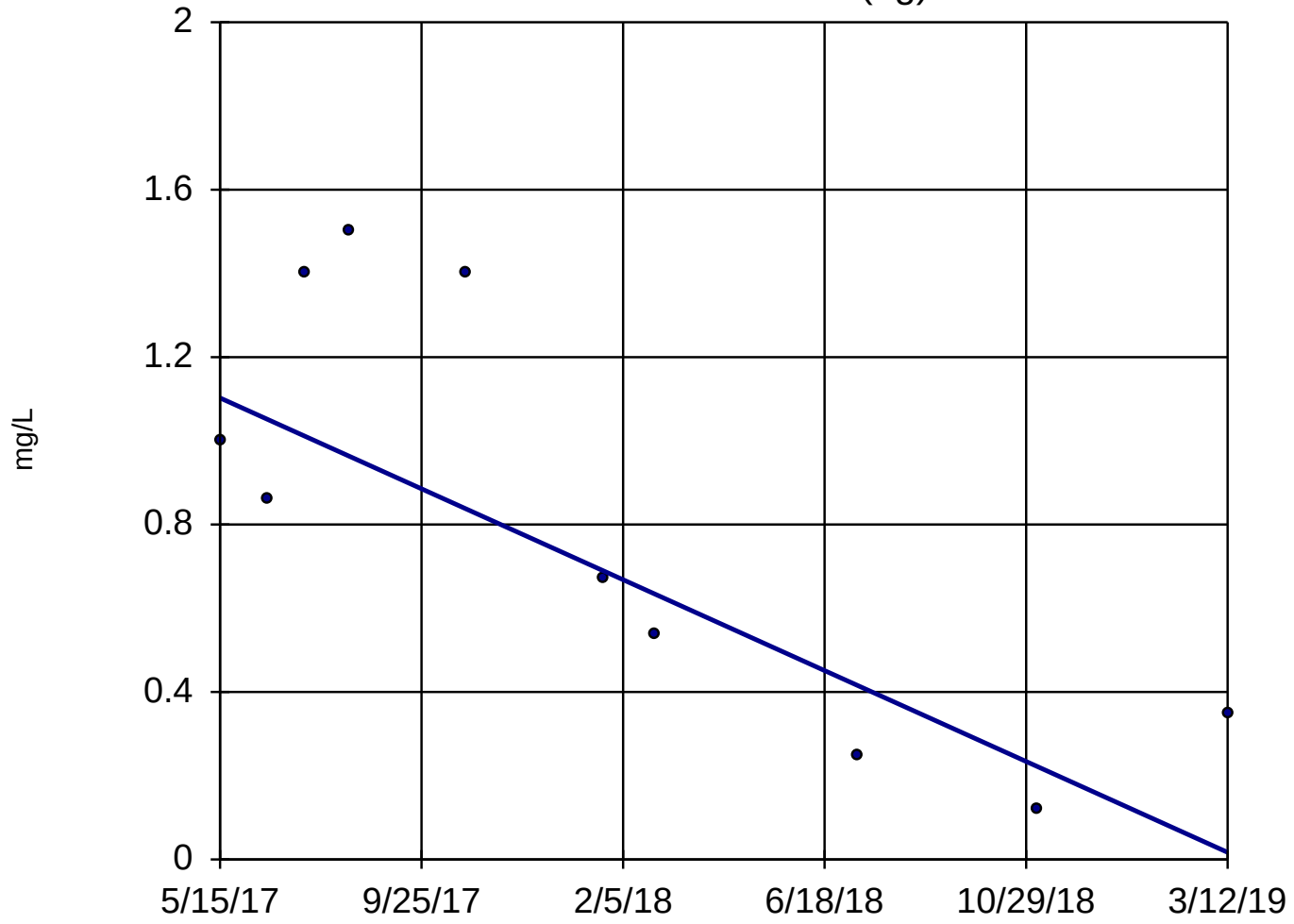


Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWA-70A (bg)



n = 10

Slope = -0.5948 units per year.

Mann-Kendall statistic = -26
critical = -30

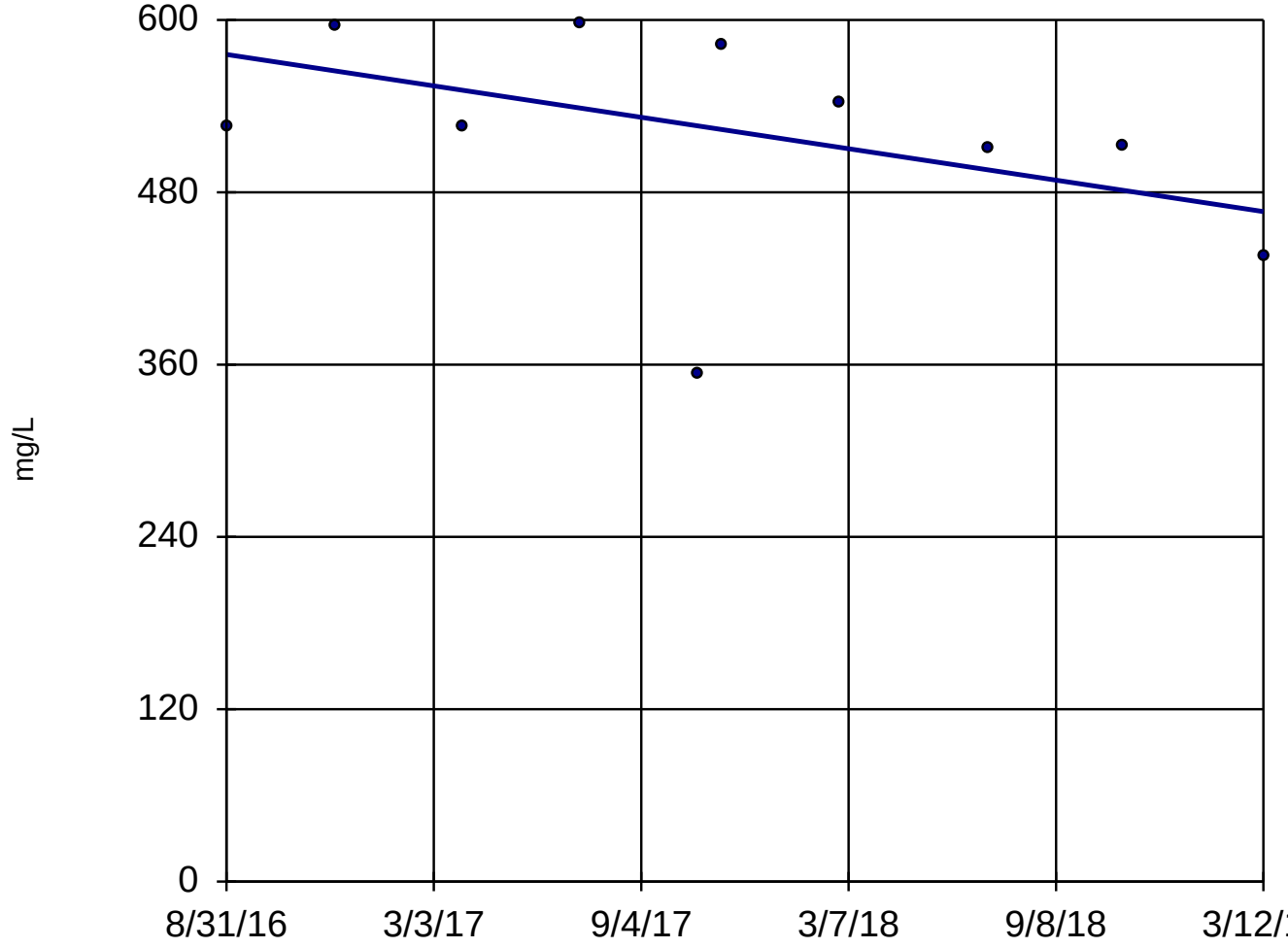
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-10



n = 10

Slope = -43.28 units per year.

Mann-Kendall statistic = -16
critical = -30

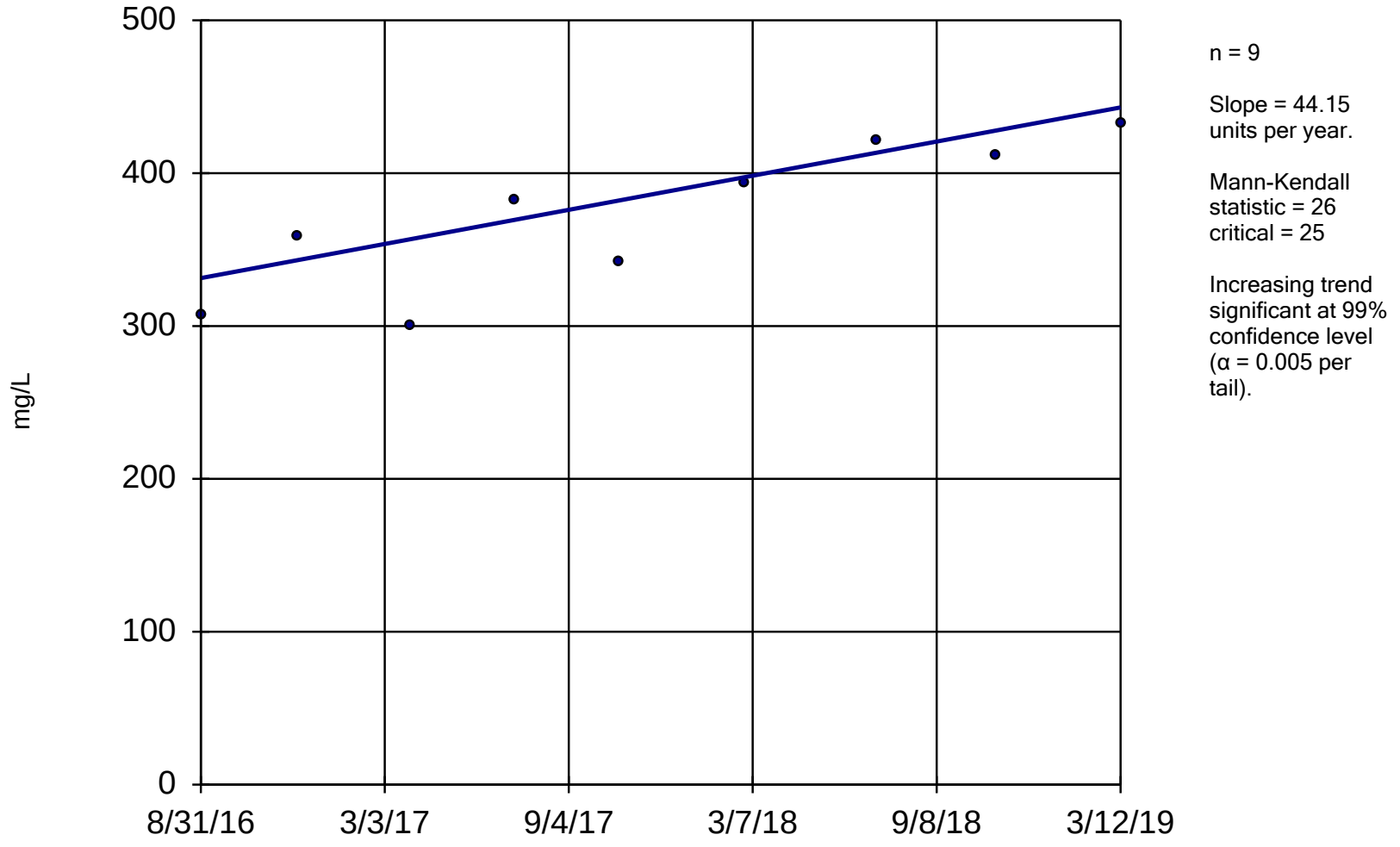
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-11



n = 9

Slope = 44.15 units per year.

Mann-Kendall statistic = 26
critical = 25

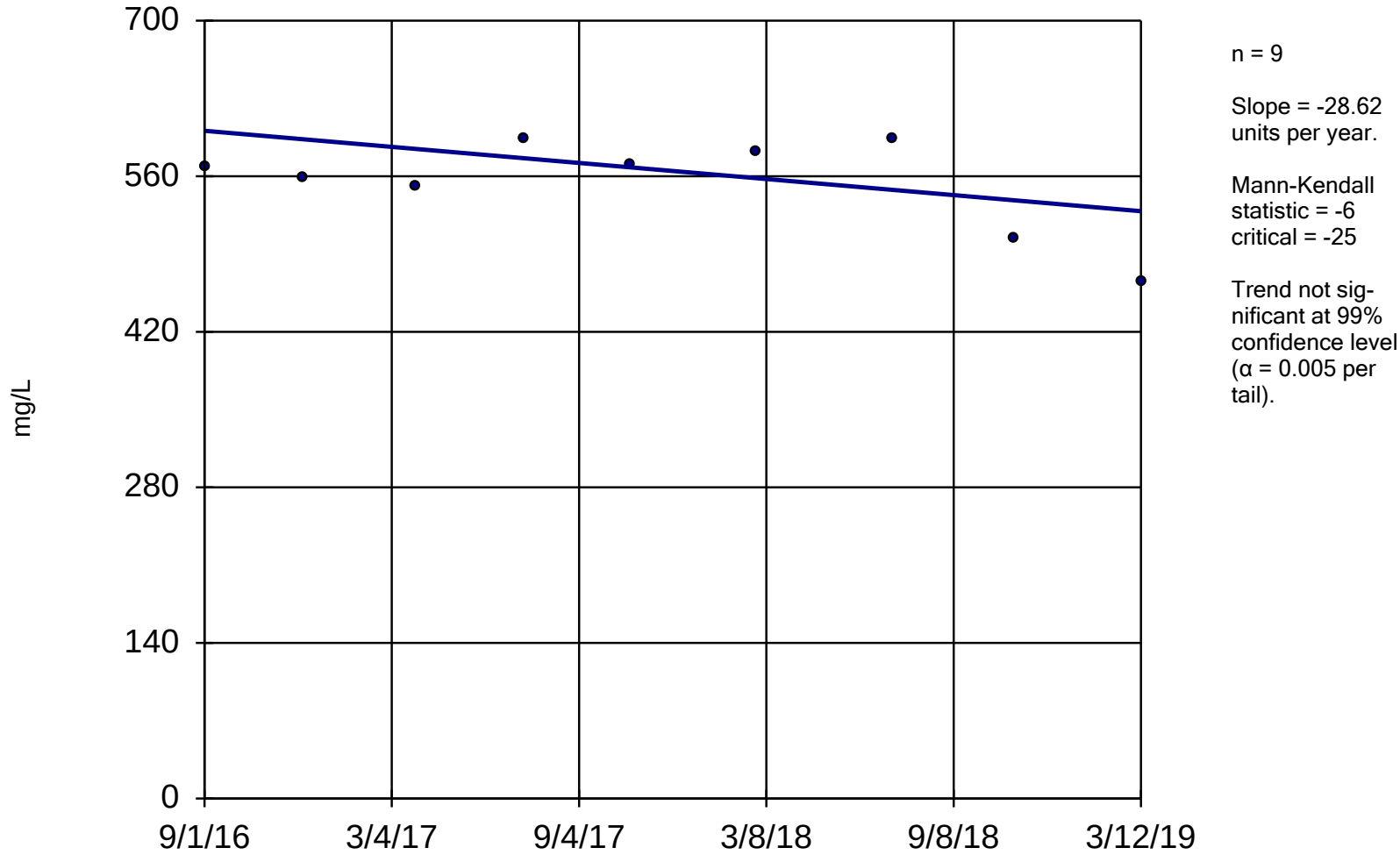
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-12



n = 9

Slope = -28.62 units per year.

Mann-Kendall statistic = -6
critical = -25

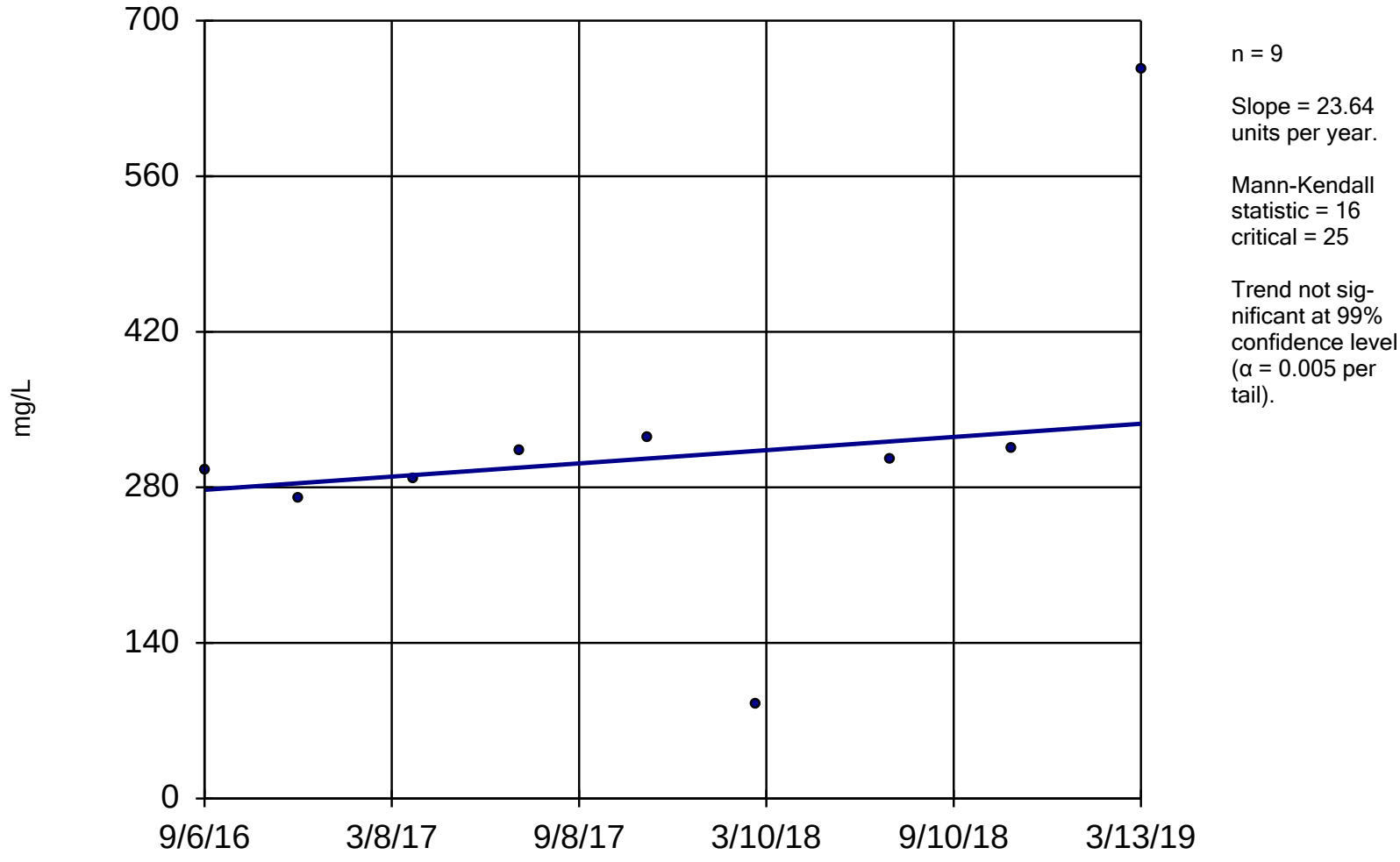
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-13



n = 9

Slope = 23.64 units per year.

Mann-Kendall statistic = 16
critical = 25

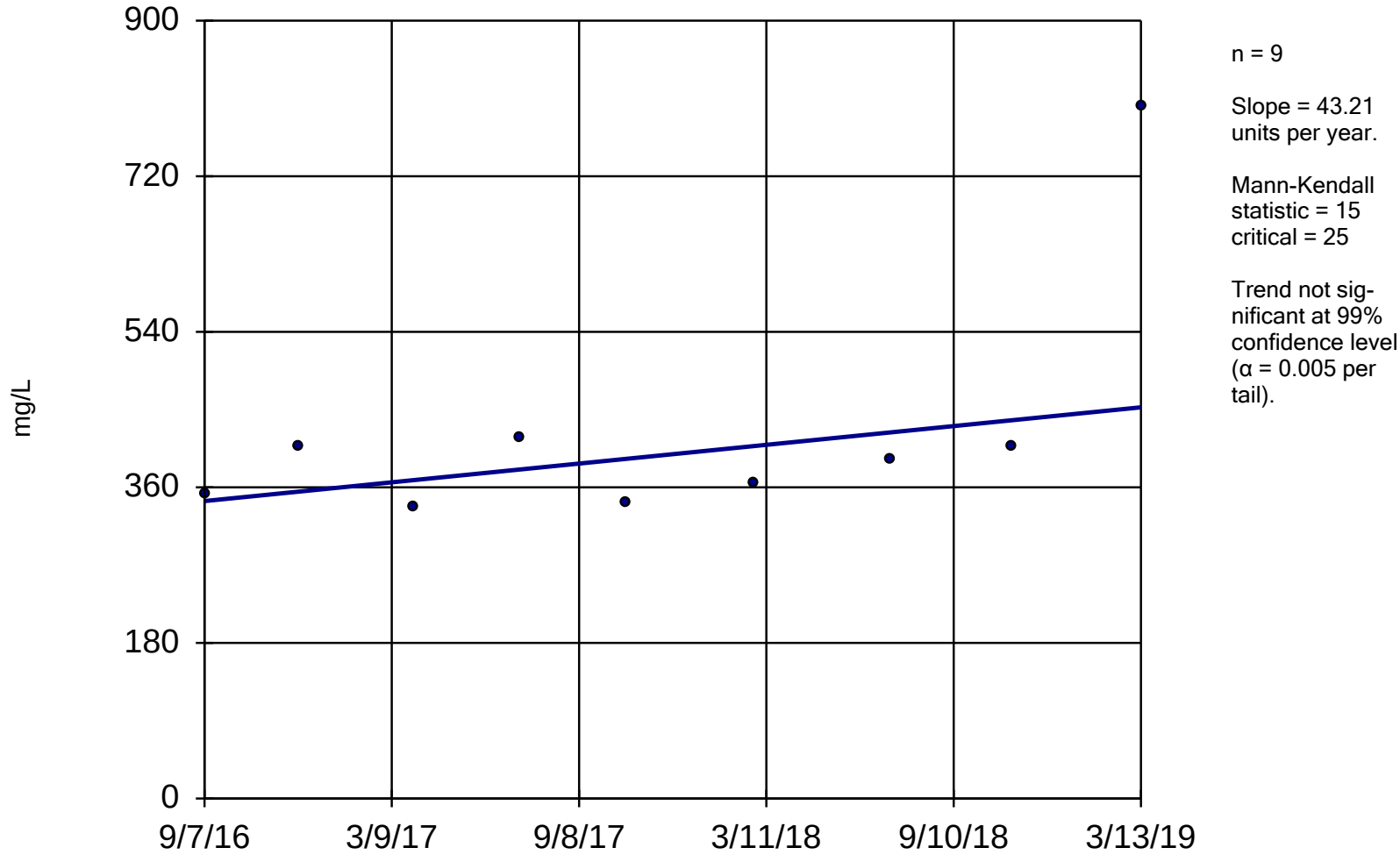
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-17



n = 9

Slope = 43.21 units per year.

Mann-Kendall statistic = 15
critical = 25

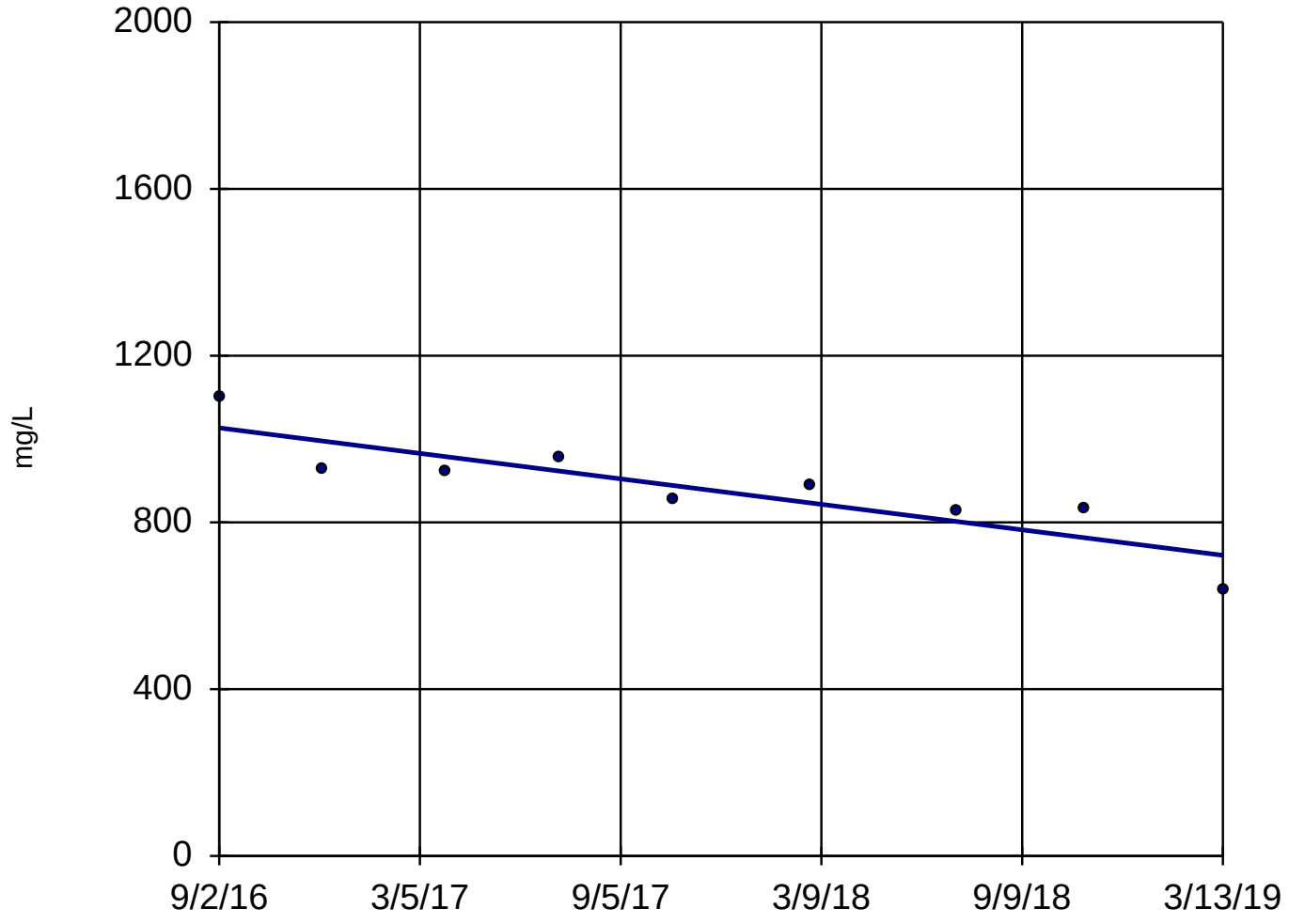
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-20



n = 9

Slope = -121 units per year.

