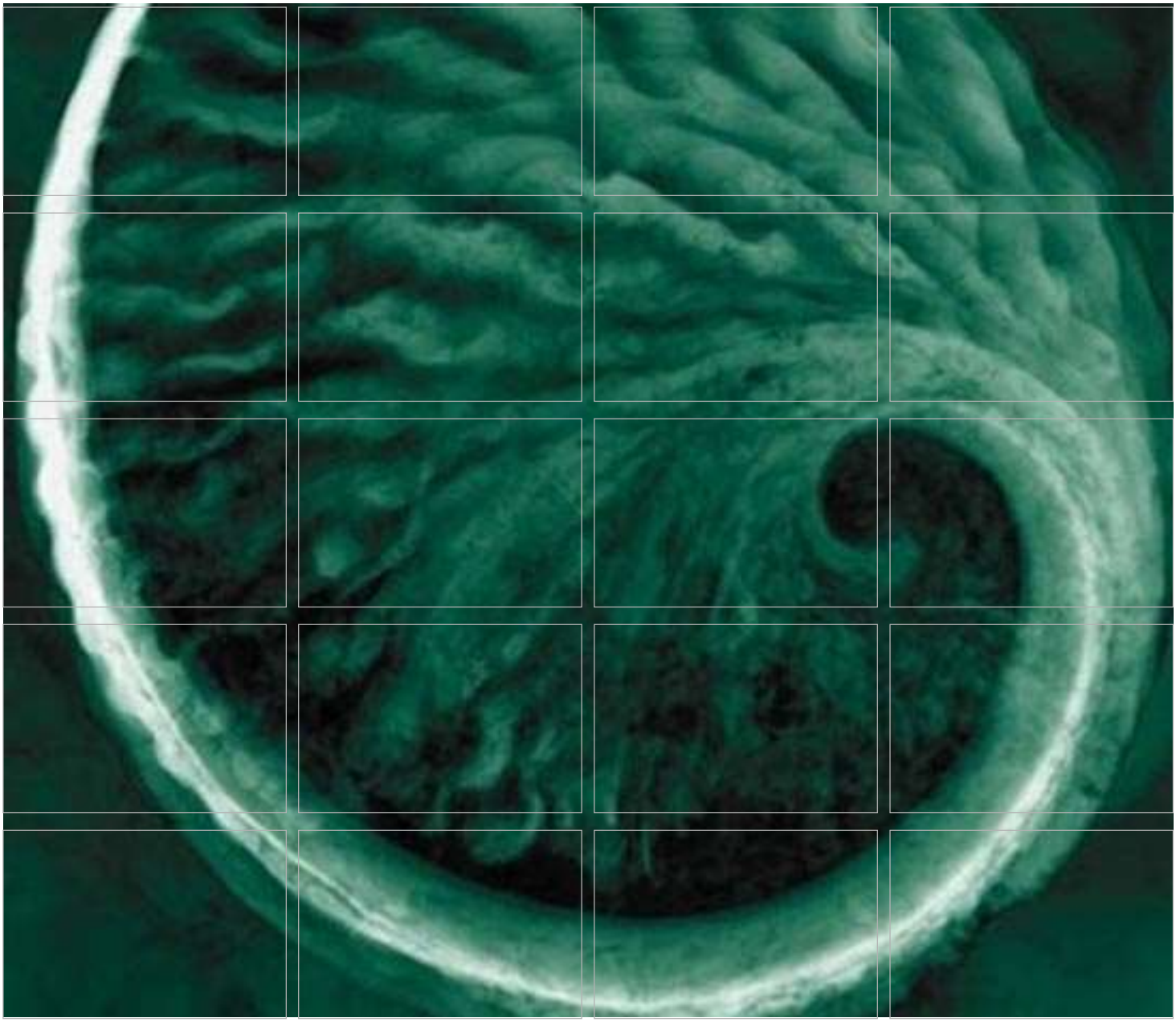


Prepared for:
Georgia Power Company

2017 Annual Groundwater Monitoring and Corrective Action Report

Plant Hammond
Ash Ponds 1 & 2 (AP-1 and AP-2)

January 31, 2018

www.erm.com

The business of sustainability

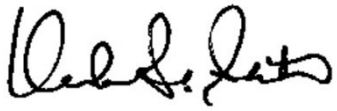
ERM

Georgia Power Company

2017 Annual Groundwater Monitoring and Corrective Action Report

Plant Hammond
Ash Ponds 1 and 2 (AP-1 and AP-2)