Mann-Kendall statistic = -28
critical = -25

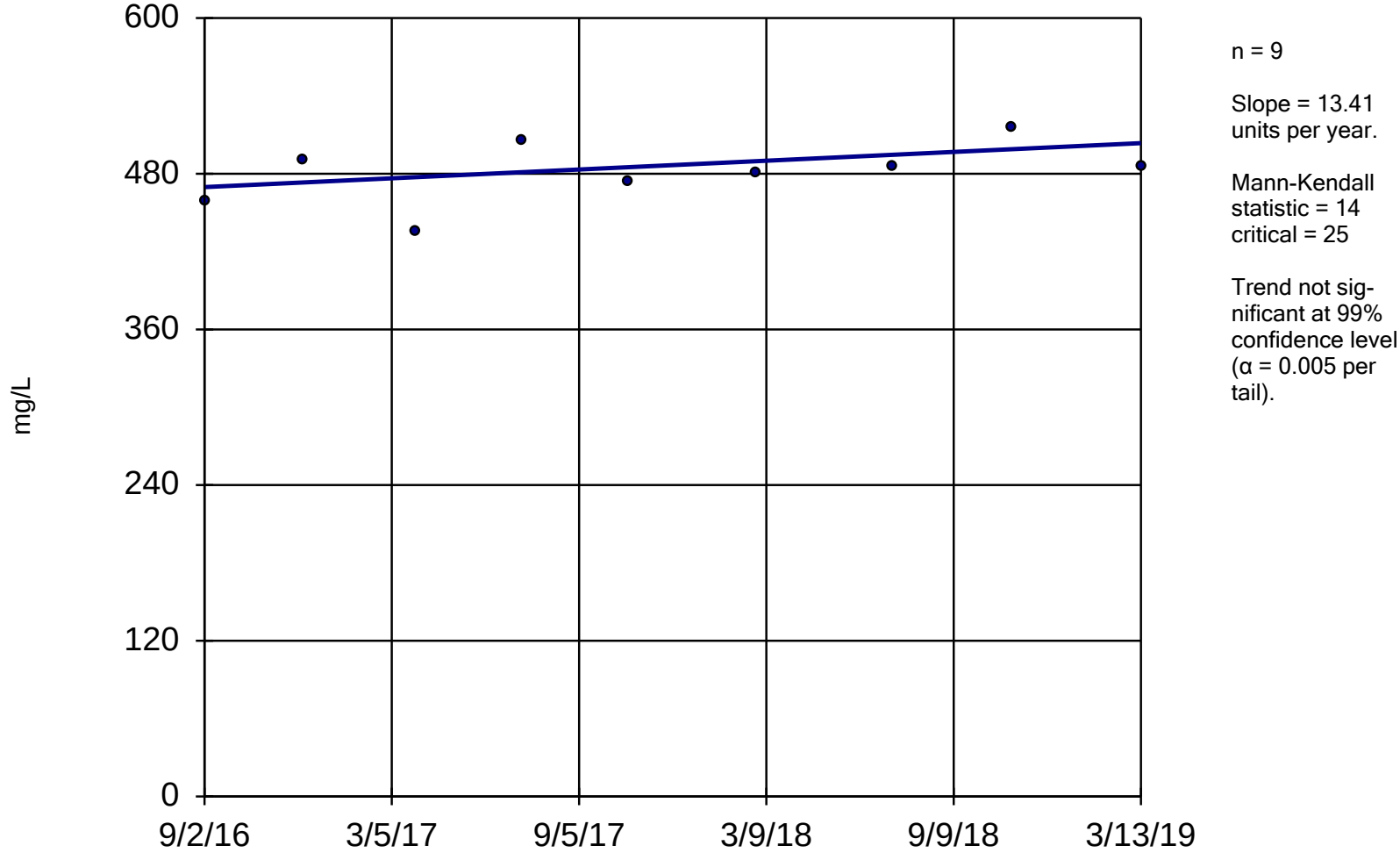
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-21



n = 9

Slope = 13.41 units per year.

Mann-Kendall statistic = 14
critical = 25

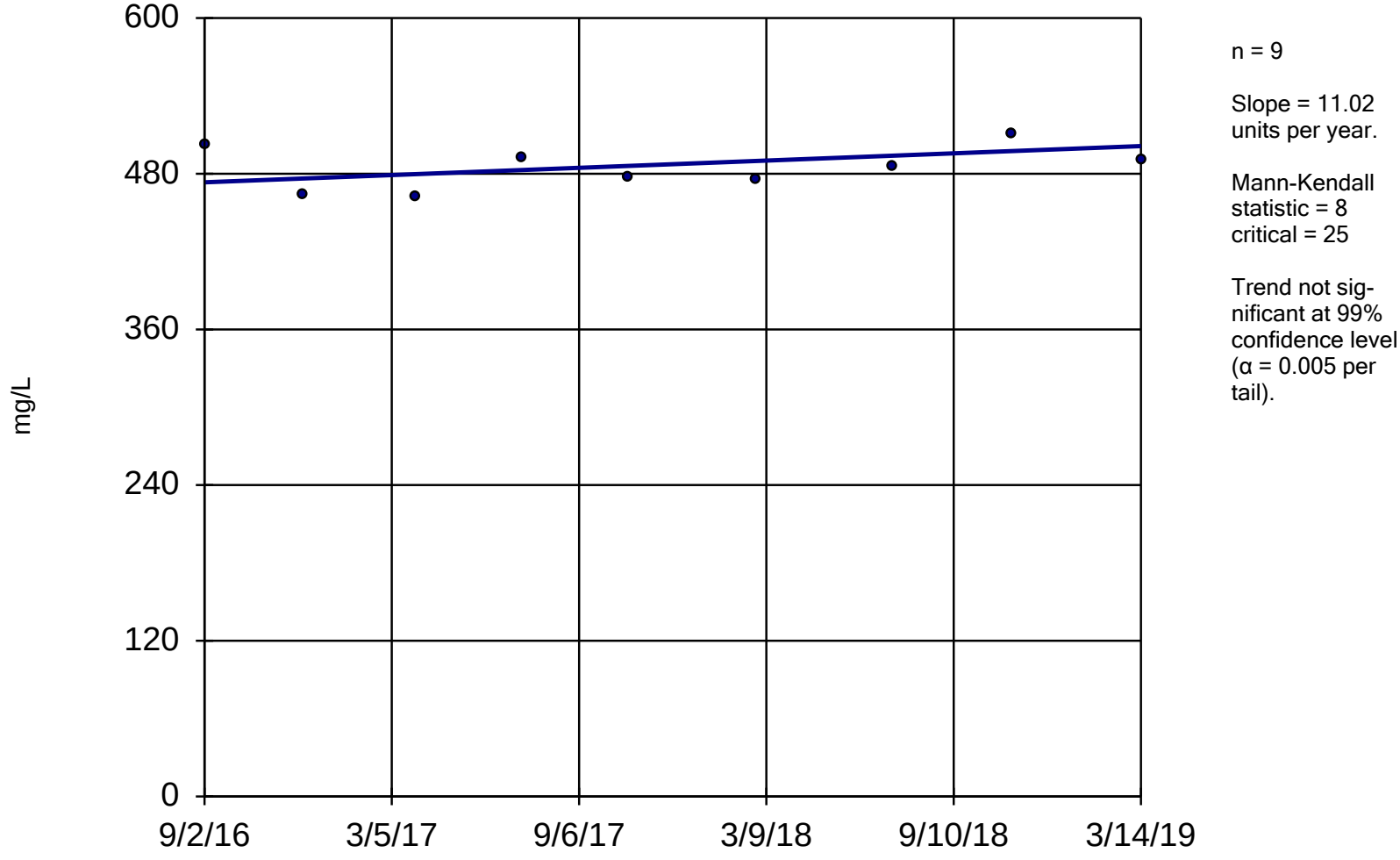
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-22



n = 9

Slope = 11.02 units per year.

Mann-Kendall statistic = 8
critical = 25

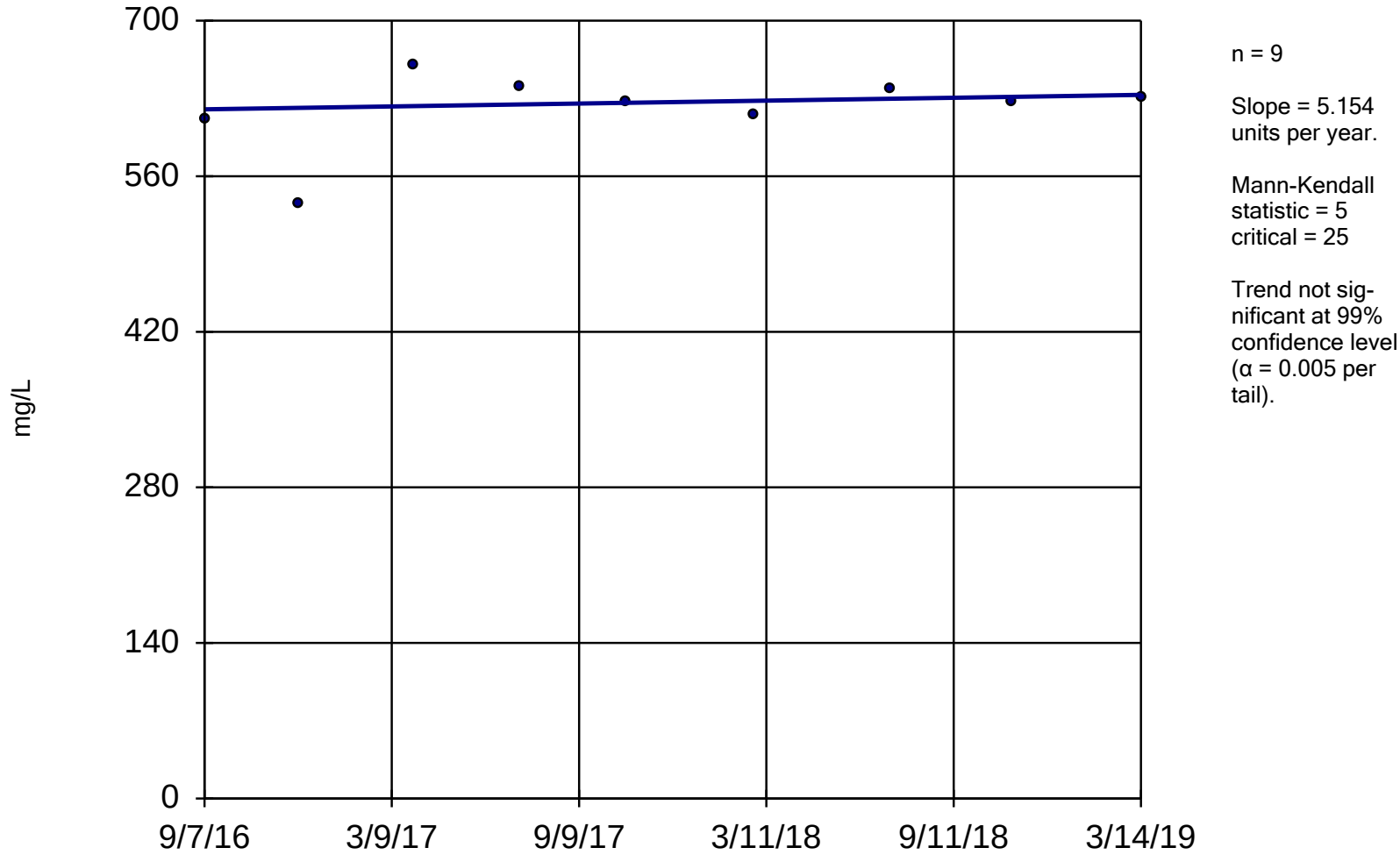
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-42



n = 9

Slope = 5.154 units per year.

Mann-Kendall statistic = 5
critical = 25

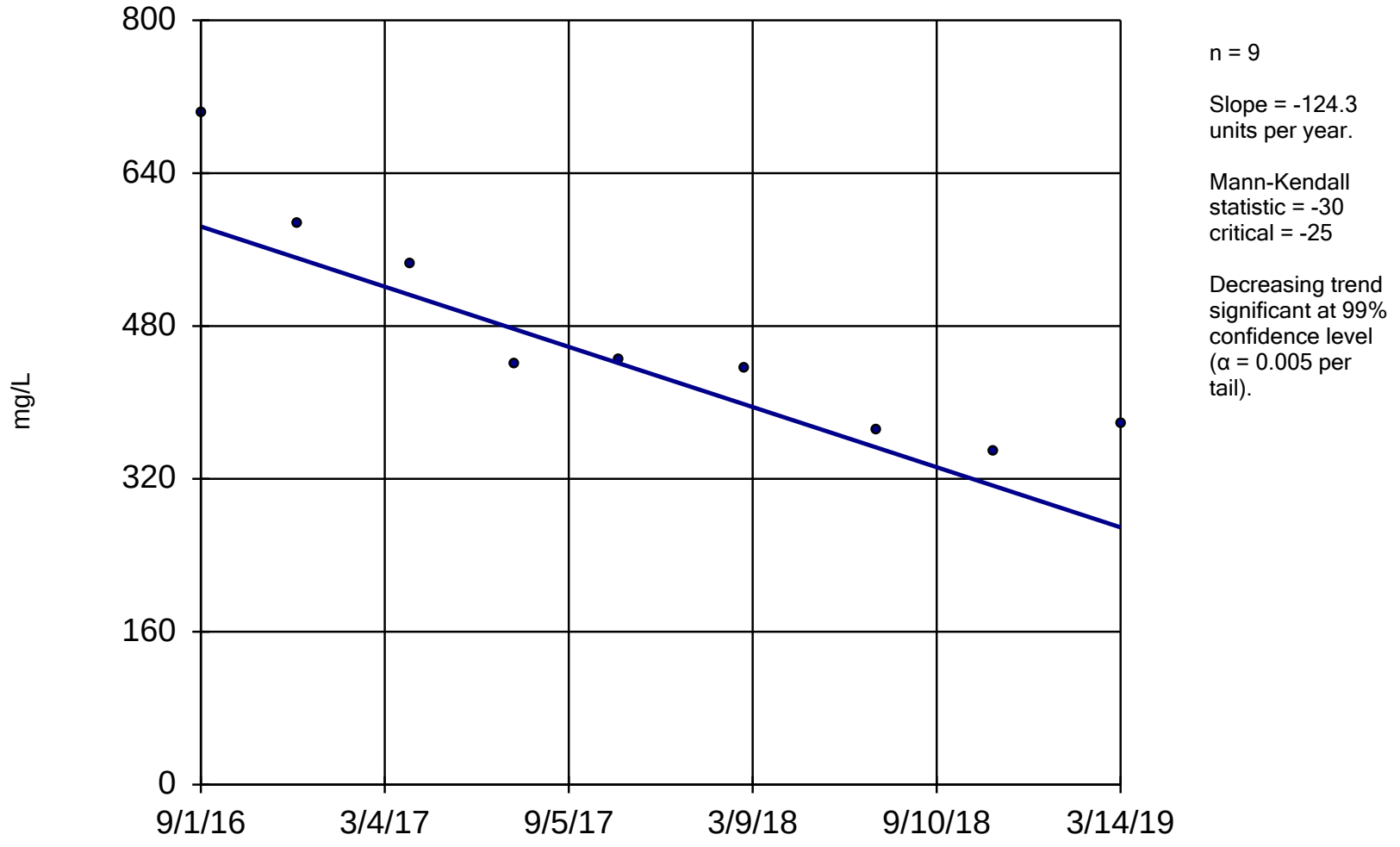
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-47



n = 9

Slope = -124.3 units per year.

Mann-Kendall statistic = -30
critical = -25

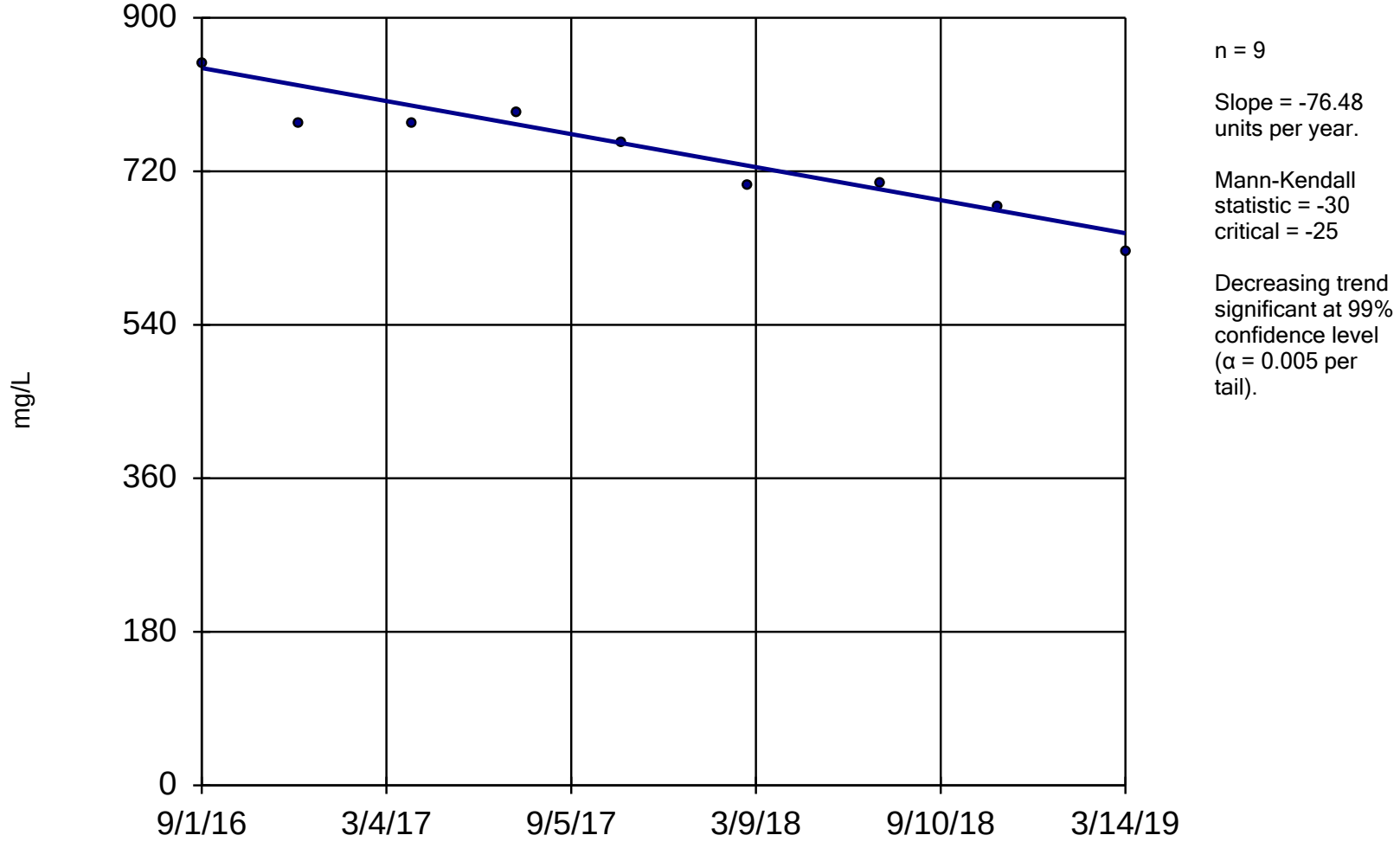
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-48



n = 9

Slope = -76.48 units per year.

Mann-Kendall statistic = -30
critical = -25

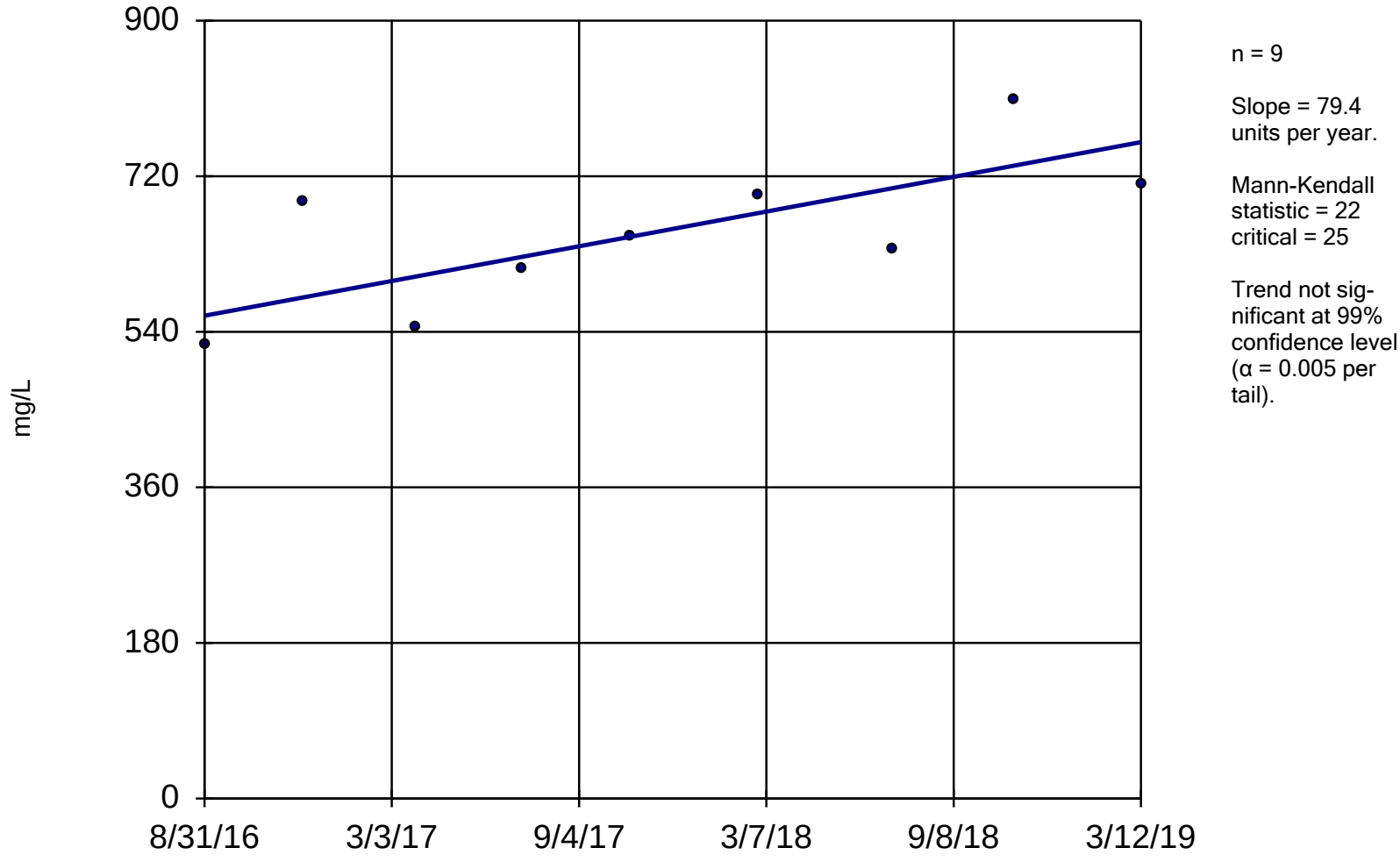
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-5



n = 9

Slope = 79.4 units per year.

Mann-Kendall statistic = 22
critical = 25

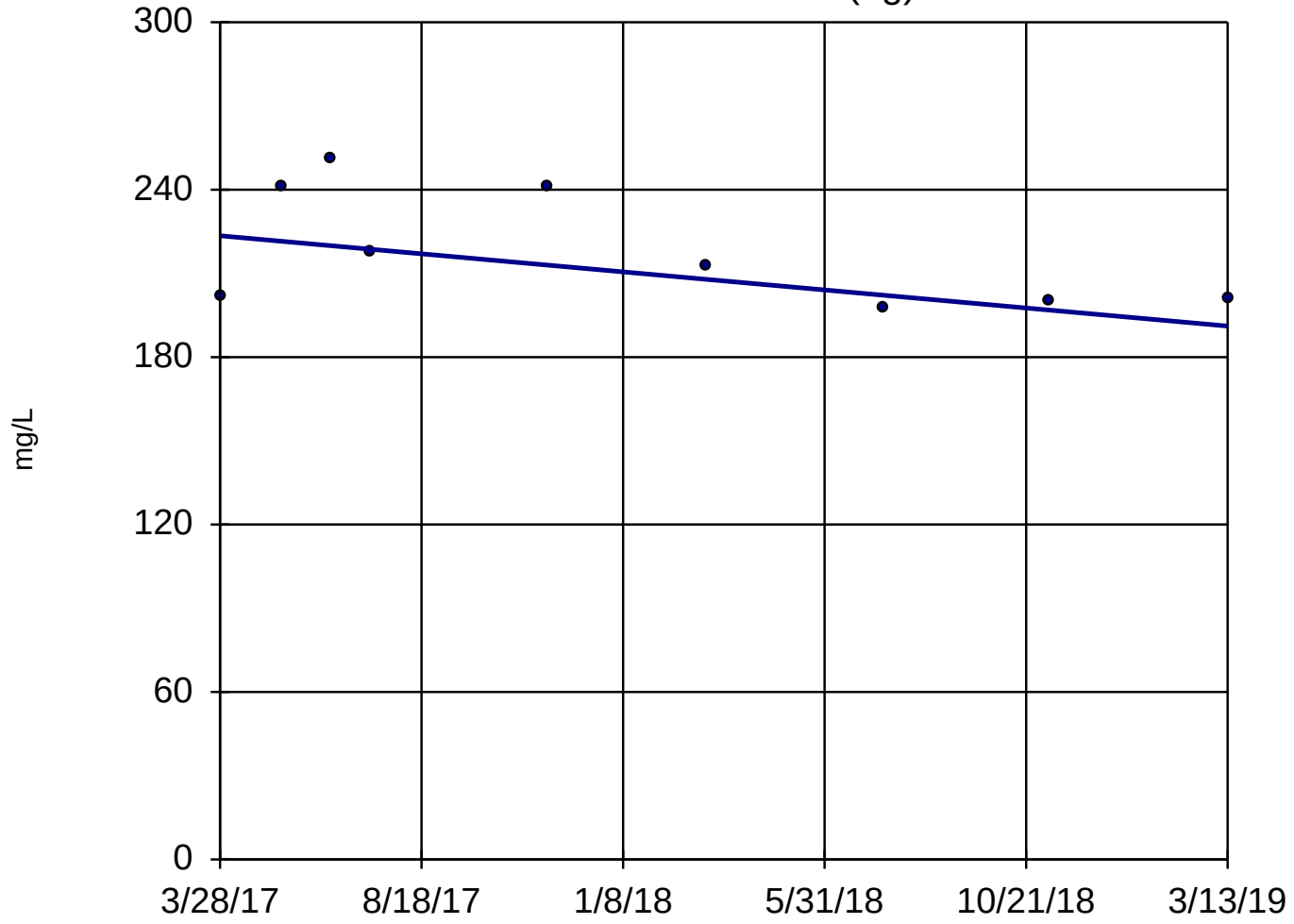
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWA-53 (bg)



n = 9

Slope = -16.52 units per year.

Mann-Kendall statistic = -15
critical = -25

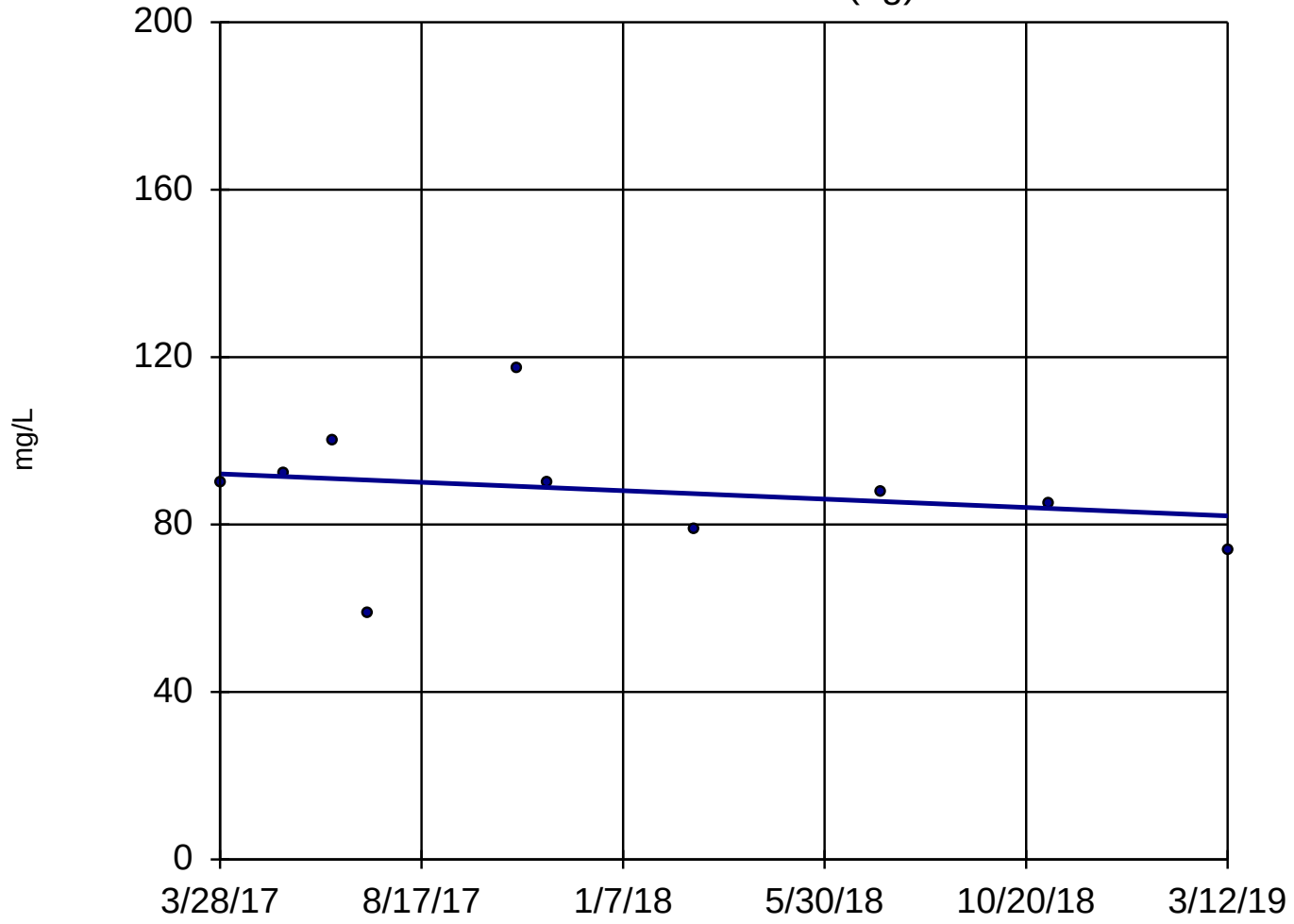
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWA-71 (bg)



n = 10

Slope = -5.126 units per year.

Mann-Kendall statistic = -16
critical = -30

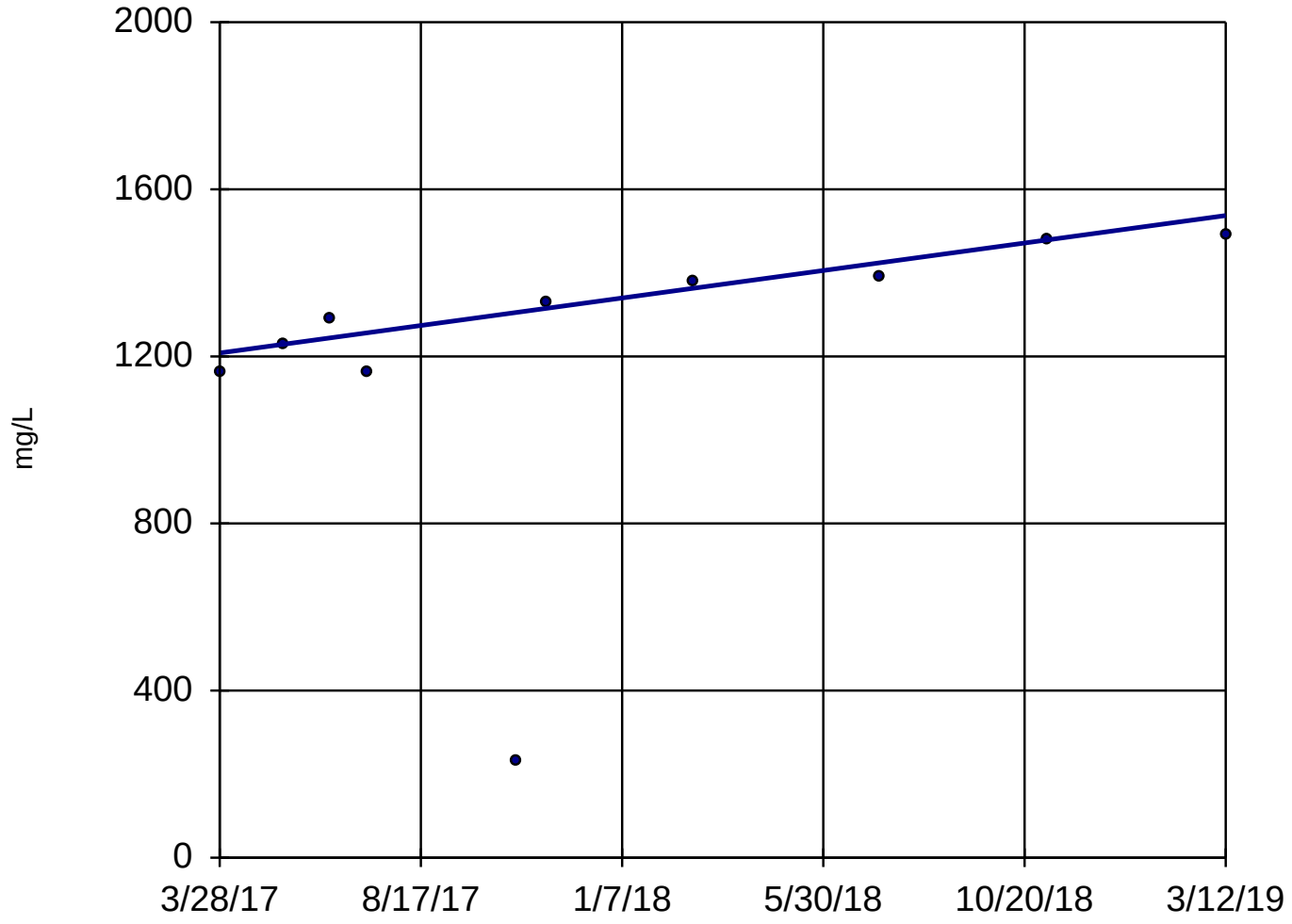
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:25 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-4



n = 10

Slope = 168 units per year.

Mann-Kendall statistic = 32
critical = 30

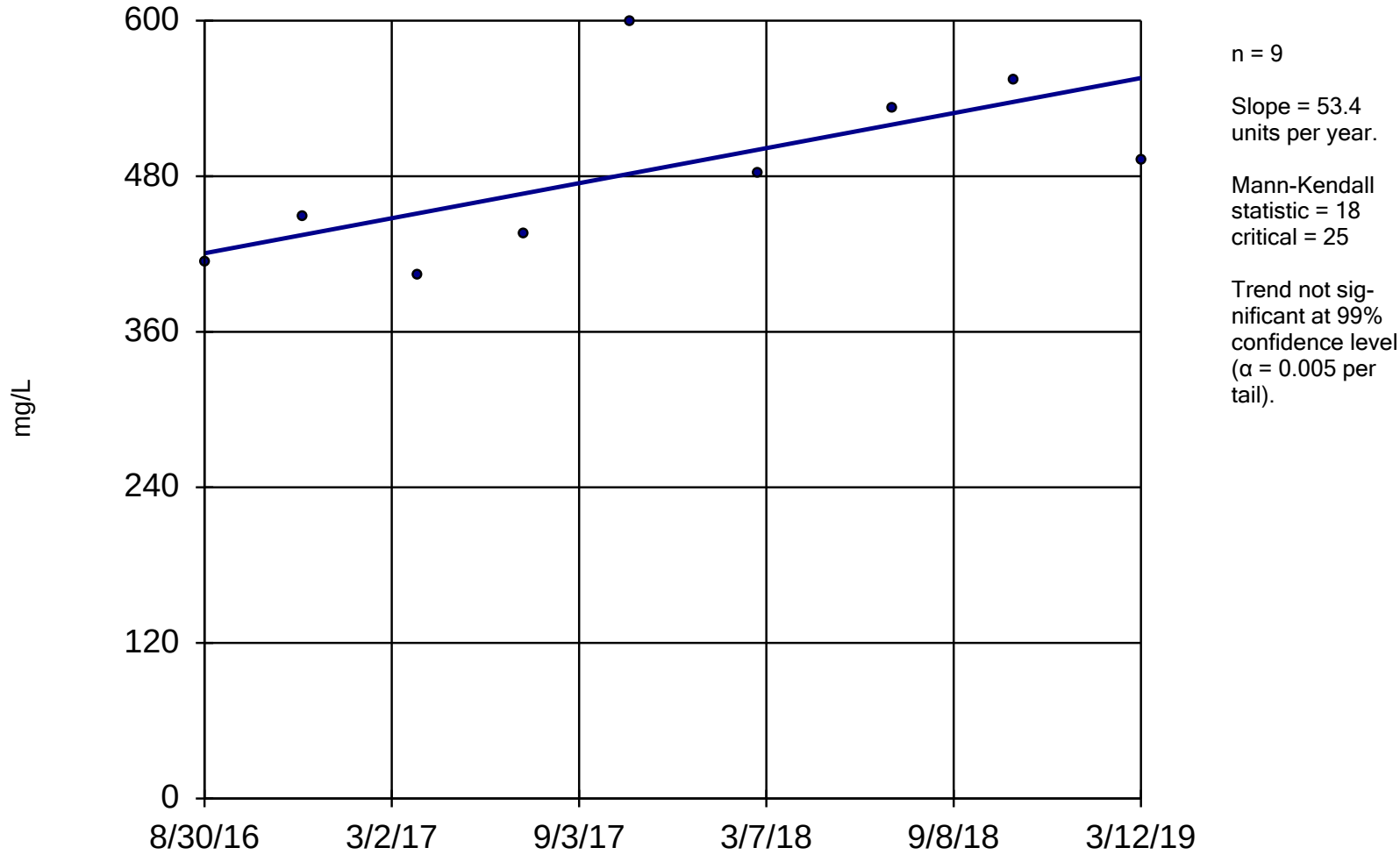
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:26 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-9



n = 9

Slope = 53.4 units per year.

Mann-Kendall statistic = 18
critical = 25

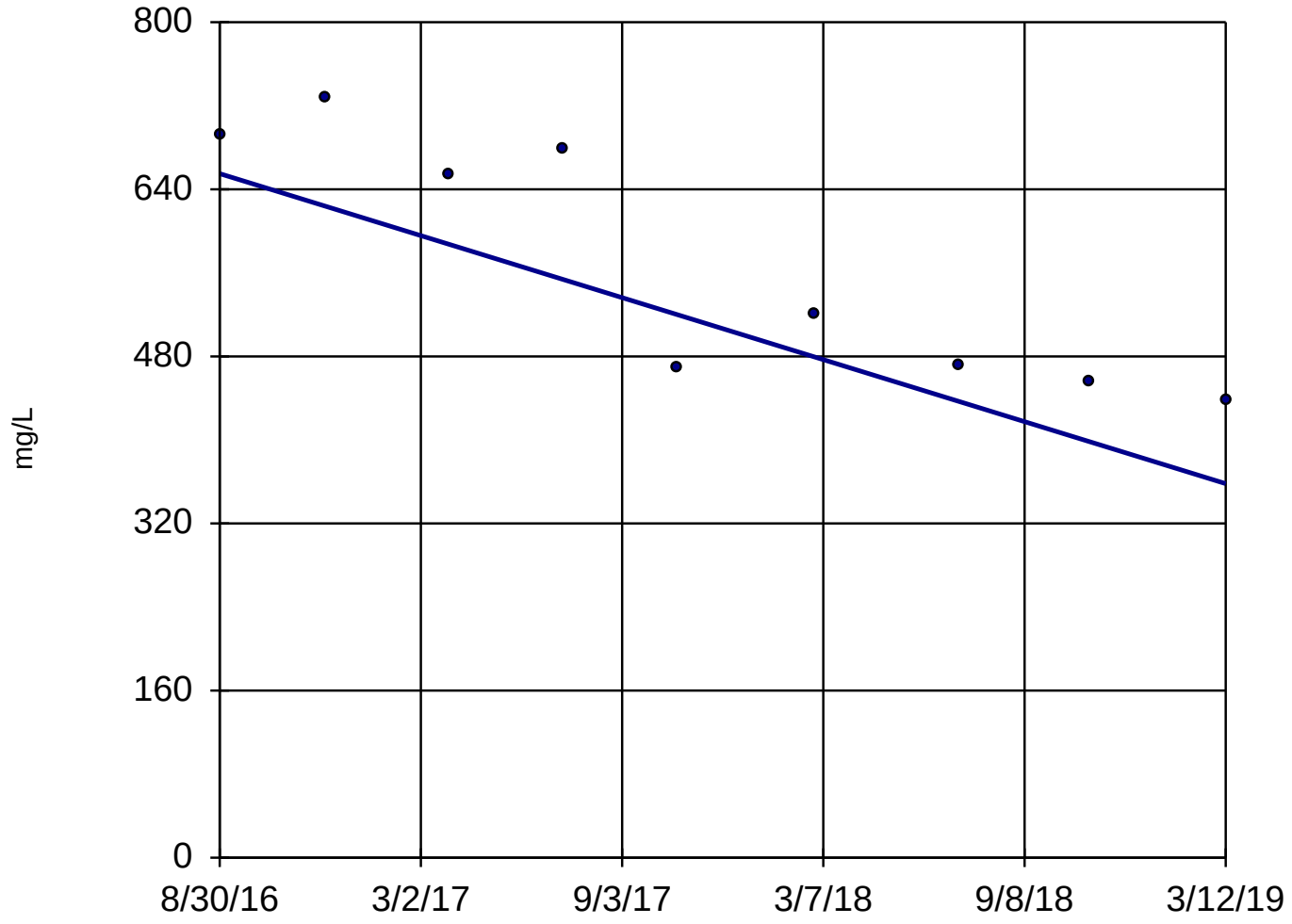
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:26 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-8



n = 9

Slope = -117.2 units per year.

Mann-Kendall statistic = -28
critical = -25

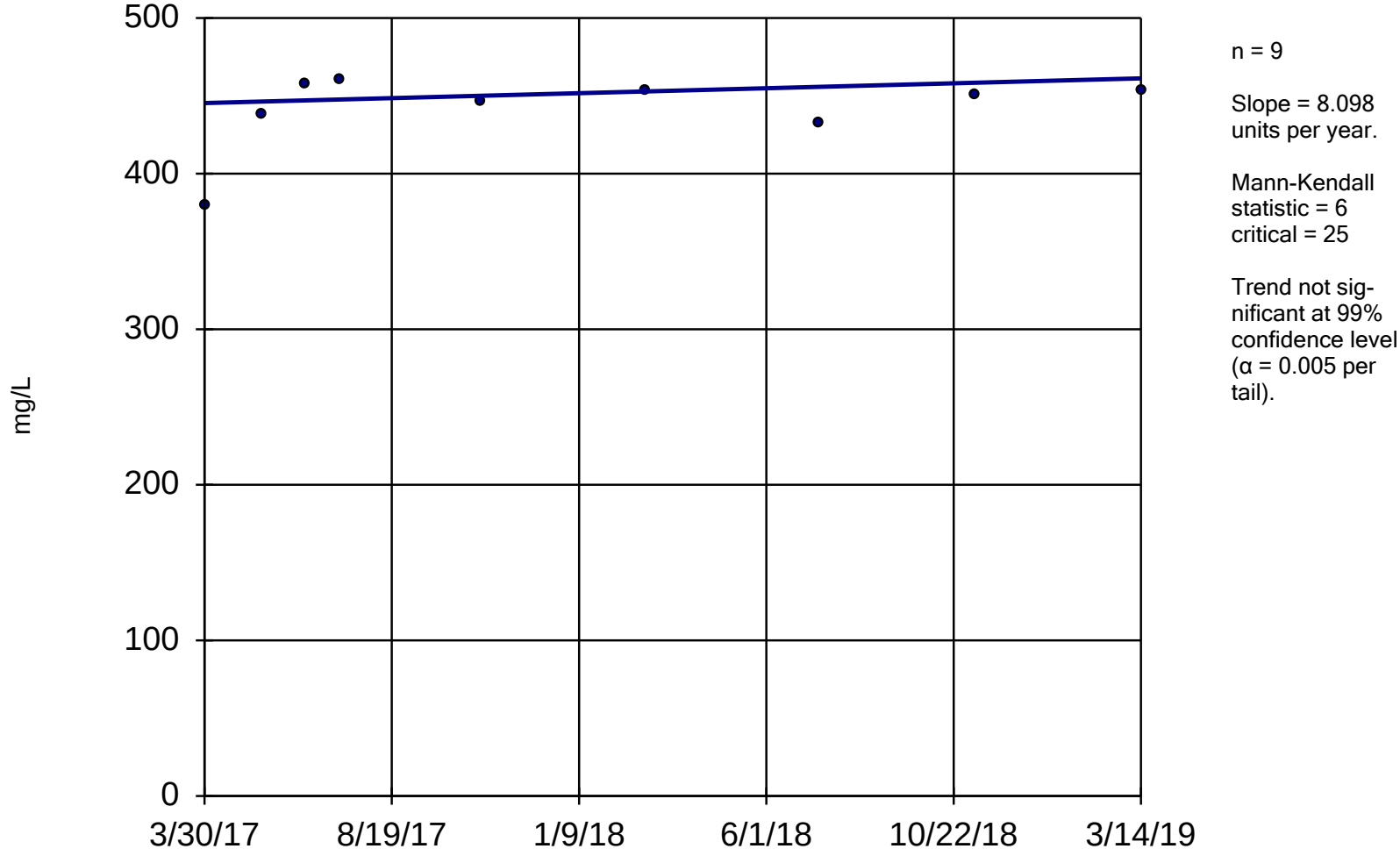
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:26 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWC-23



n = 9

Slope = 8.098 units per year.

Mann-Kendall statistic = 6
critical = 25

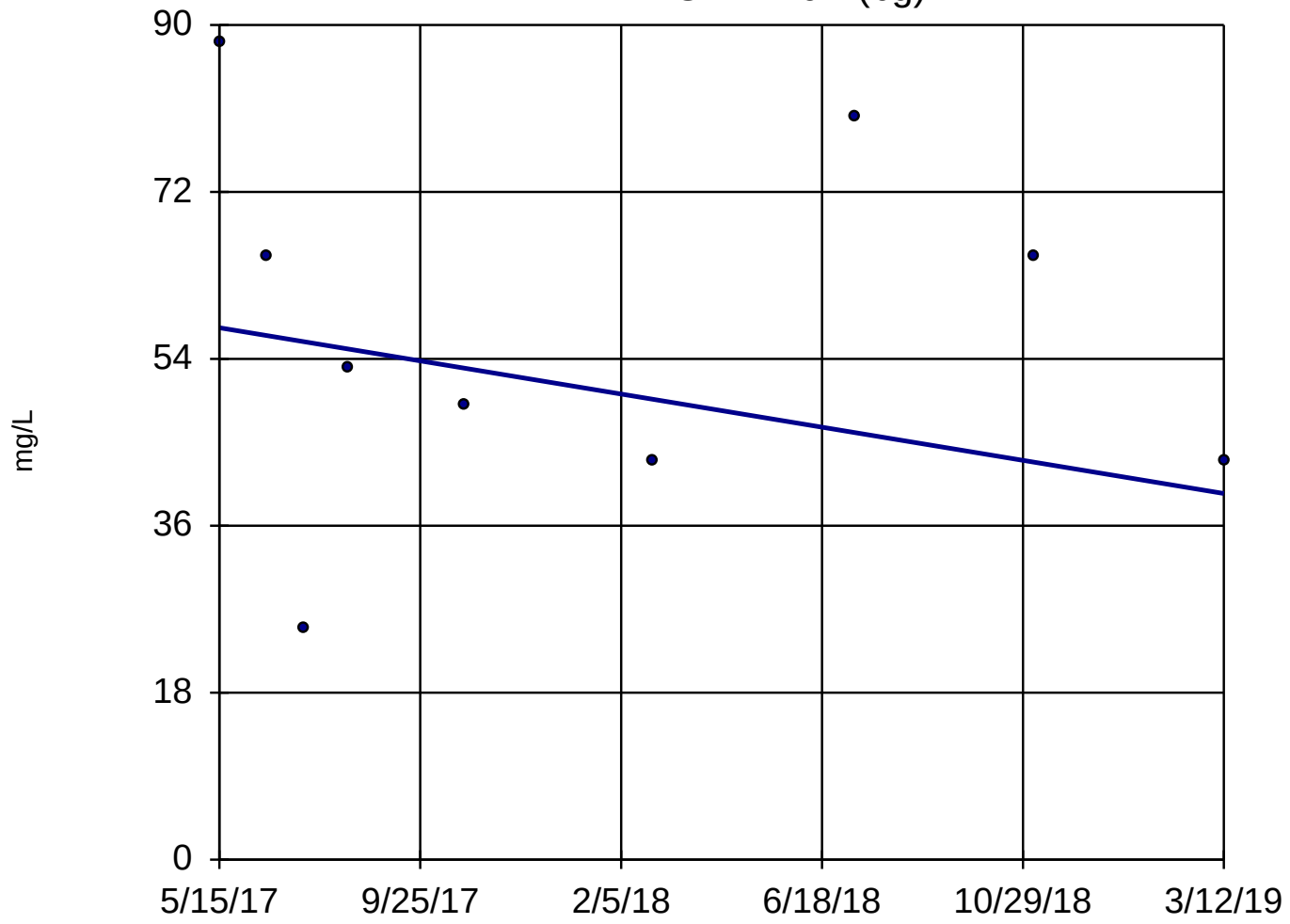
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:26 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sen's Slope Estimator

DGWA-70A (bg)



n = 9

Slope = -9.791 units per year.

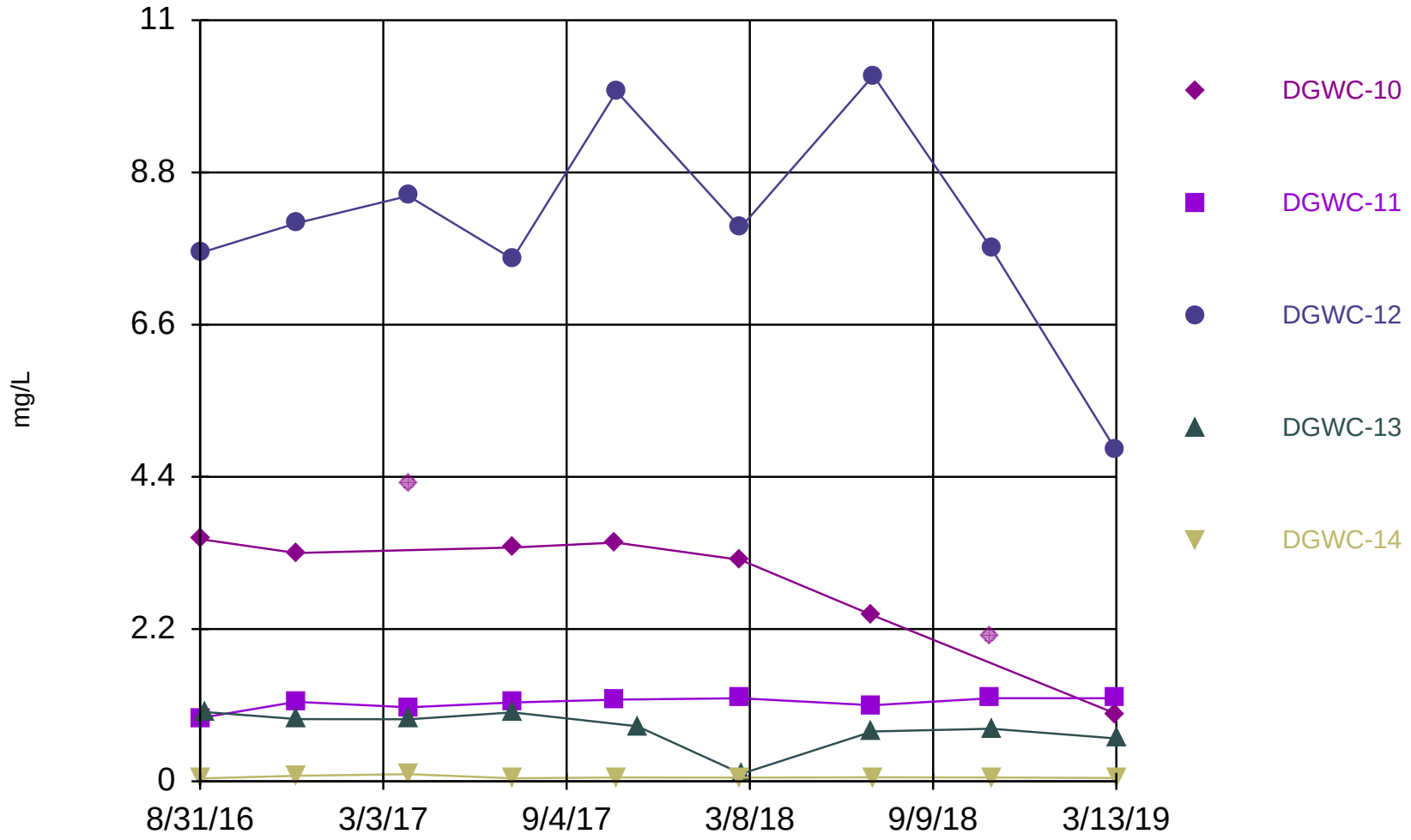
Mann-Kendall statistic = -8
critical = -25

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: TDS Analysis Run 7/26/2019 1:26 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

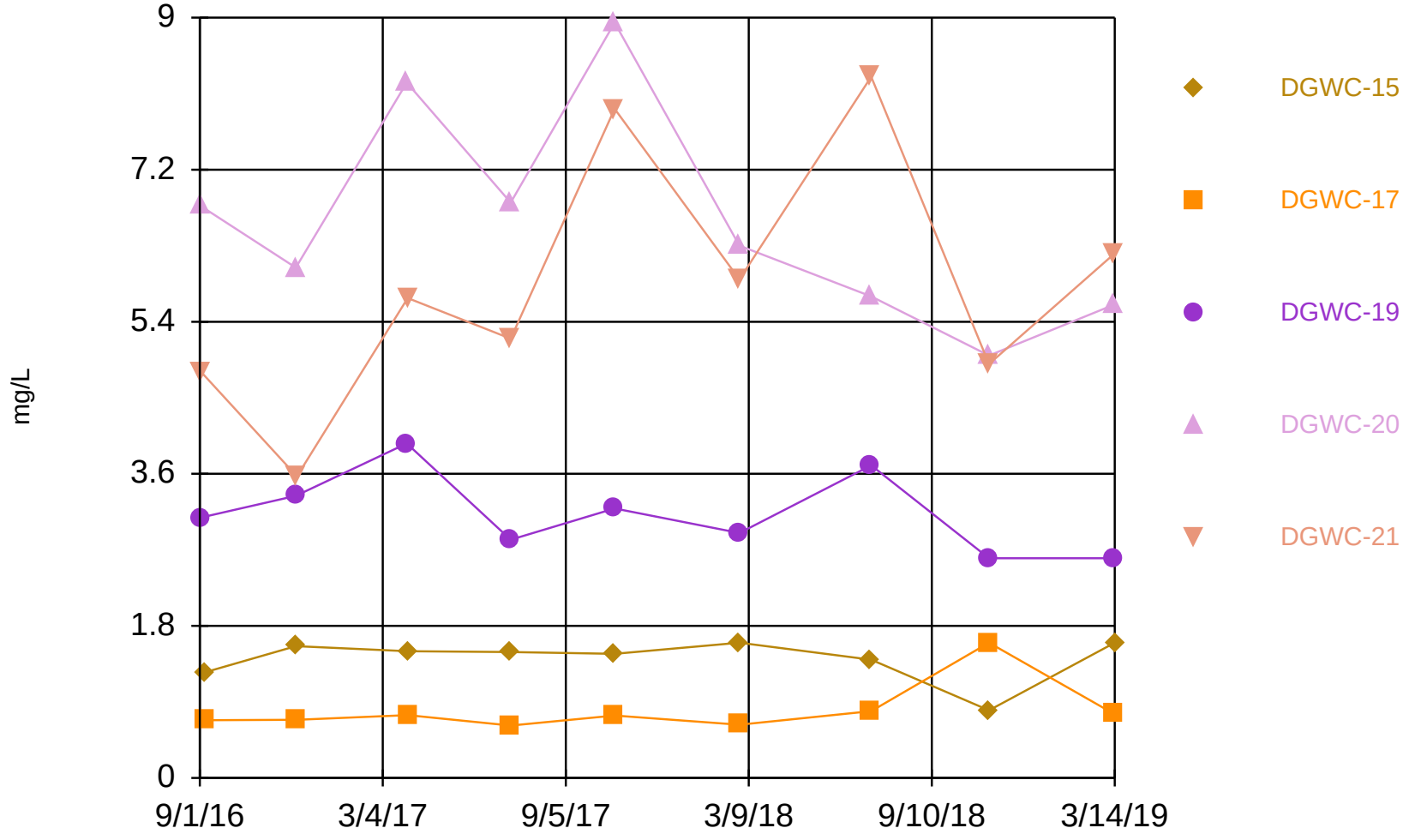
Time Series



Constituent: Boron Analysis Run 7/6/2019 1:36 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

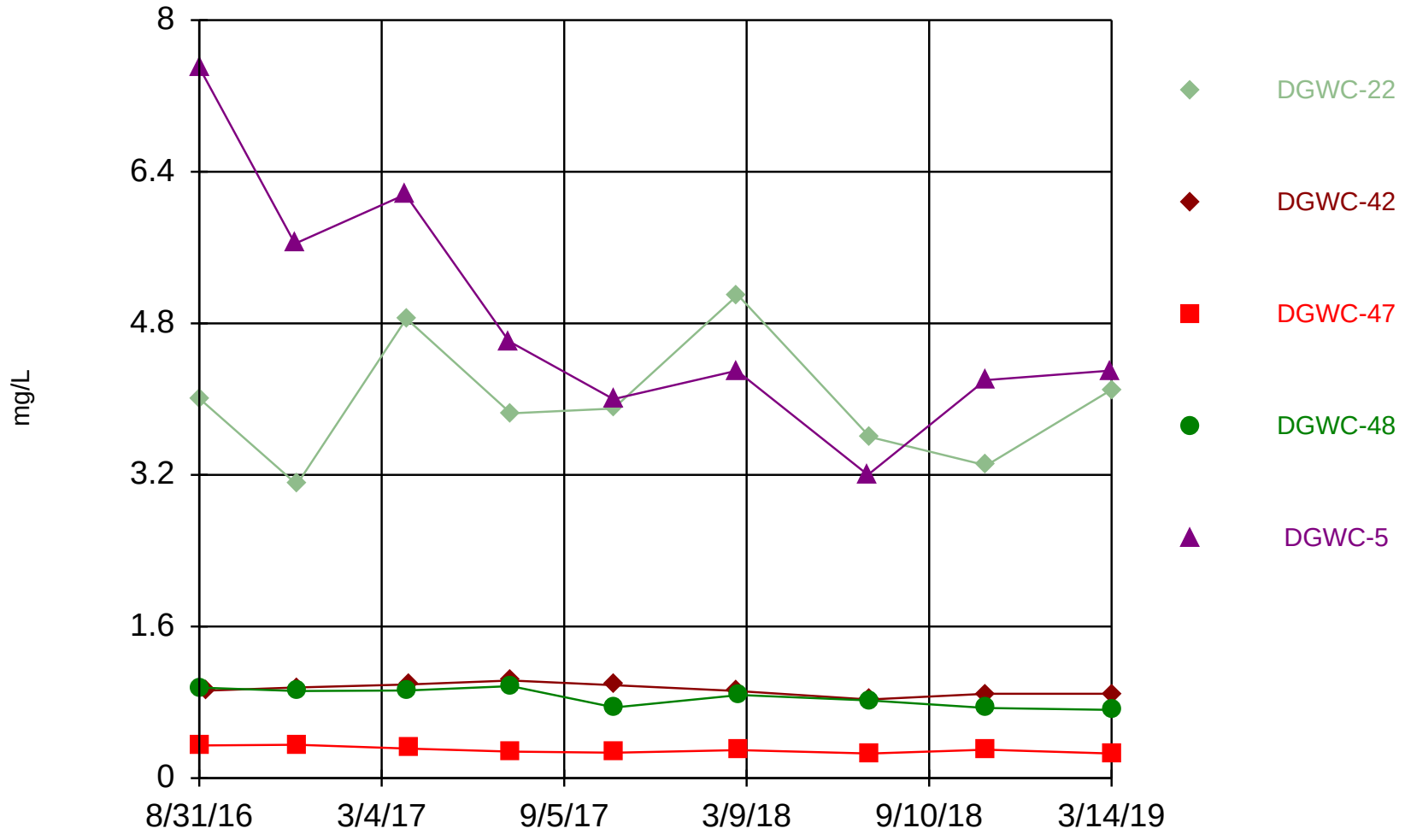
Time Series



Constituent: Boron Analysis Run 7/6/2019 1:36 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

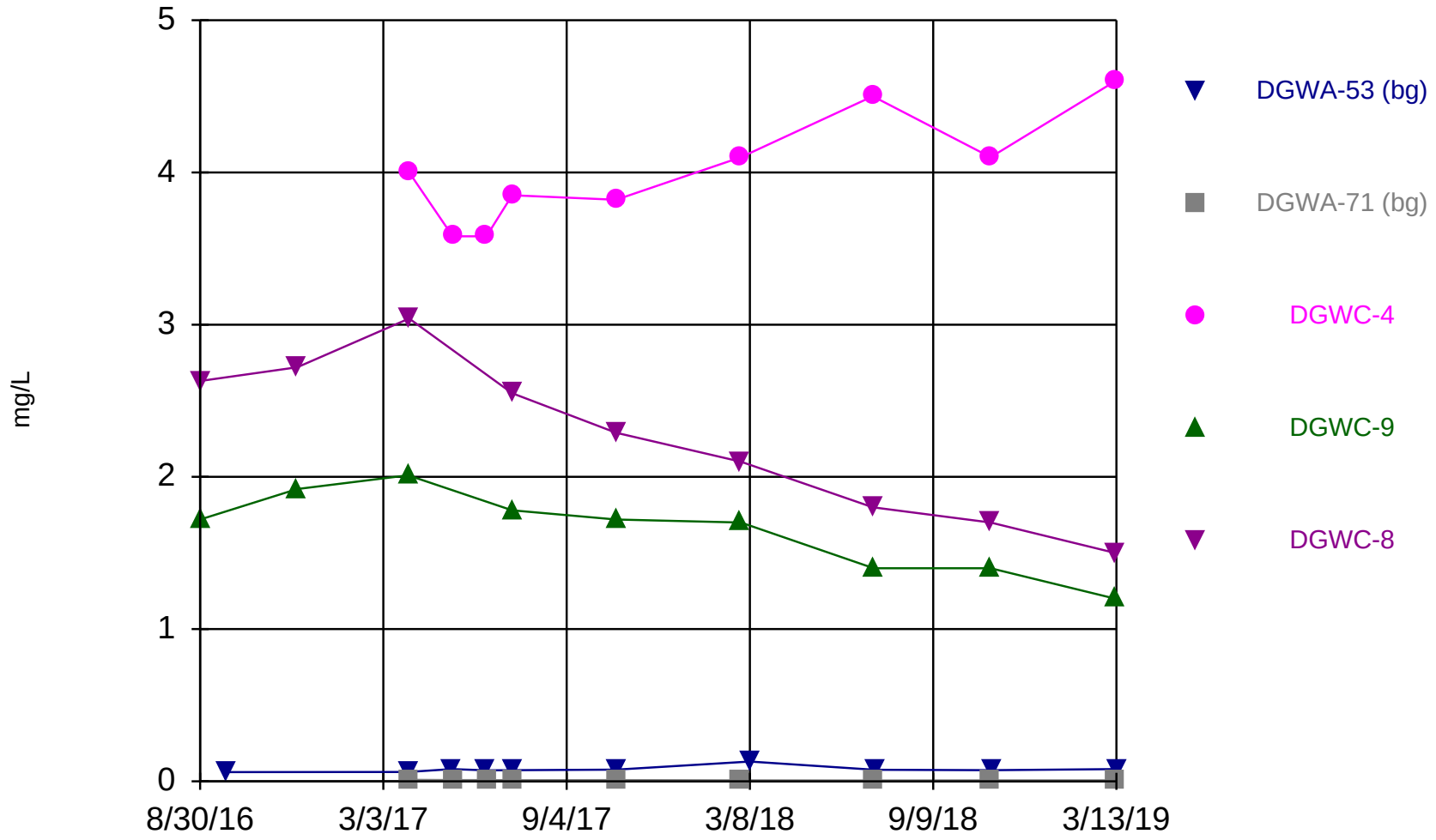
Time Series



Constituent: Boron Analysis Run 7/6/2019 1:36 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Time Series



Constituent: Boron Analysis Run 7/6/2019 1:36 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

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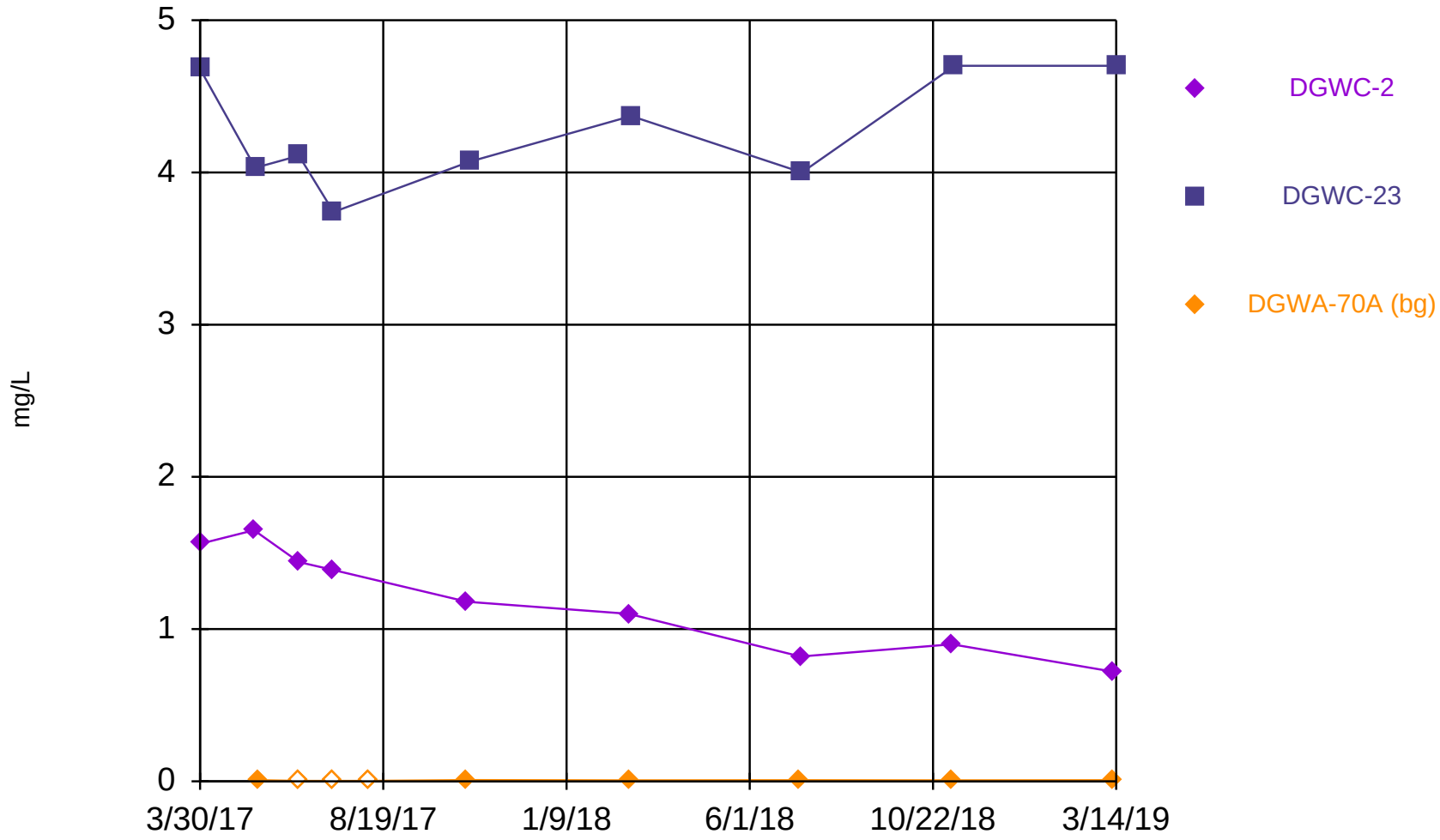
Hollow symbols indicate censored values.

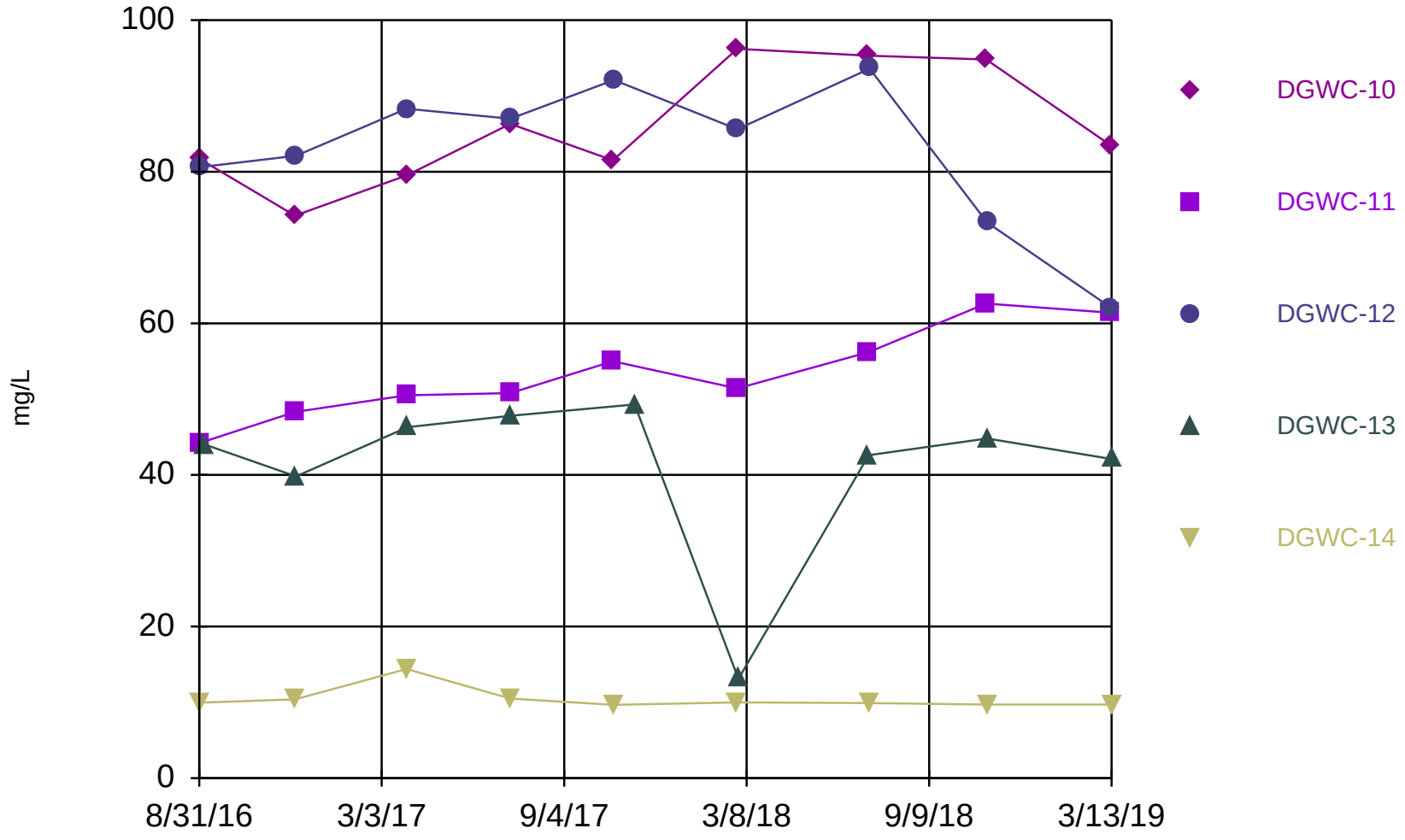
Time Series



Constituent: Boron Analysis Run 7/6/2019 1:36 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

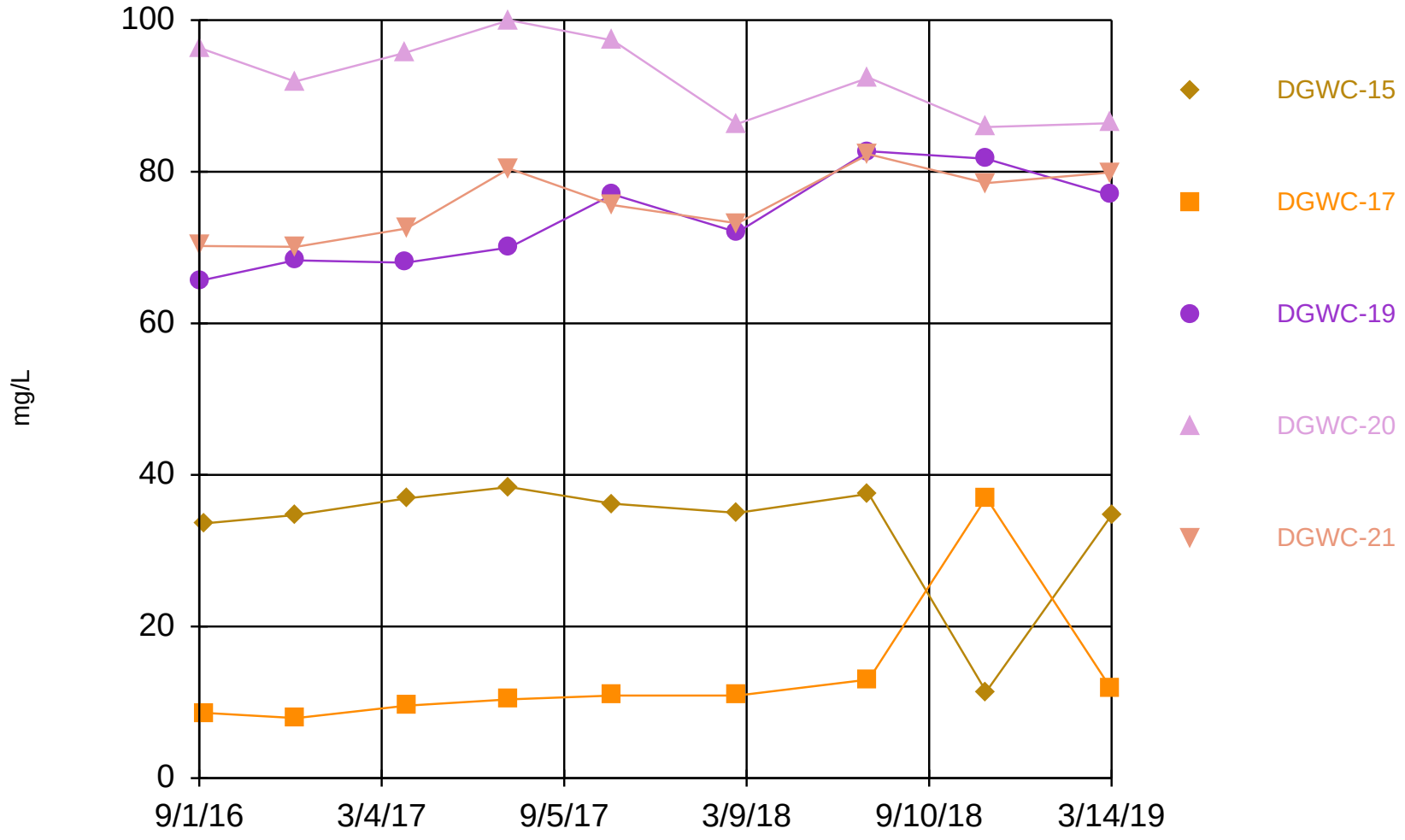
Time Series



Constituent: Calcium Analysis Run 7/6/2019 1:36 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

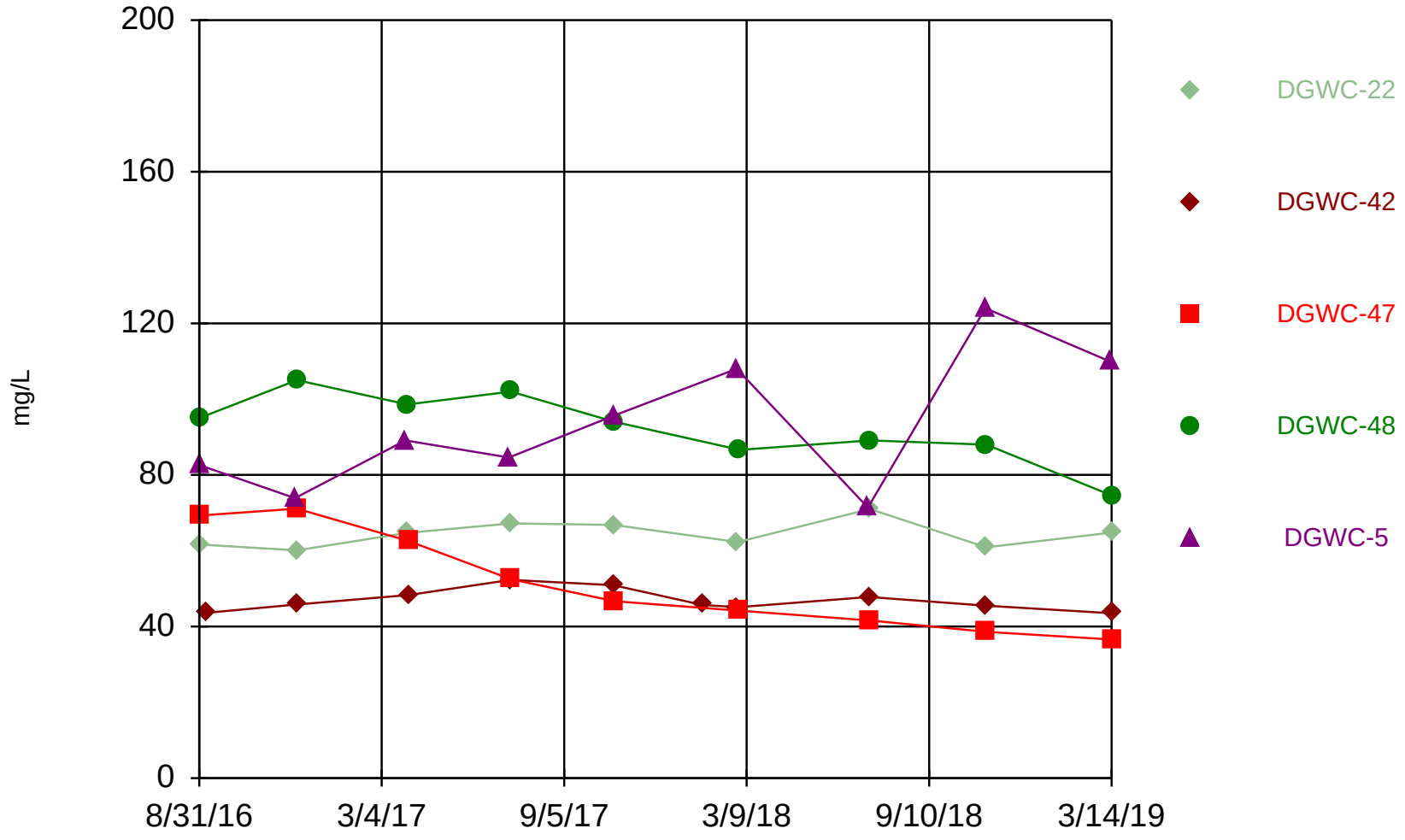
Time Series



Constituent: Calcium Analysis Run 7/6/2019 1:36 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

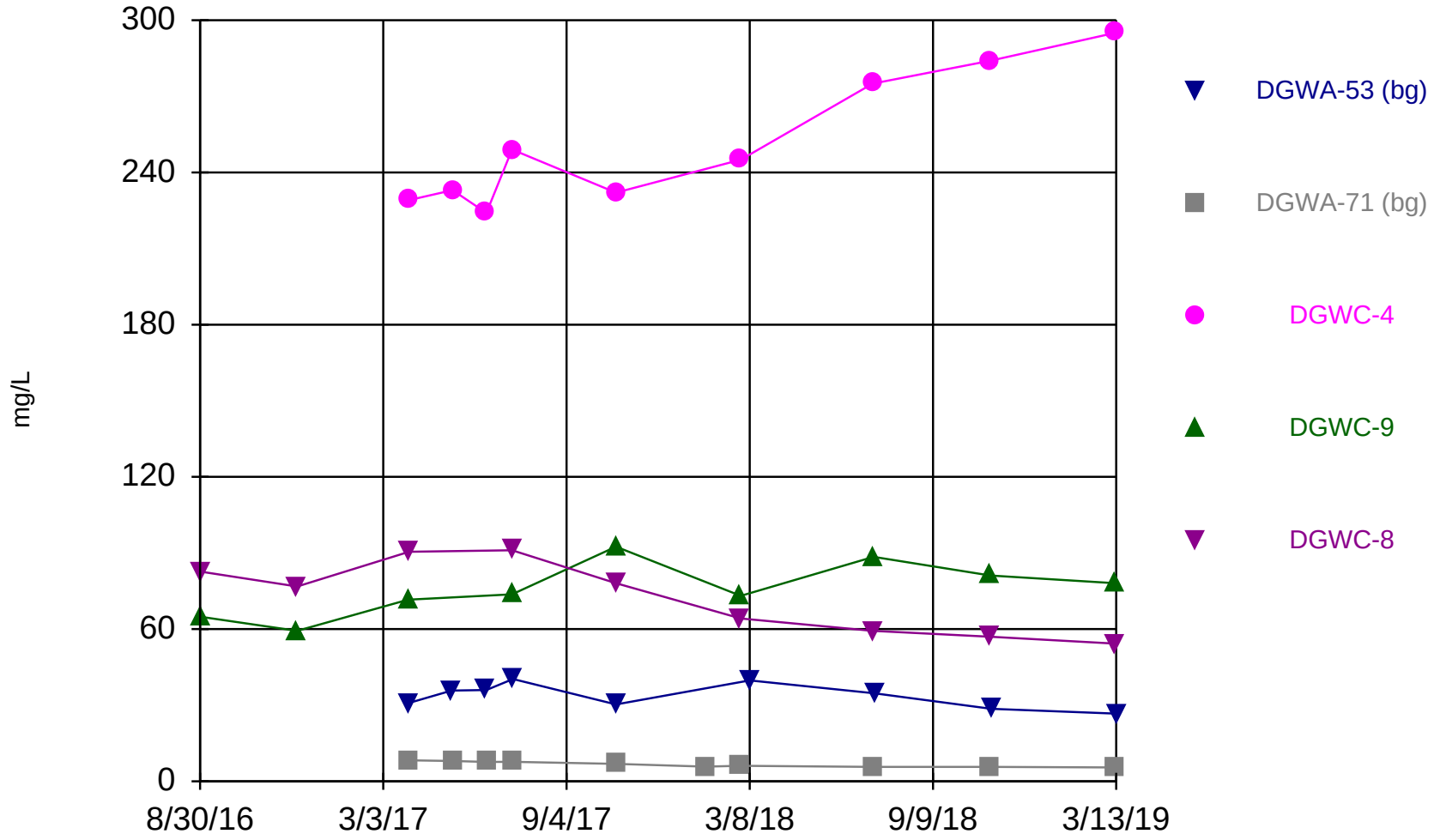
Time Series



Constituent: Calcium Analysis Run 7/6/2019 1:36 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

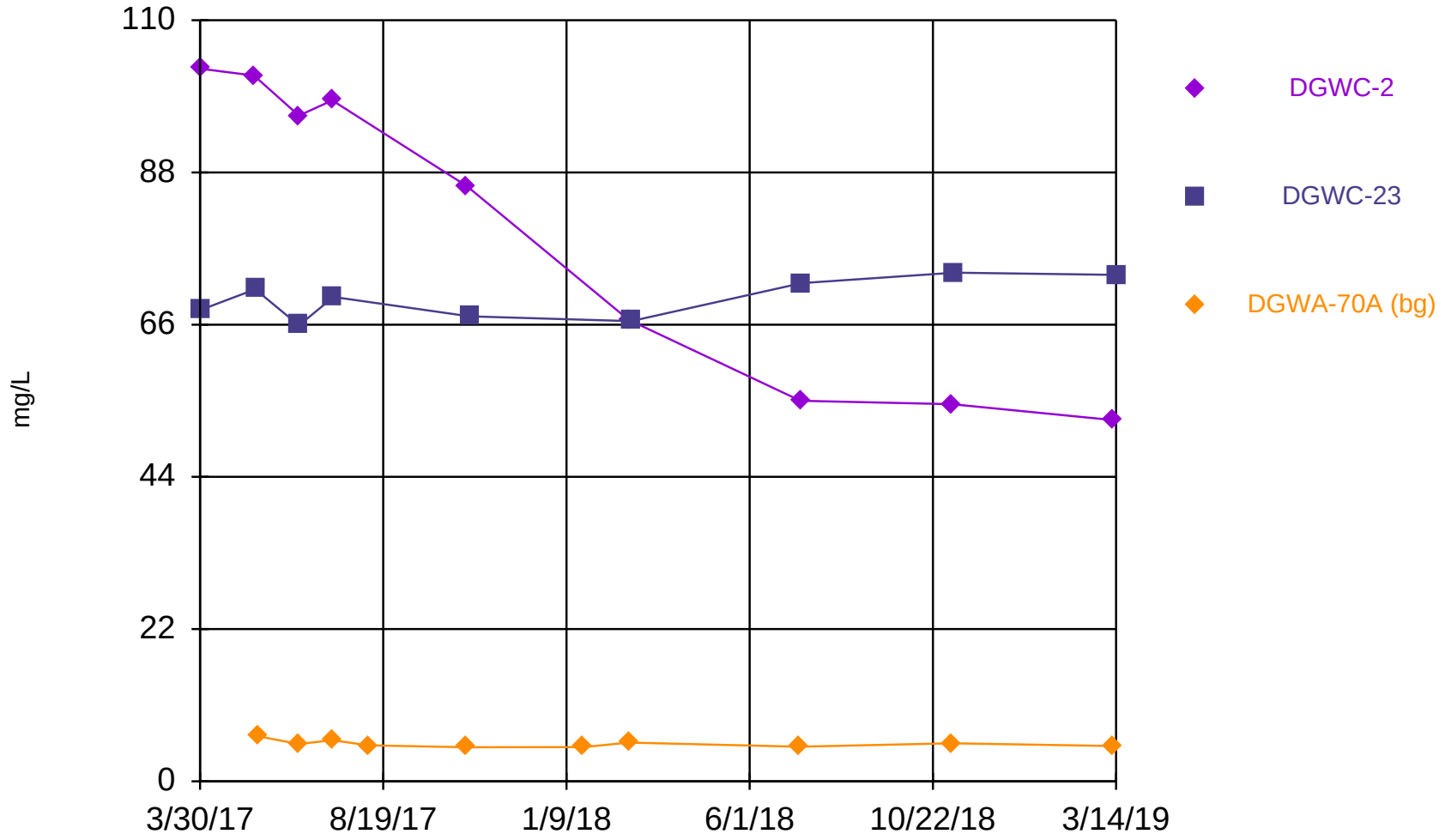
Time Series



Constituent: Calcium Analysis Run 7/6/2019 1:36 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

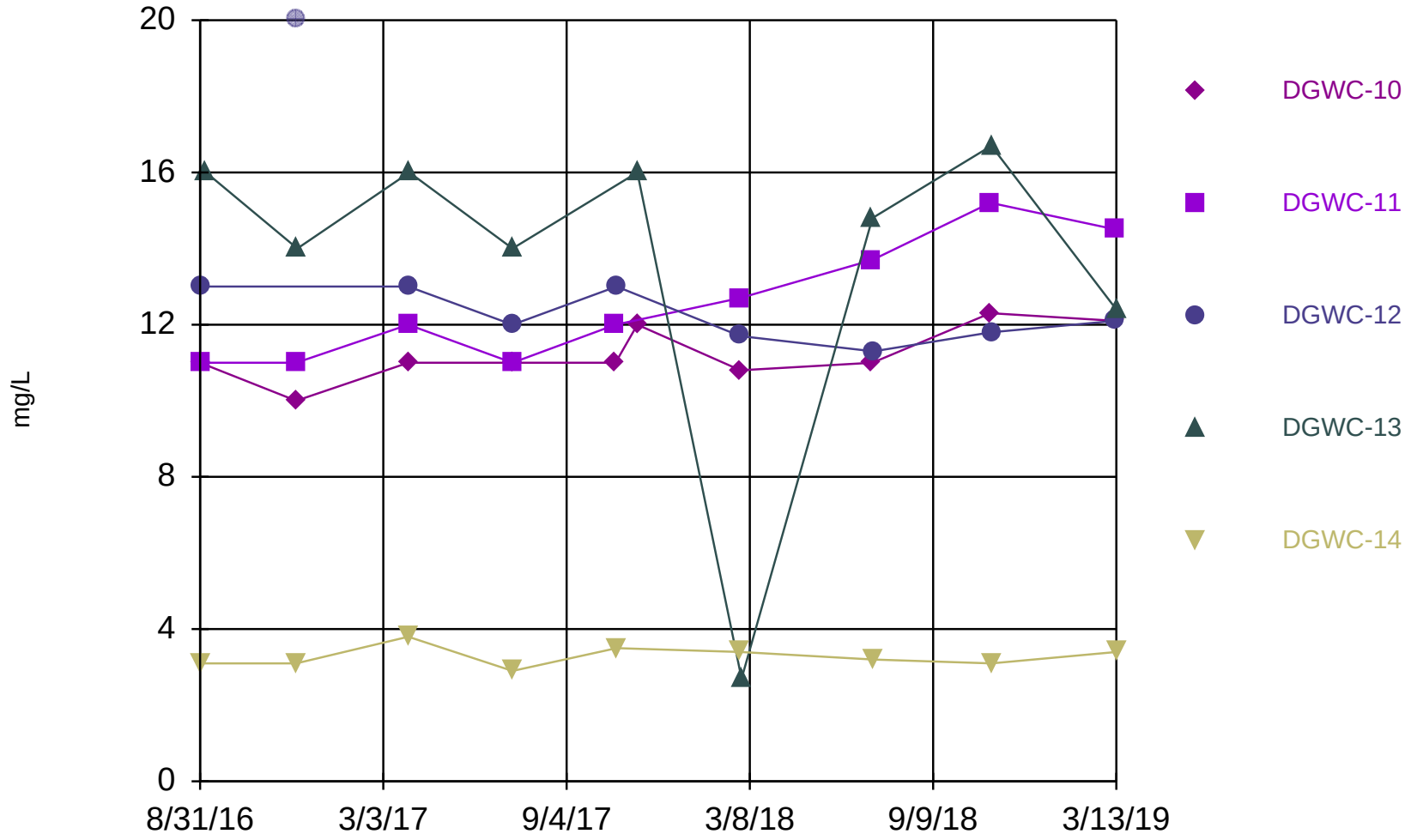
Time Series



Constituent: Calcium Analysis Run 7/6/2019 1:37 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

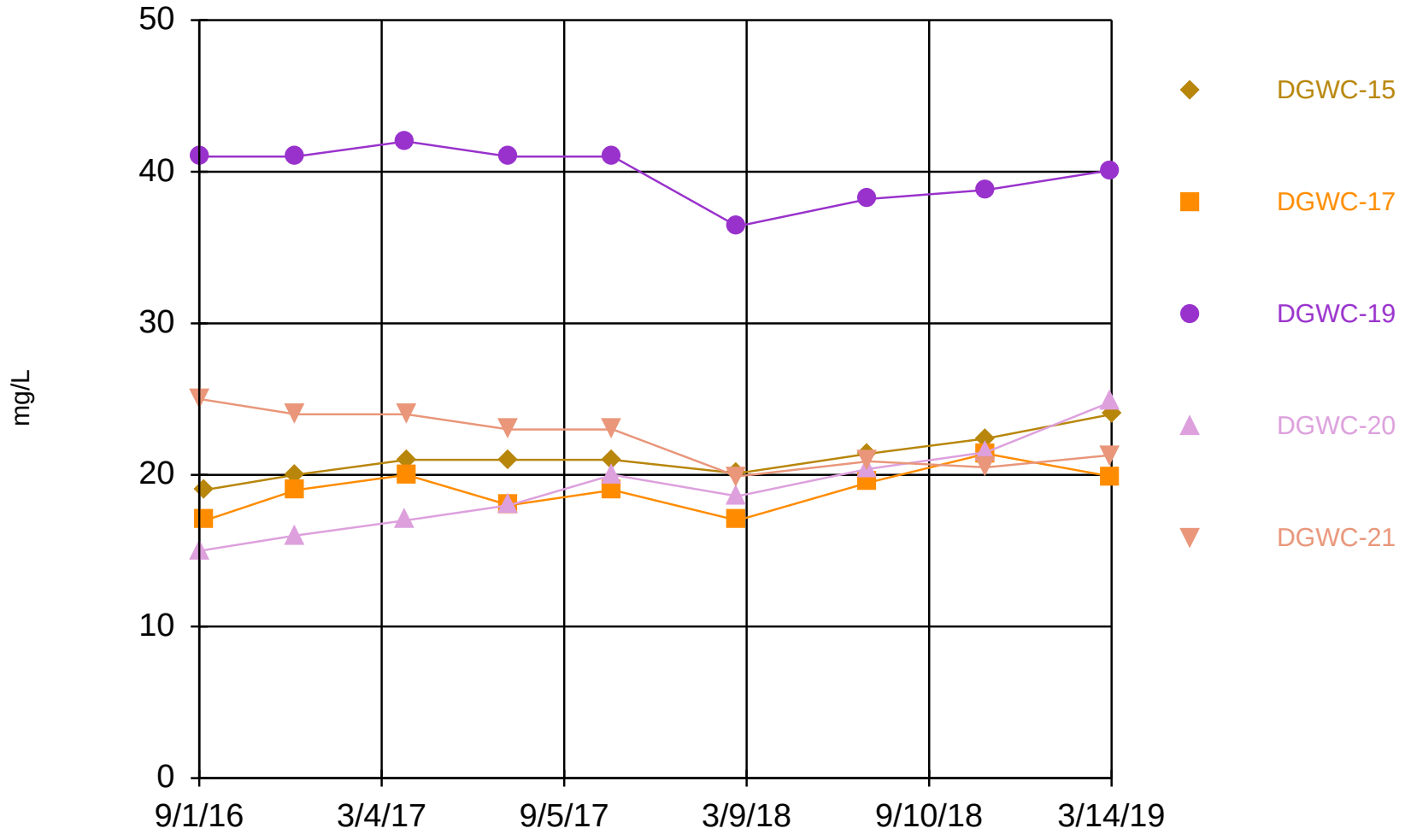
Time Series



Constituent: Chloride Analysis Run 7/6/2019 1:37 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

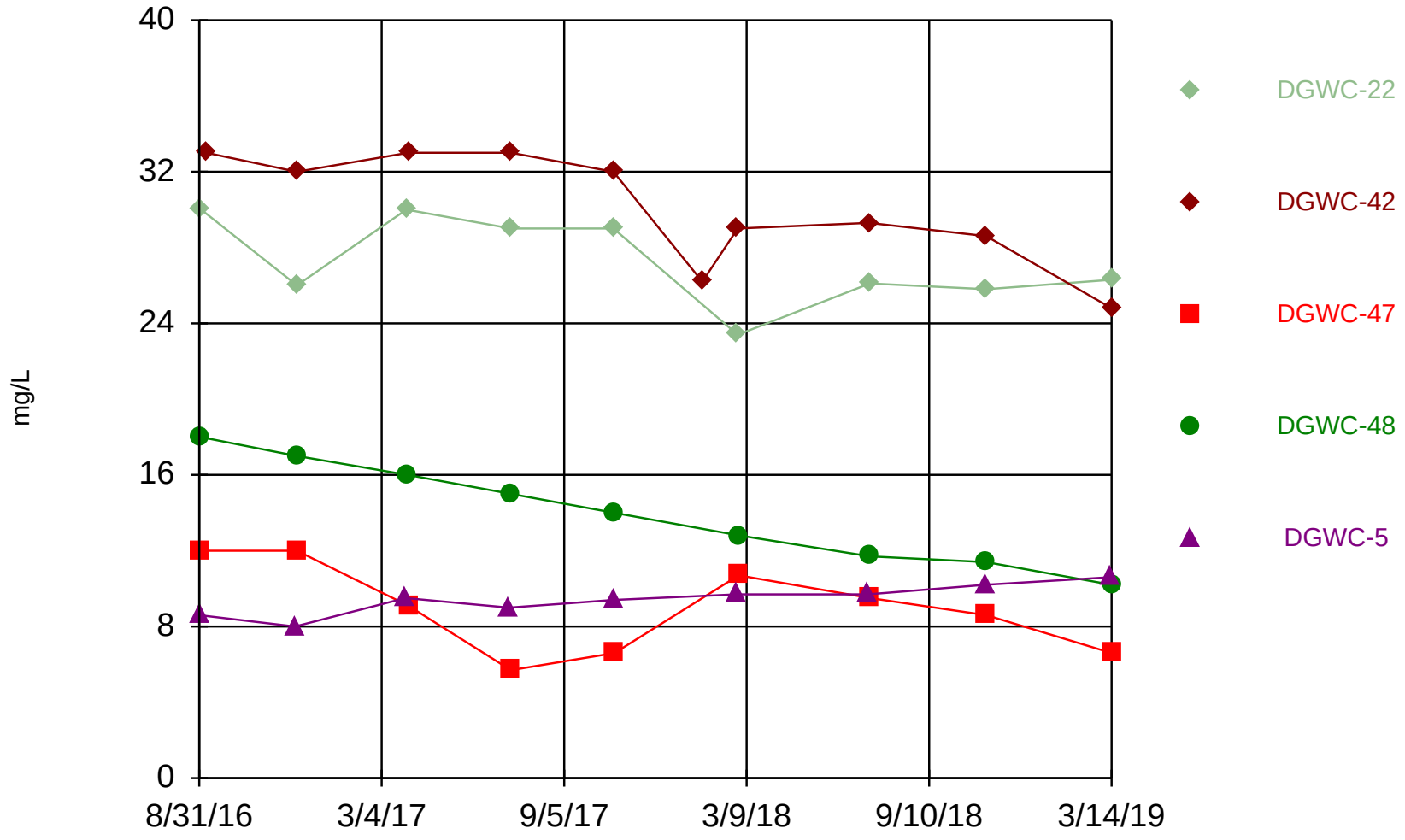
Time Series



Constituent: Chloride Analysis Run 7/6/2019 1:37 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Time Series



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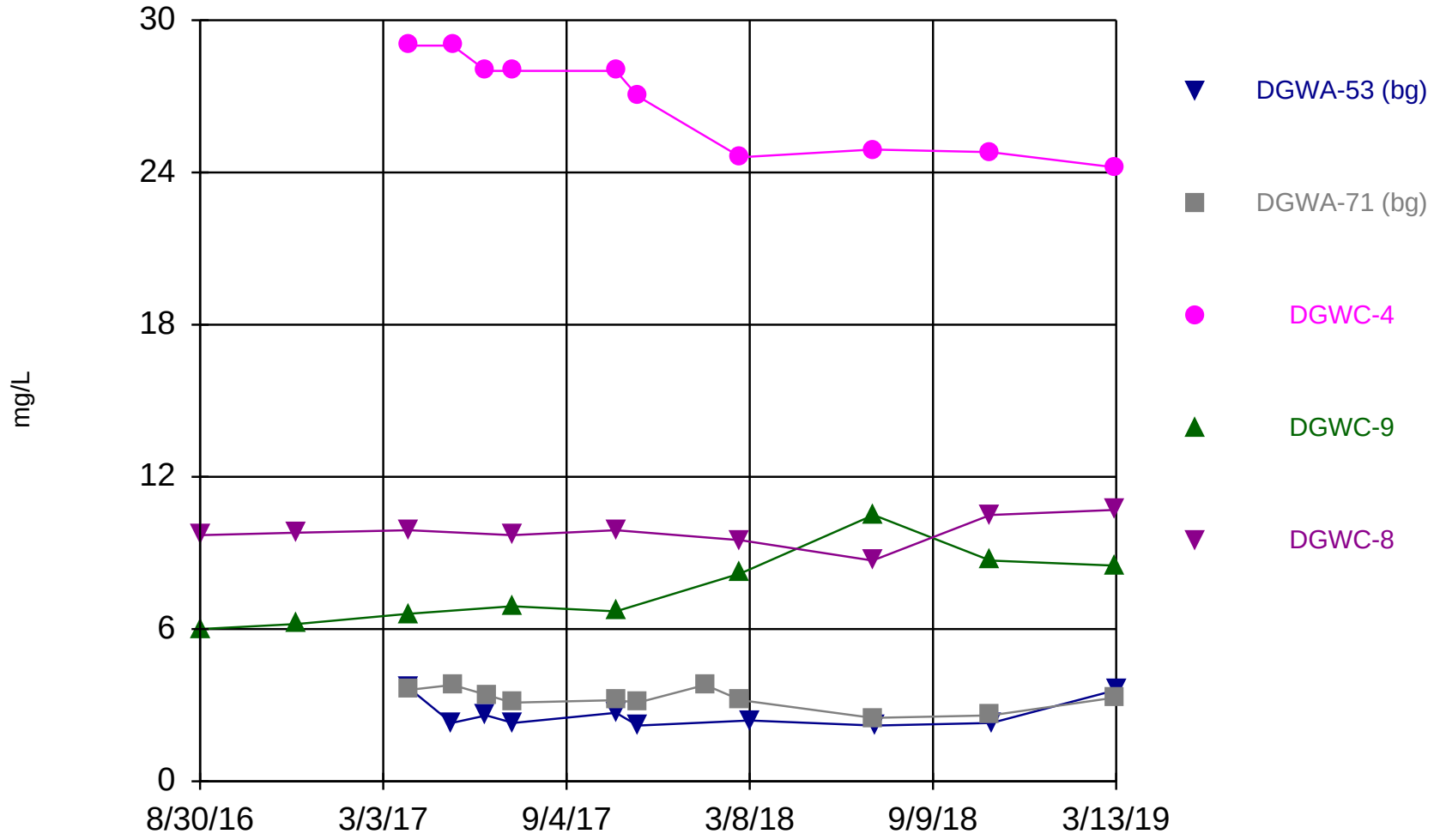
McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Time Series



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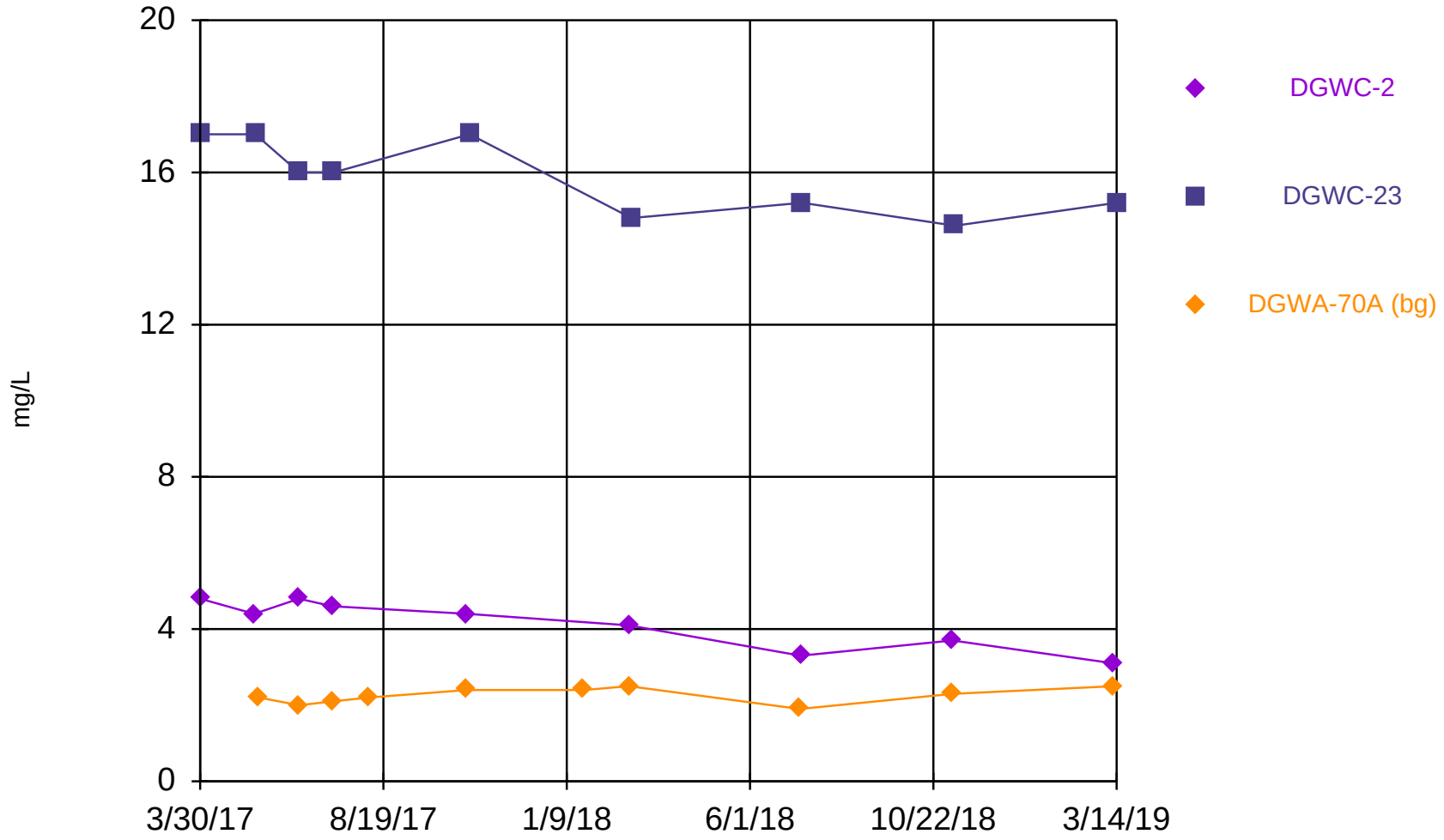
McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Time Series

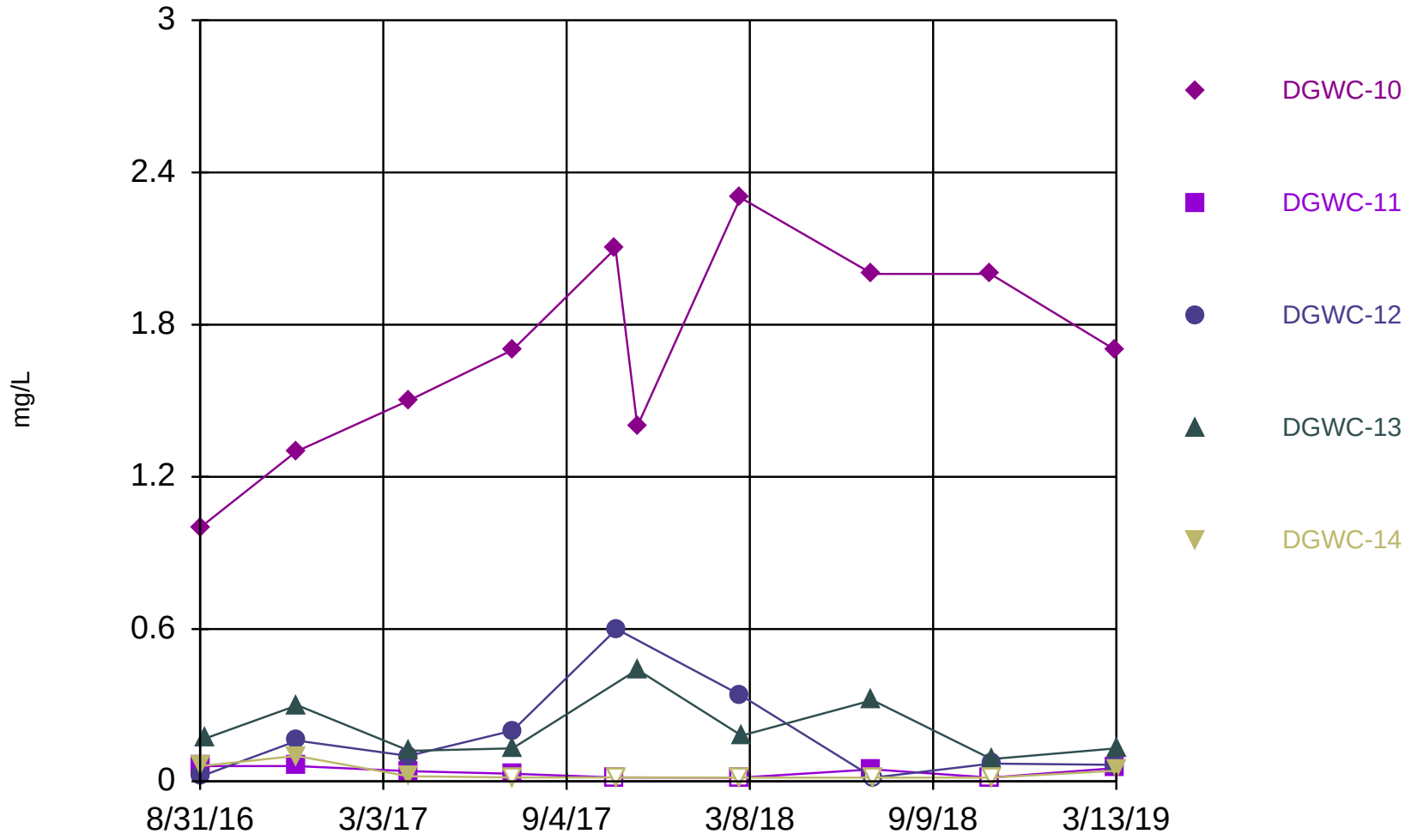


Constituent: Chloride Analysis Run 7/6/2019 1:37 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sanitas™ v.9.6.14 For the statistical analyses of ground water by Golder Associates only. UG
Hollow symbols indicate censored values.

Time Series

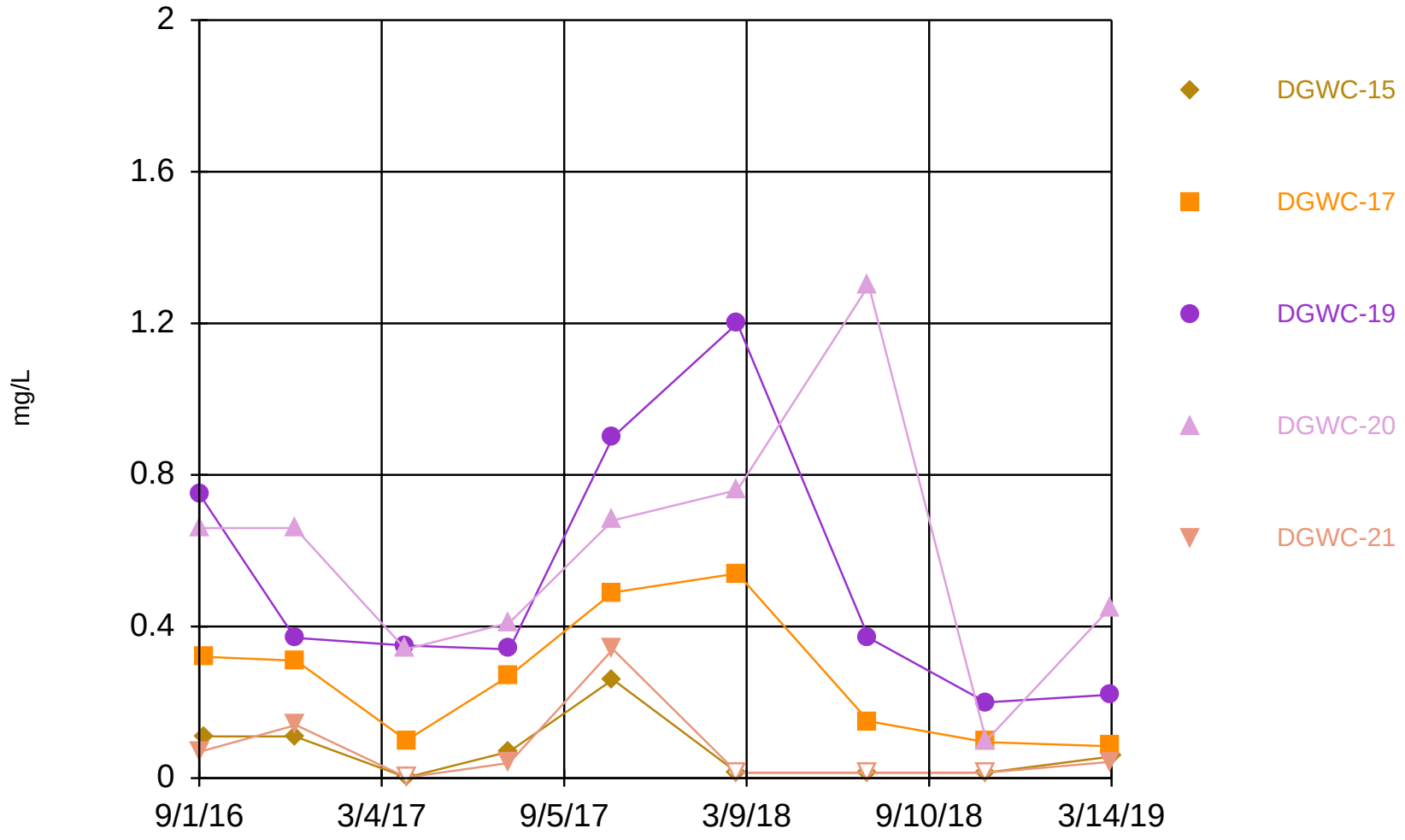


Constituent: Fluoride Analysis Run 7/6/2019 1:37 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sanitas™ v.9.6.14 For the statistical analyses of ground water by Golder Associates only. UG
Hollow symbols indicate censored values.

Time Series

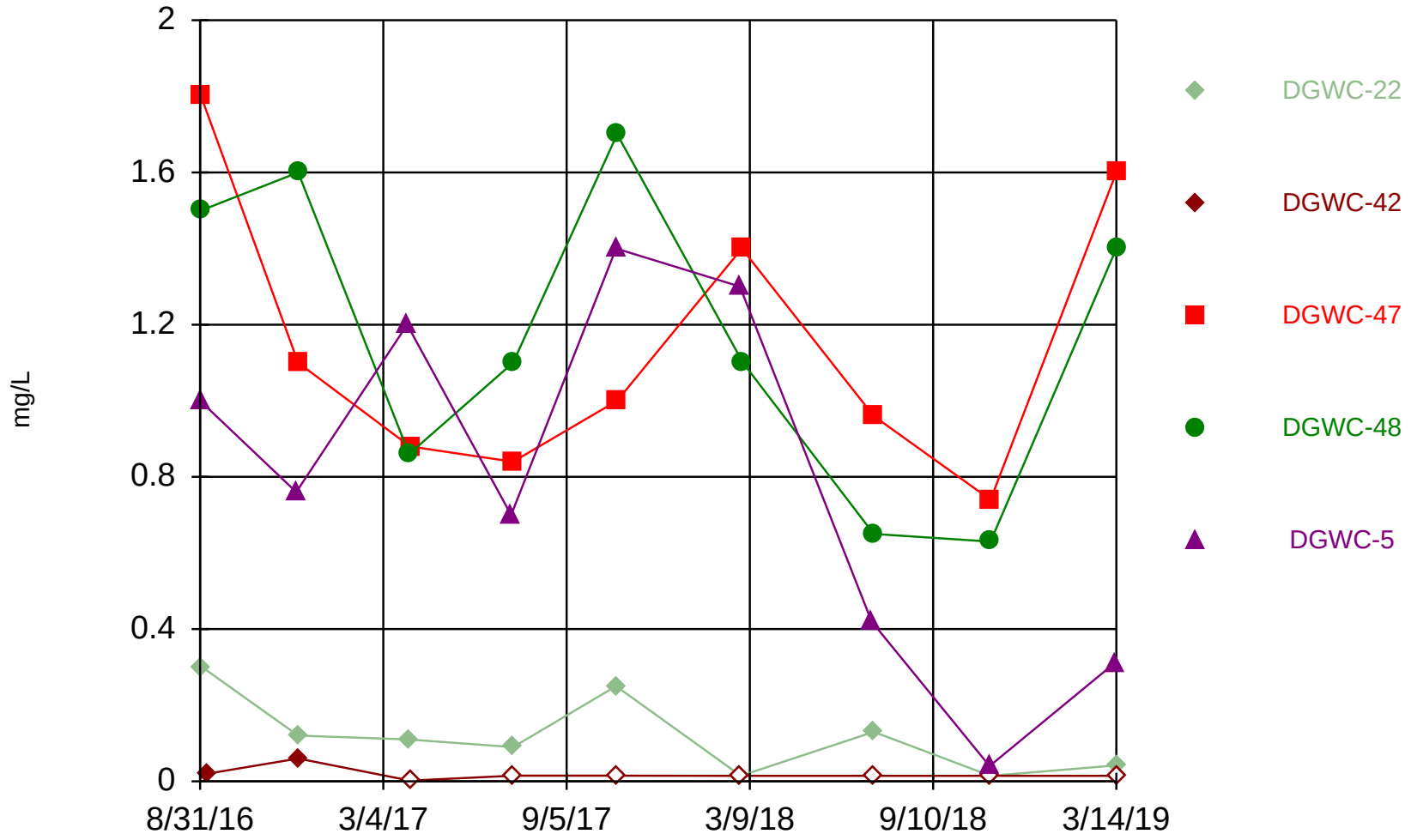


Constituent: Fluoride Analysis Run 7/6/2019 1:37 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sanitas™ v.9.6.14 For the statistical analyses of ground water by Golder Associates only. UG
Hollow symbols indicate censored values.

Time Series

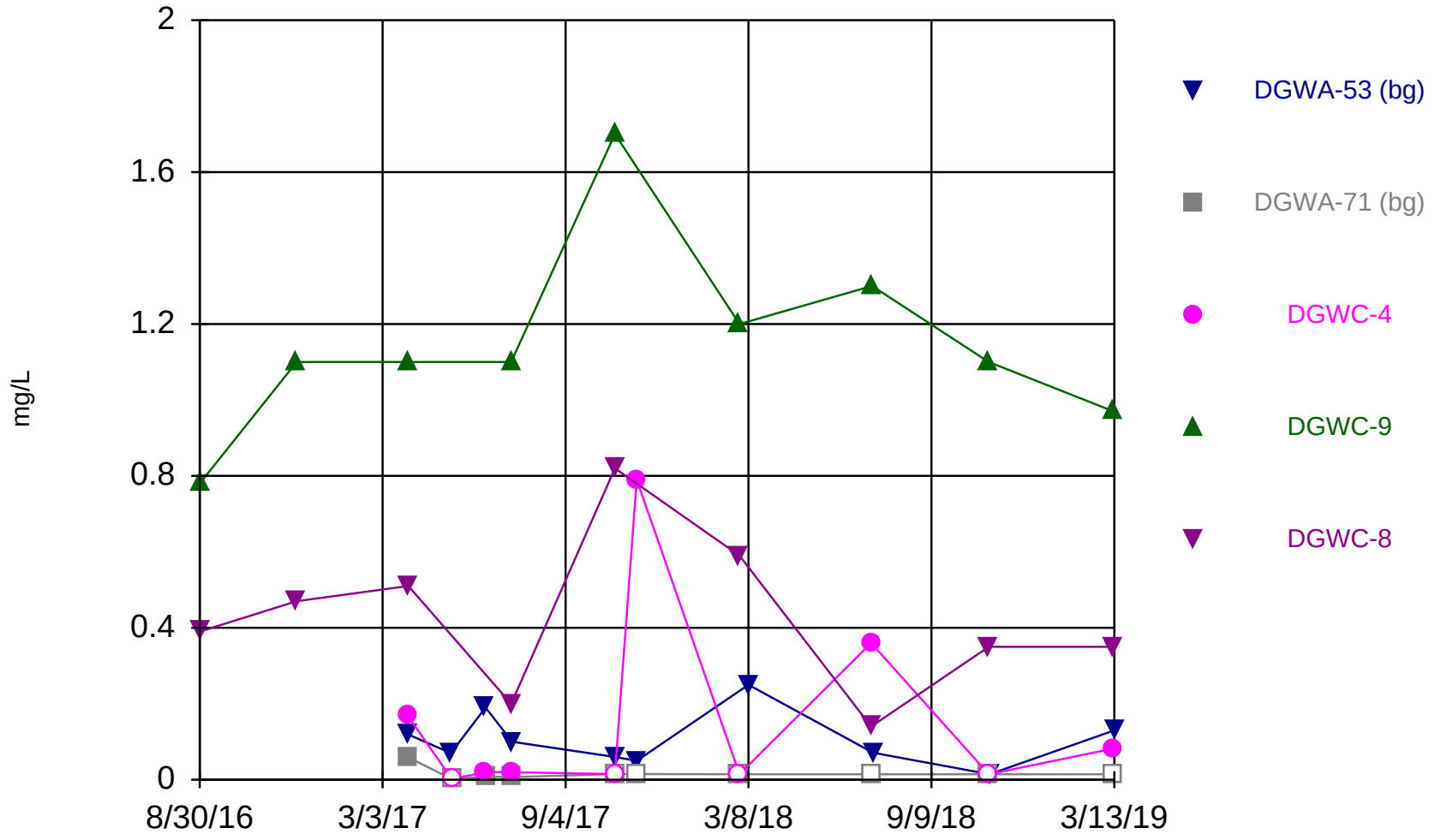


Constituent: Fluoride Analysis Run 7/6/2019 1:37 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sanitas™ v.9.6.14 For the statistical analyses of ground water by Golder Associates only. UG
Hollow symbols indicate censored values.

Time Series

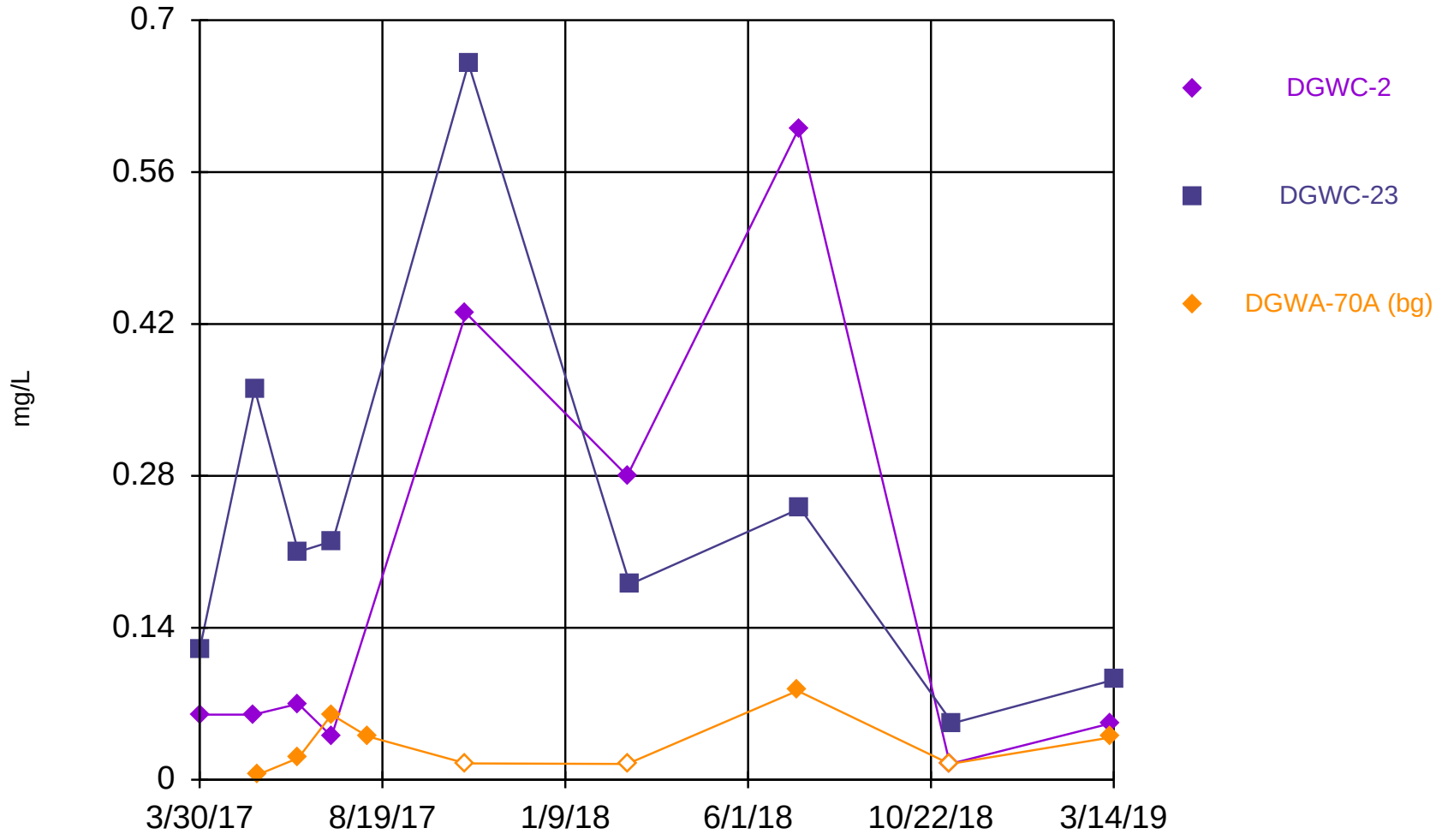


Constituent: Fluoride Analysis Run 7/6/2019 1:37 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Sanitas™ v.9.6.14 For the statistical analyses of ground water by Golder Associates only. UG
Hollow symbols indicate censored values.

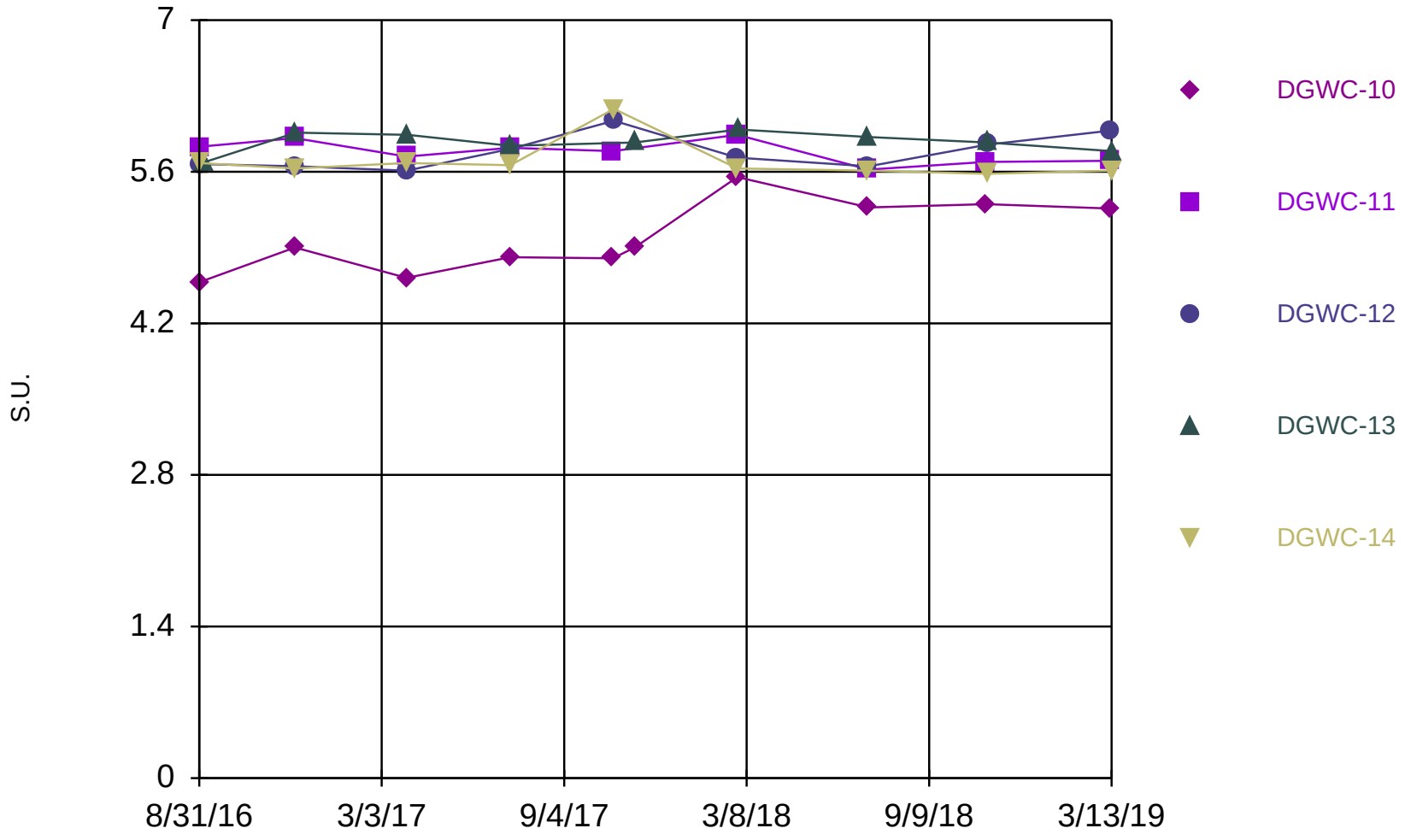
Time Series



Constituent: Fluoride Analysis Run 7/6/2019 1:37 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

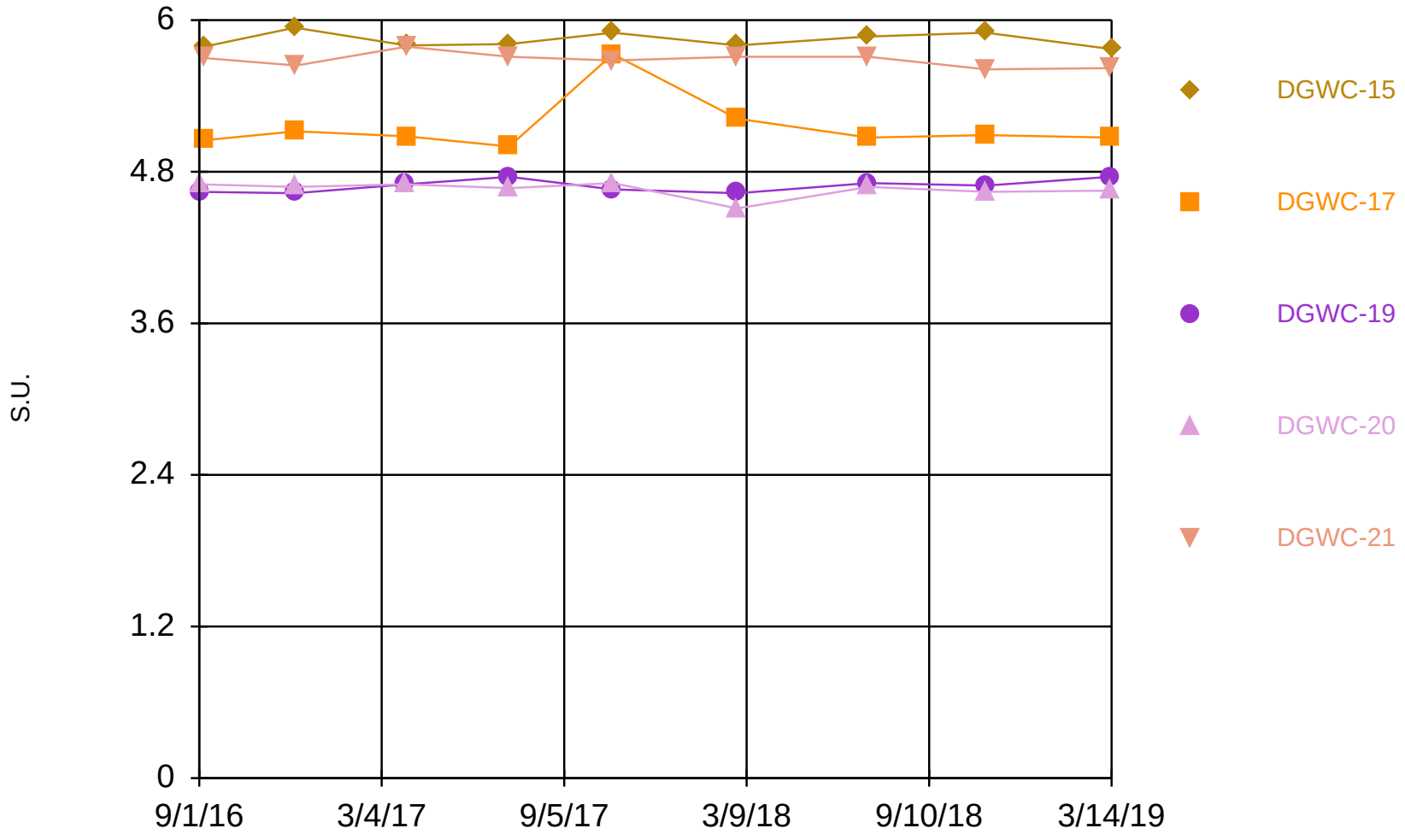
Time Series



Constituent: pH [field] Analysis Run 7/6/2019 1:37 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

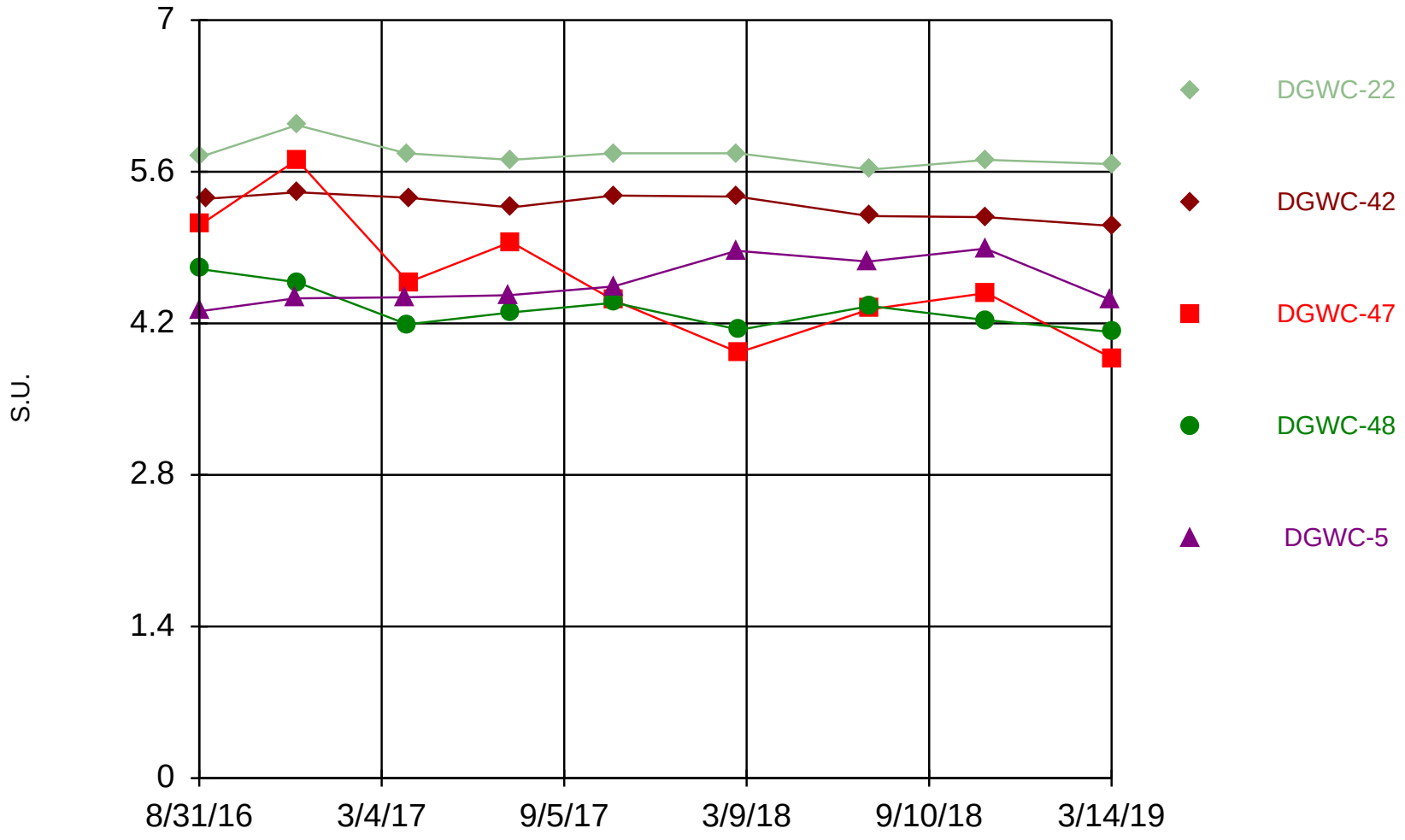
Time Series



Constituent: pH [field] Analysis Run 7/6/2019 1:37 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

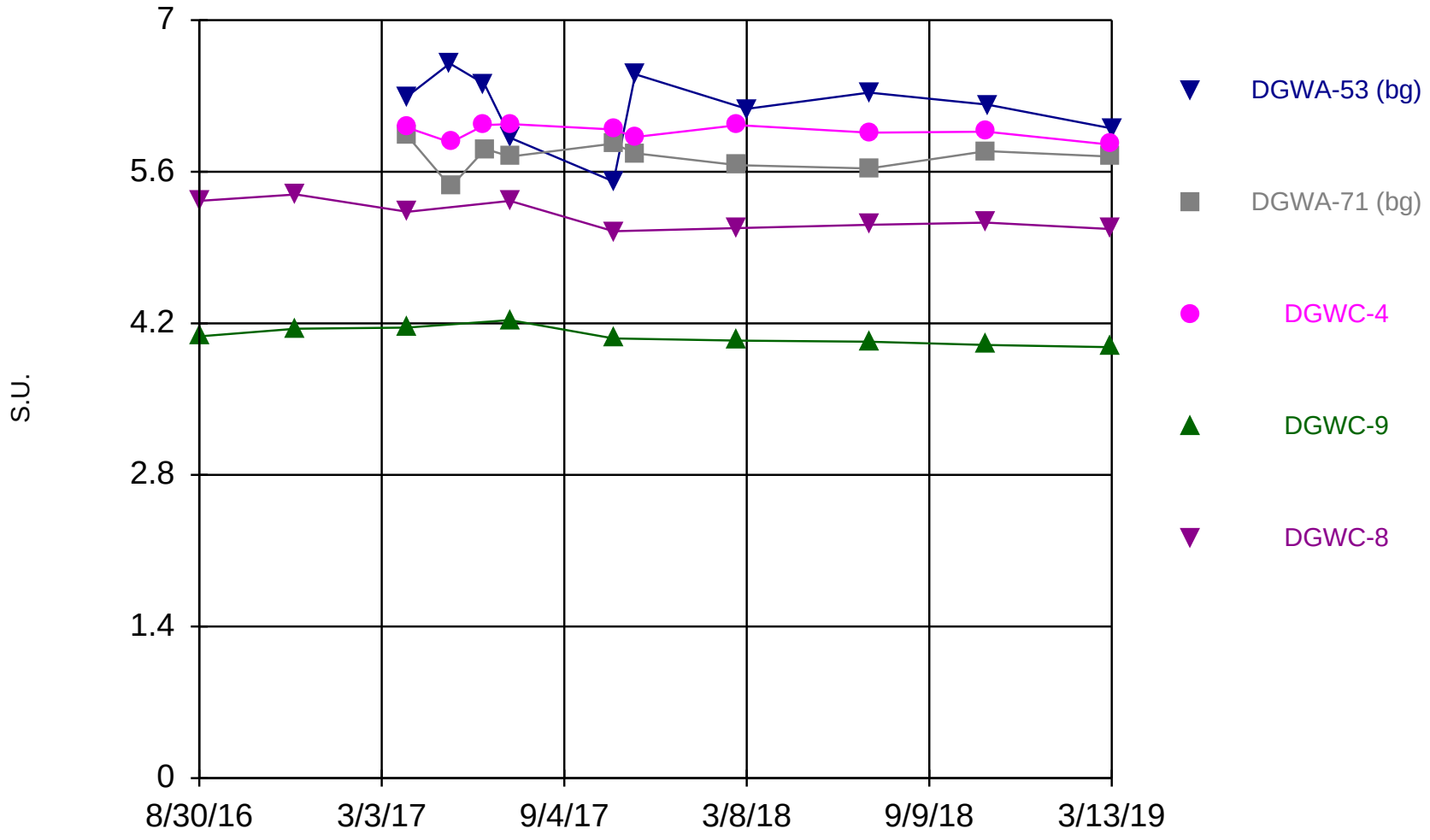
Time Series



Constituent: pH [field] Analysis Run 7/6/2019 1:37 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

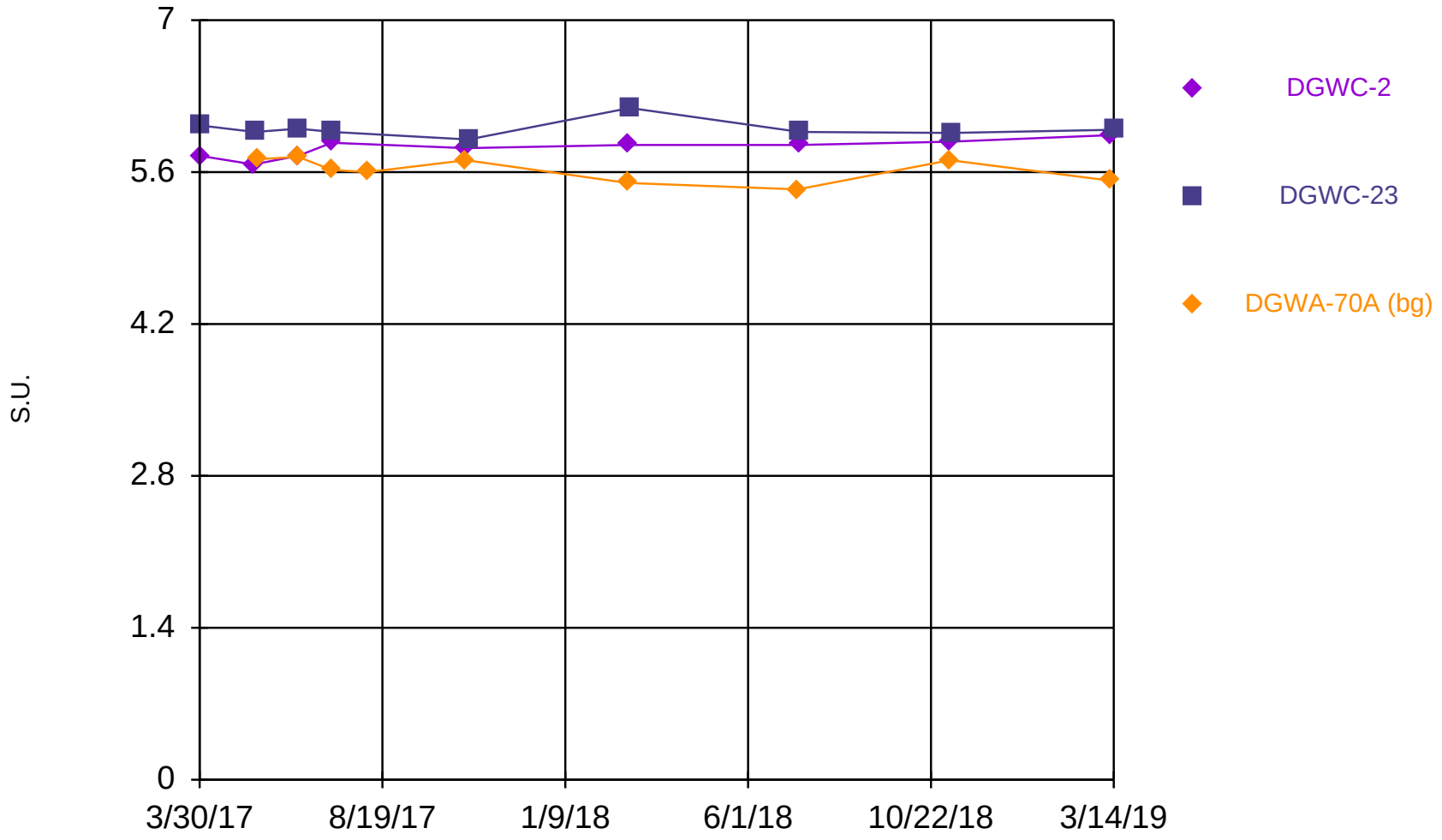
Time Series



Constituent: pH [field] Analysis Run 7/6/2019 1:37 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

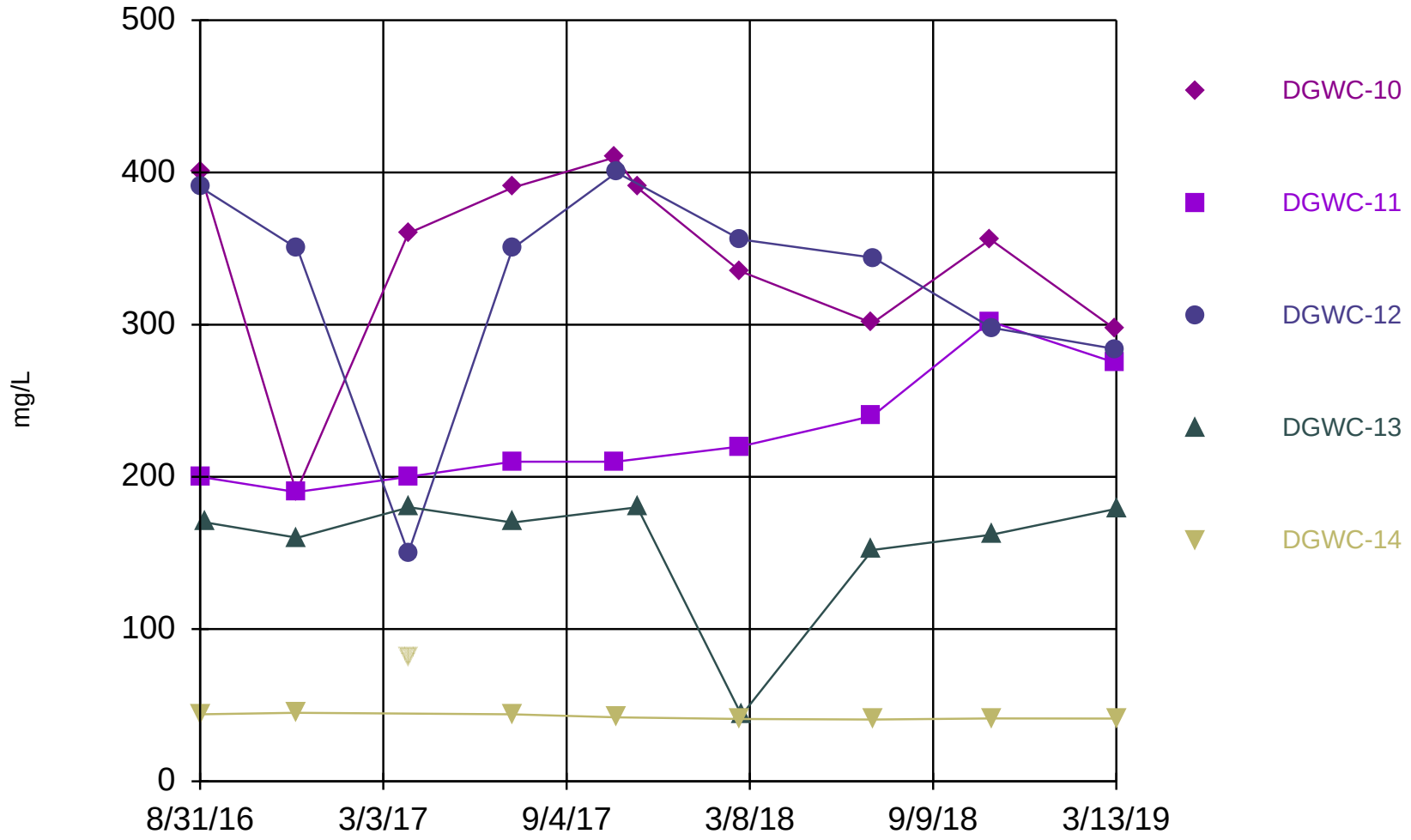
Time Series



Constituent: pH [field] Analysis Run 7/6/2019 1:37 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

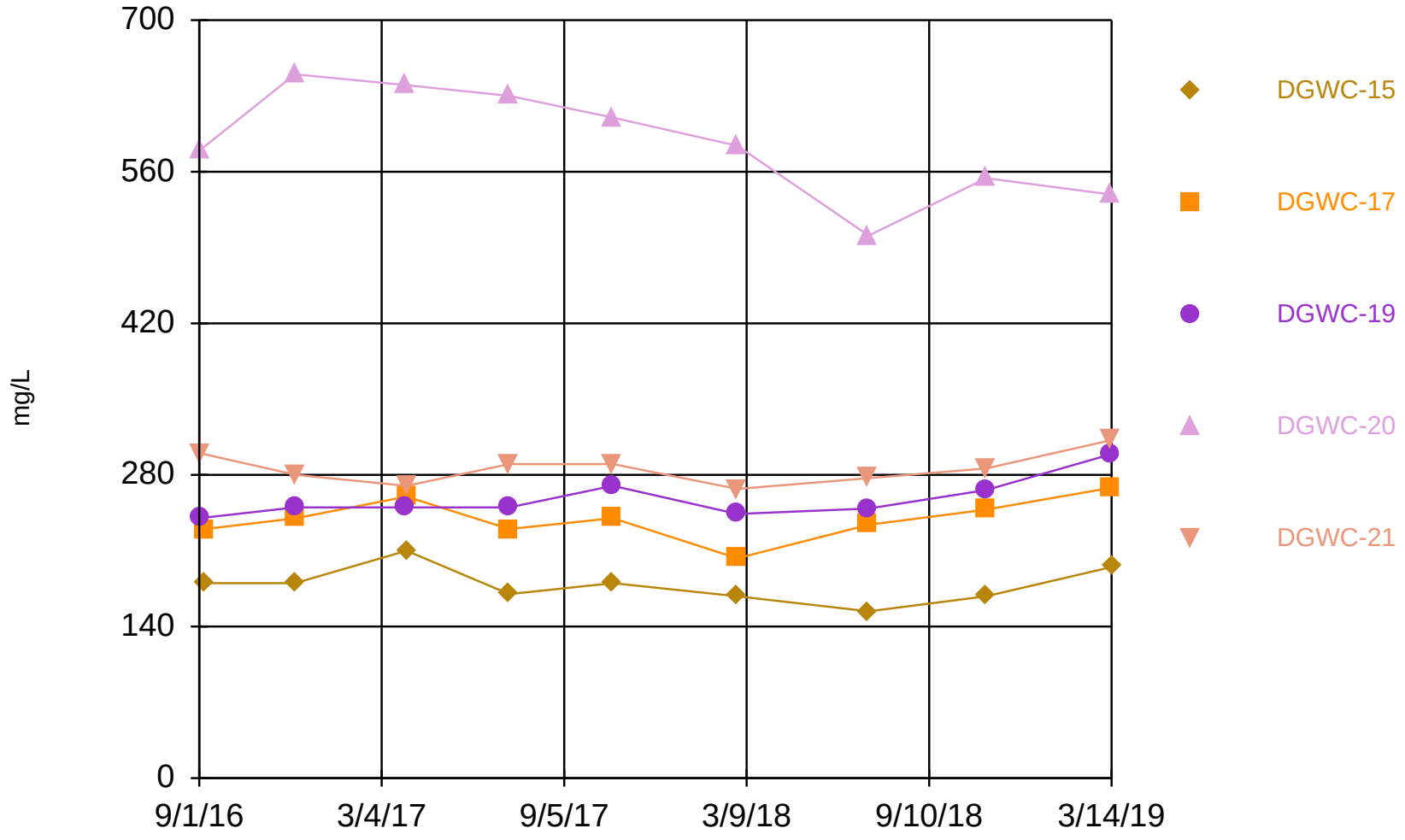
Time Series



Constituent: Sulfate Analysis Run 7/6/2019 1:37 PM View: APP III_AP234

McDonough Client: Golder Associates Data: McDonough Ash Pond - updated 752019_nonvalidated

Time Series



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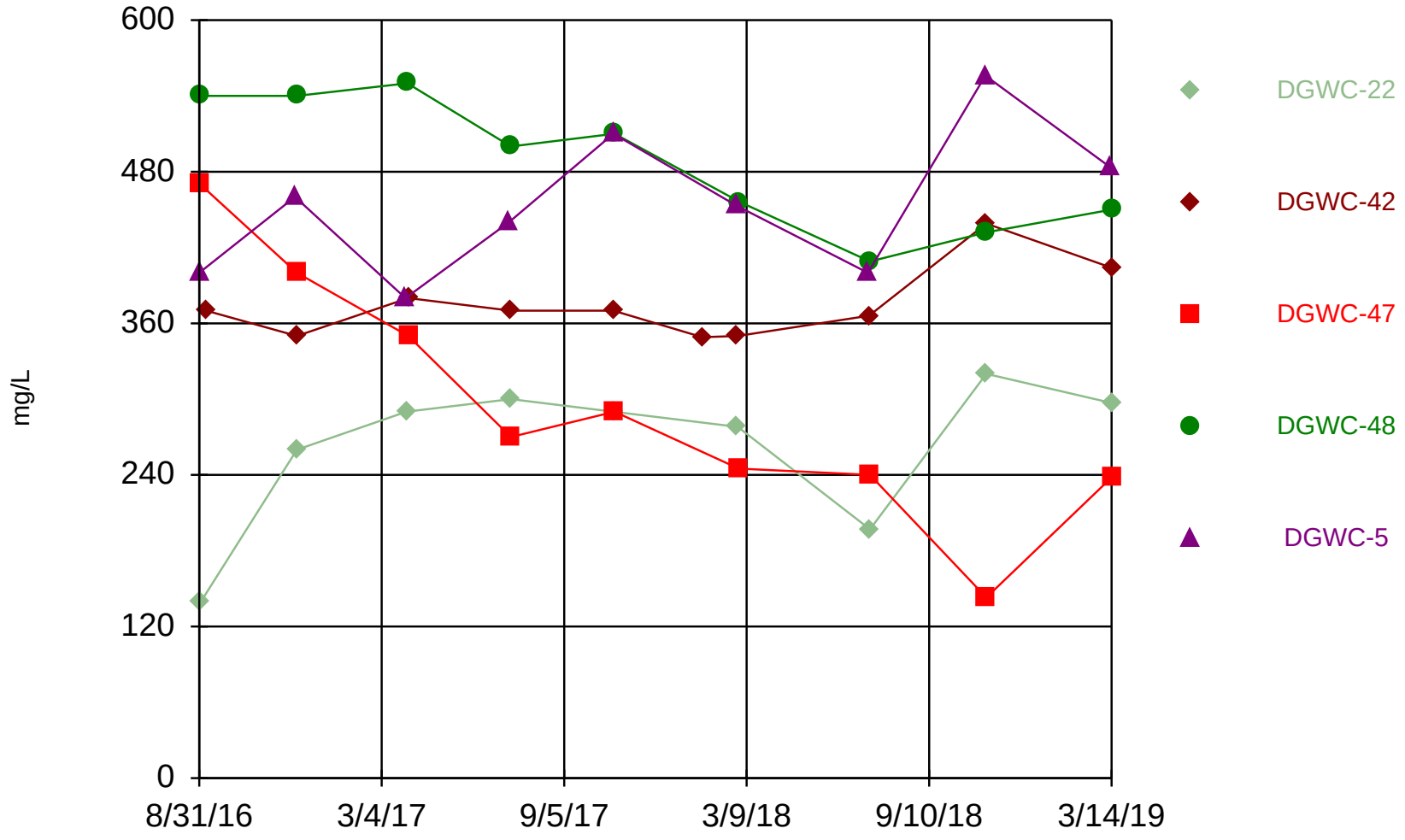

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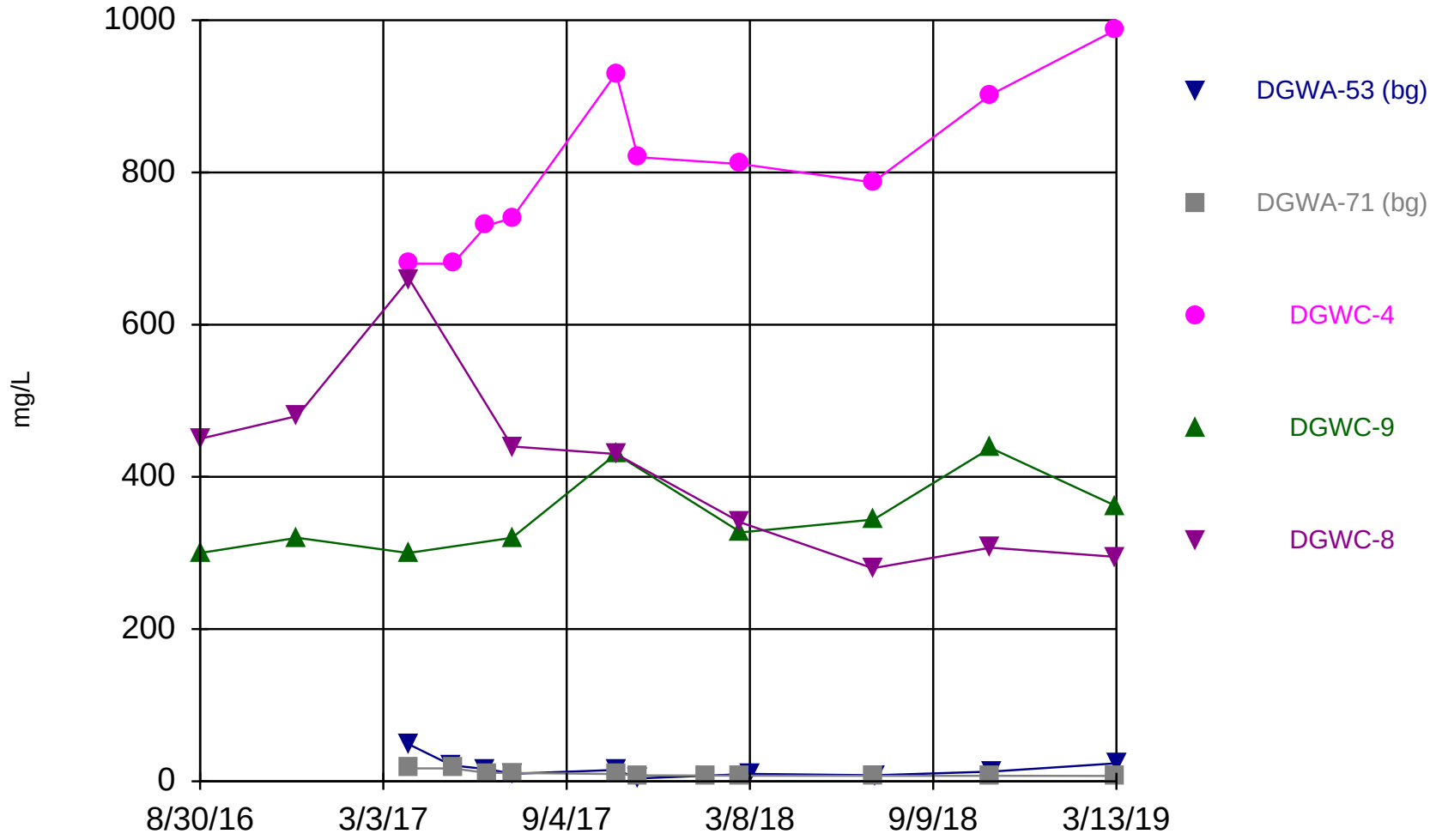

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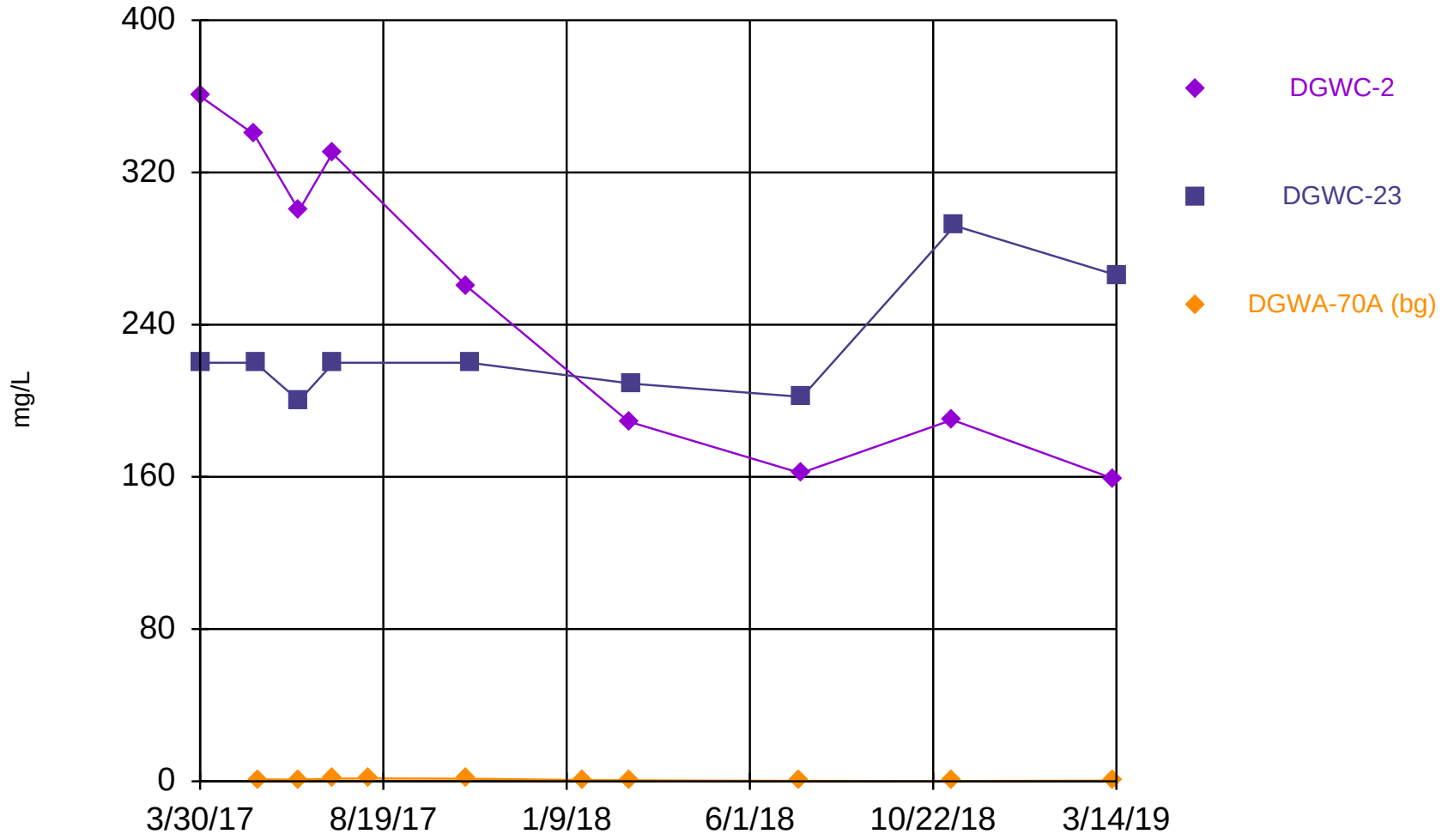
Time Series



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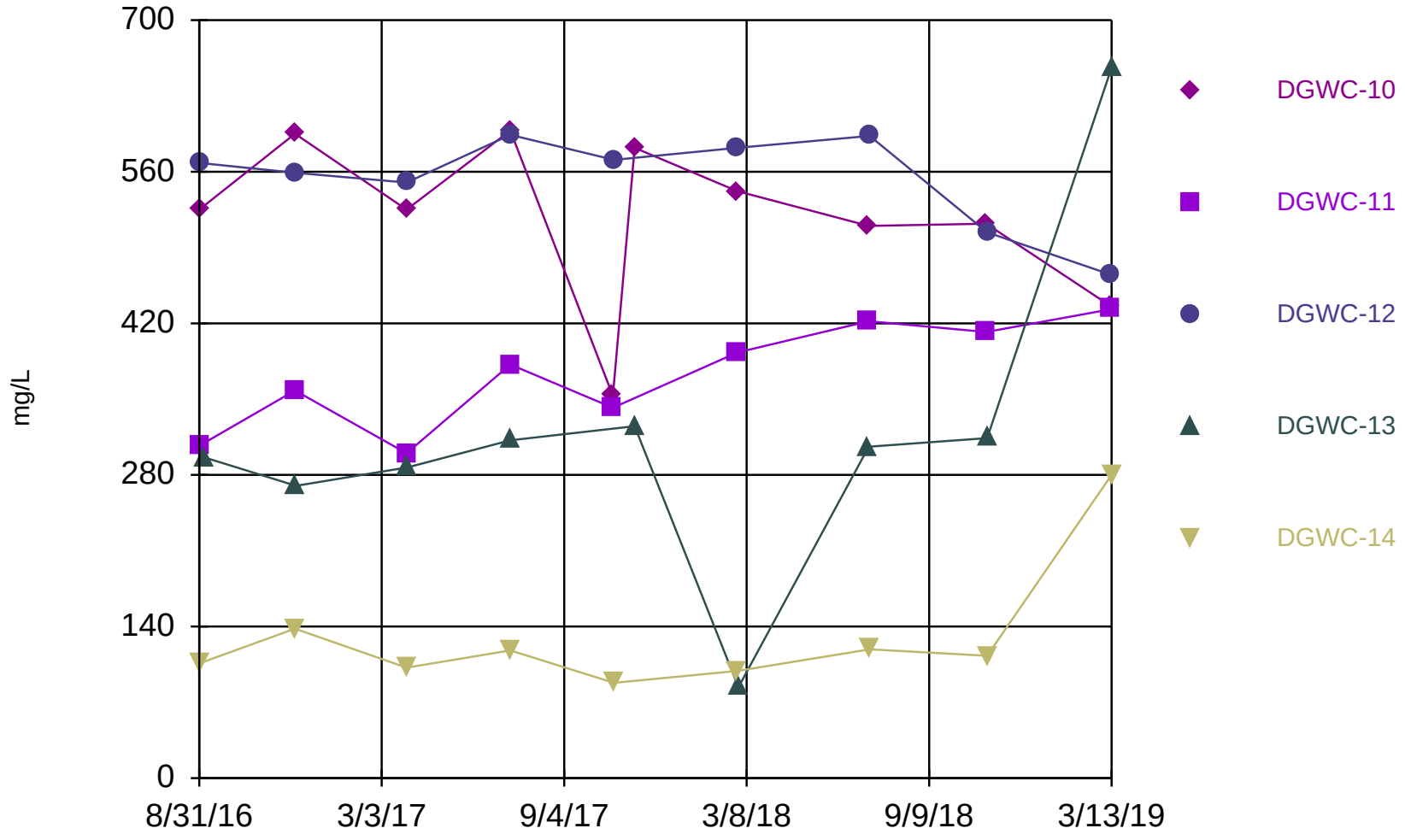
Time Series



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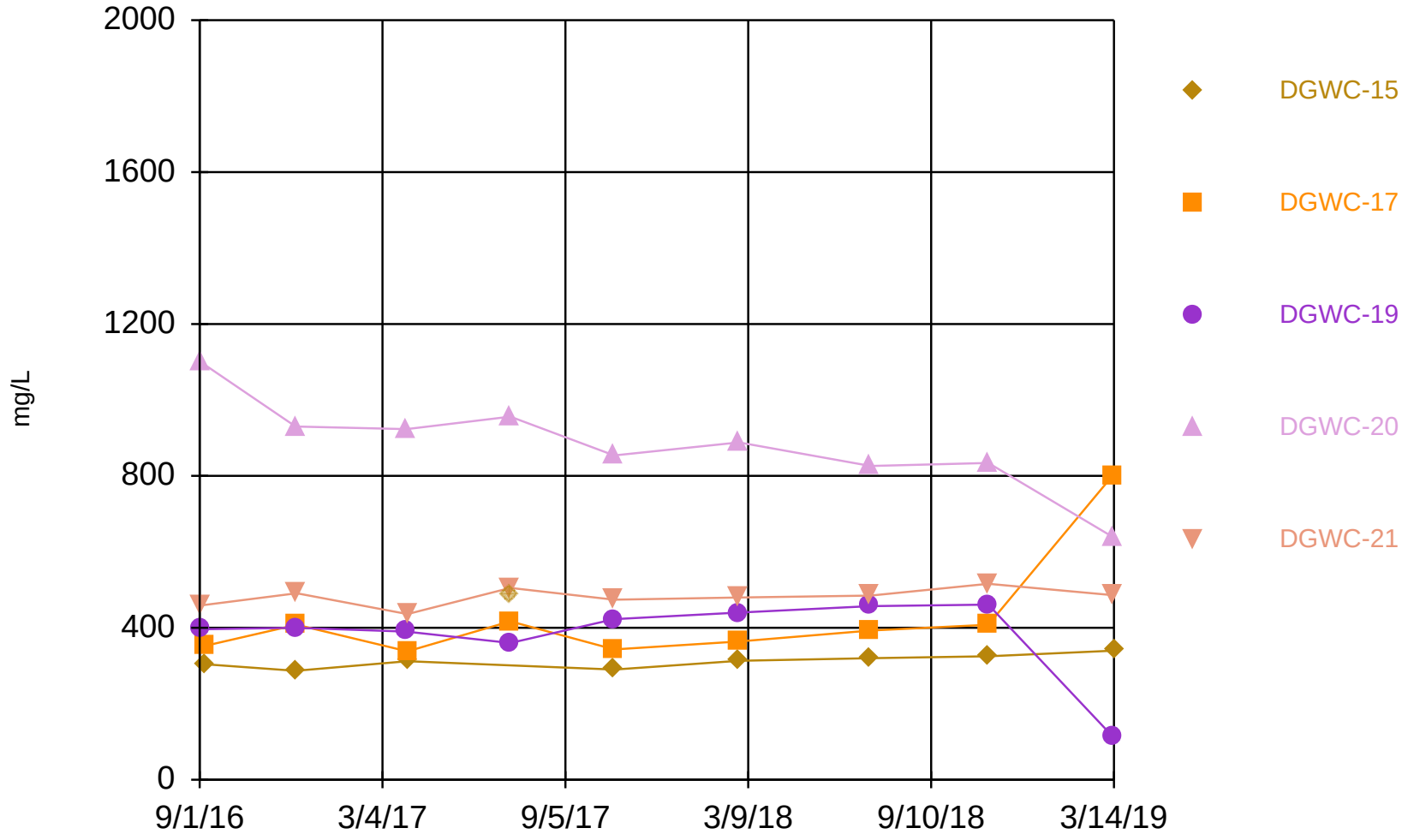
Time Series



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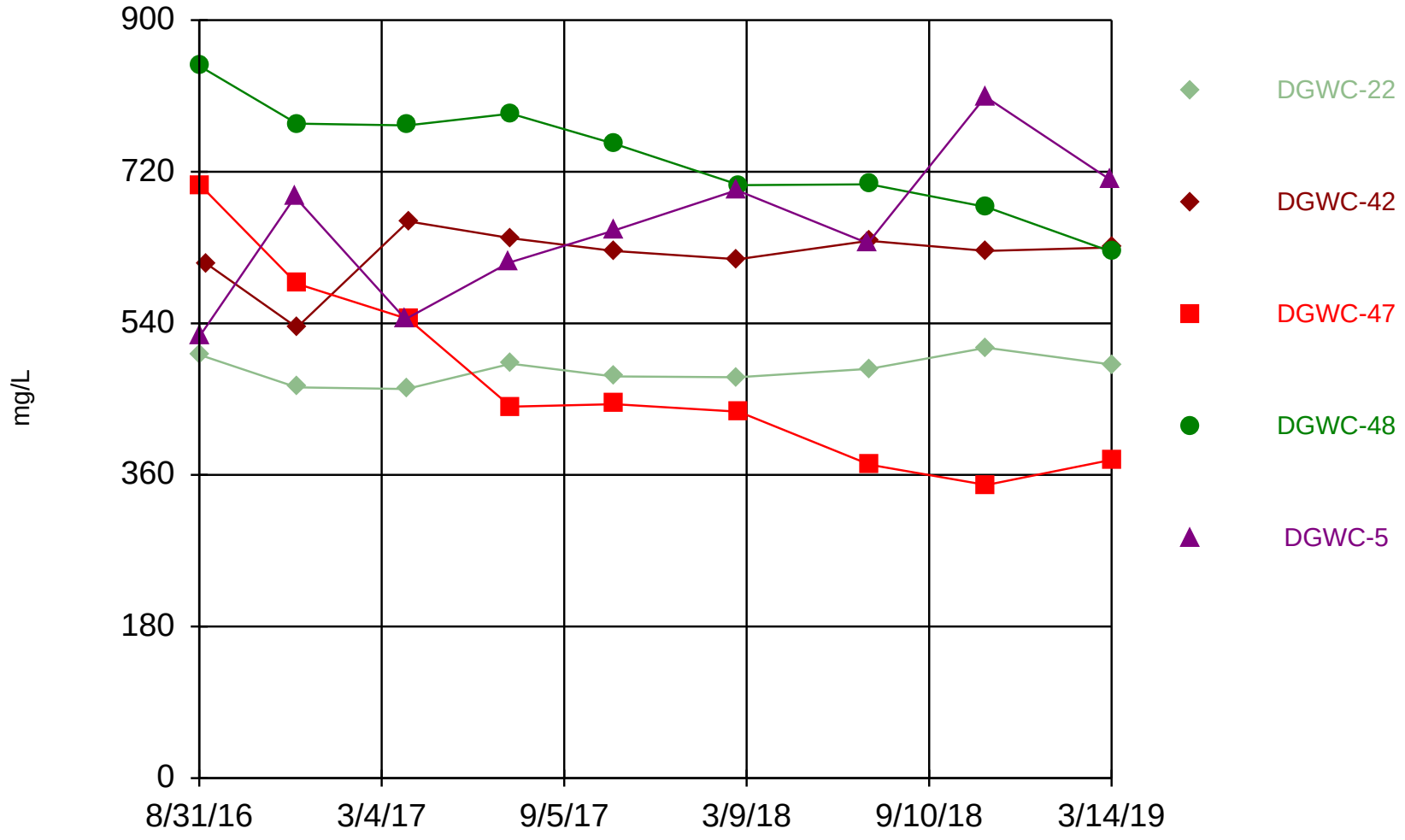
Time Series



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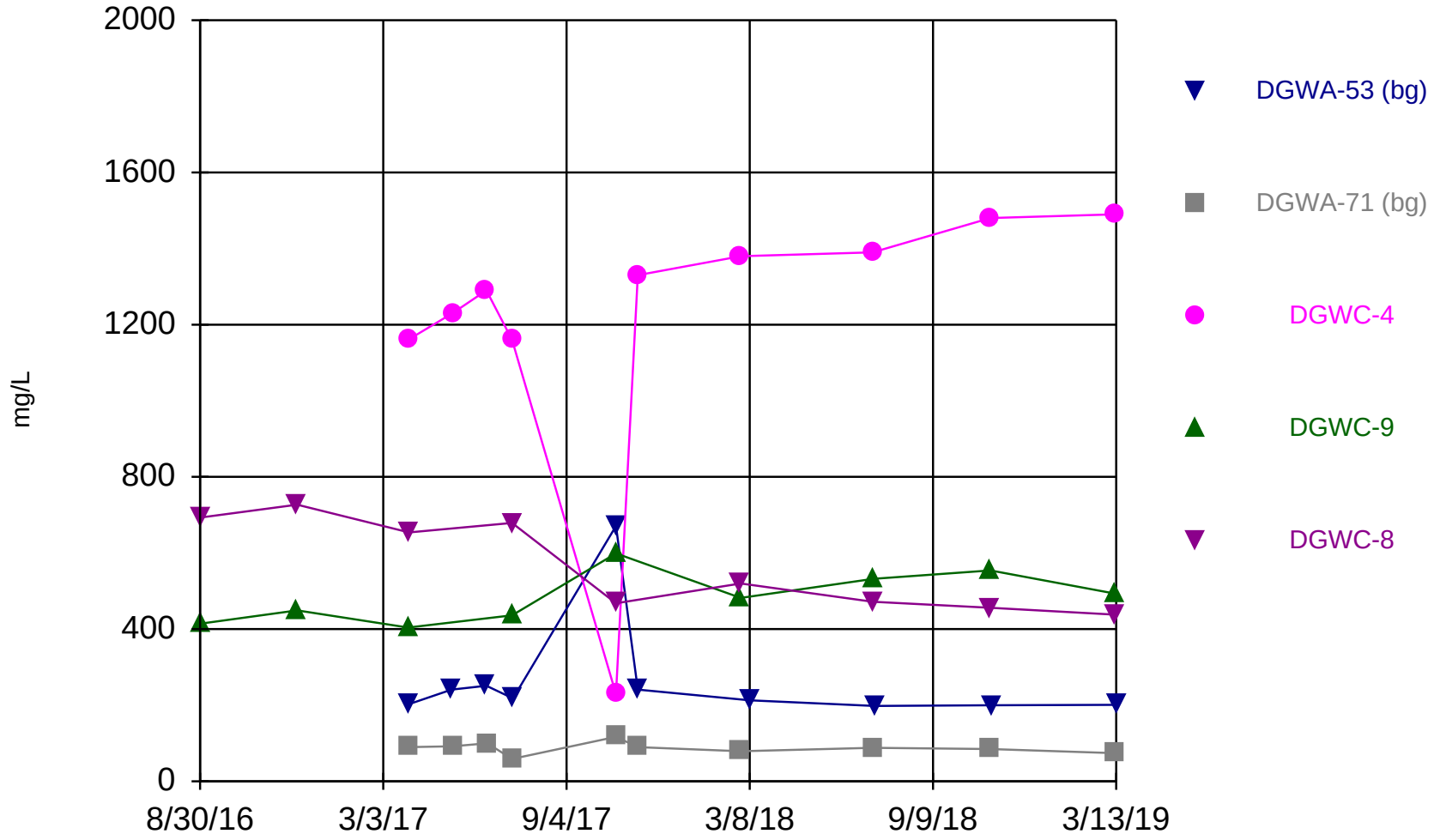

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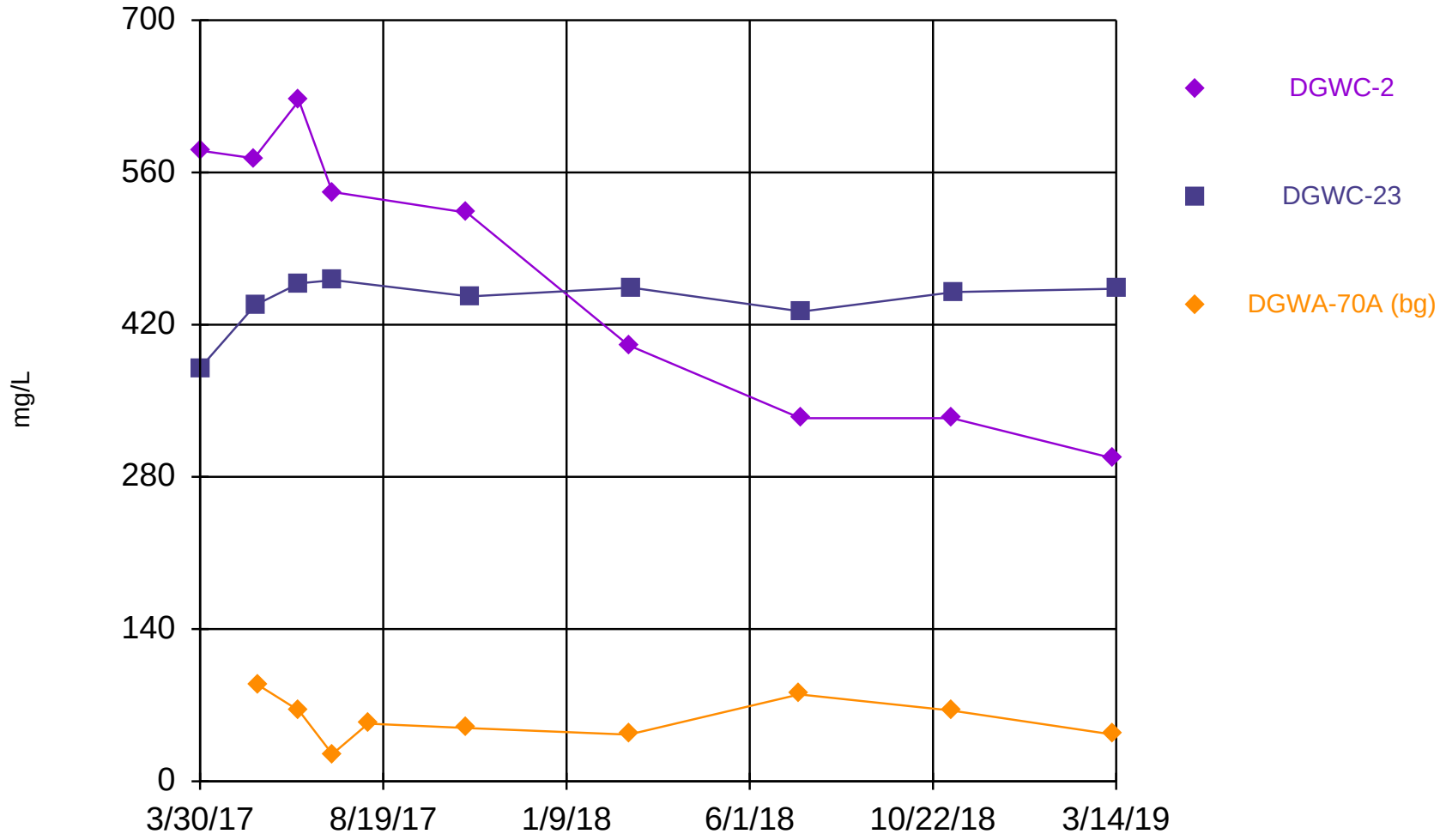

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