January 31, 2018



Hunter Sartain, P.E.
Principal

Greg Jirak, P.G.
Project Manager

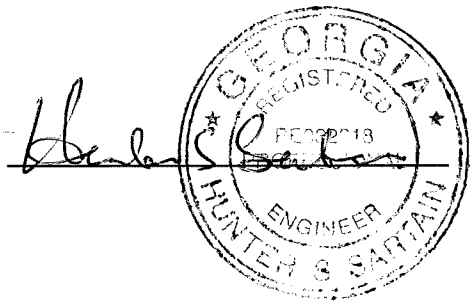
Environmental Resources Management
The Towers at Wildwood
3200 Windy Hill Rd. SE, Suite 1500 West
Atlanta, GA 30339
Phone: +1-678-486-2700

ERM

CERTIFICATION STATEMENT

This 2017 *Annual Groundwater Monitoring and Corrective Action Report, Georgia Power Company - Plant Hammond – Ash Pond 1 and 2 (AP-1 and AP-2)* has been prepared to comply with the United States Environmental Protection Agency (USEPA) coal combustion residual (CCR) rule (40 Code of Federal Regulations [CFR] 257 Subpart D; published in 80 FR 21302-21501, April 17, 2015) by a licensed Professional Engineer with Environmental Resources Management-Southeast, Inc. (ERM).

CONSULTANT

Signature: 

Date: 1/31/18

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

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; published in 80 FR 21302-21501, April 17, 2015), this *2017 Annual Groundwater Monitoring and Corrective Action Report* has been prepared to document groundwater monitoring activities conducted at Georgia Power Company's (GPC's) Plant Hammond (the site), Ash Pond 1 (AP-1) and Ash Pond 2 (AP-2) and satisfy the requirements of §257.90(e). Groundwater monitoring and reporting for the site will be performed in accordance with the requirements §257.90 through §257.98.

This report documents the activities completed to establish the groundwater monitoring program and actions through the 2017 calendar year.

1.1 SITE LOCATION AND DESCRIPTION

The site is located in Floyd County, approximately 10 miles west of Rome, Georgia (Figure 1, Site Location Map). The plant property is located on the north bank of the Coosa River. AP-1 (35 acres) and AP-2 (21 acres) are currently in use and monitored as separate CCR Units. Both ponds are located in the central portion of the property (Figure 2, Site Plan and Well Location Map).

1.1.1 Regional Geology

Floyd County is located in the Valley and Ridge Physiographic Province of Georgia which is characterized by well-defined, long and linear ridges and valleys that generally trend to the northeast-southwest. The Valley and Ridge province contains a sequence of folded and faulted sedimentary rocks of Paleozoic age, which form a series of generally parallel valleys separated by steep to well-rounded ridges (Clark and Zisa, 1976).

1.1.2 Site Geology and Hydrogeology

The Coosa River forms the southern border of the property and flows towards the east. The site occupies a generally flat topographic area with an approximate elevation between 570 feet and 600 feet above mean sea level (MSL), and natural surface water drainage is generally towards the south. Two (2) smaller tributaries bisect the central and western portions of the property and the eastern property boundary is formed by Cabin Creek which drains into the Coosa River.

Boring logs indicate AP-1 and AP-2 are underlain by calcareous shale and limestone interbedded with shale and shaley limestone. The shale is weathered, thinly bedded, poorly jointed, and is locally interlayered with red silty shale and limestone. The limestone observed interlayered with the shale is slightly weathered, finely crystalline, medium to thick bedded and poorly jointed, with evidence of chemical dissolution occurring along bedding and joint planes.

Overburden at the site consists of alluvial and residual soils. Overburden soils are described as clay/clayey, silt/clayey-sand, and silt with some coarser material.

The site is underlain by a regional unconfined groundwater aquifer that occurs within the overburden. Groundwater recharge at the site is from infiltration of precipitation. Groundwater occurring in bedrock below the site is controlled by the degree of enhanced secondary permeability. In general, groundwater occurring in the bedrock is generally a result of water infiltrating through areas in the overburden where enhanced permeability exists.

1.2 GROUNDWATER MONITORING SYSTEM

Pursuant to §257.91, GPC installed groundwater monitoring systems to monitor groundwater within the uppermost aquifer at AP-1 and AP-2. The monitoring systems are designed to monitor groundwater passing the waste boundary of AP-1 and AP-2 within the uppermost aquifer. Well locations were designed to serve as upgradient or downgradient monitoring points based on groundwater flow direction (Table 1, Monitoring Well Network Summary).

2.0 GROUNDWATER MONITORING ACTIVITIES

As required by §257.90(e), the following subsections describe monitoring-related activities performed during the preceding year. Since this is the first *Annual Groundwater Monitoring and Corrective Action Report*, it also describes activities performed prior to 2017 to establish the groundwater monitoring program. All groundwater sampling was performed in accordance with §257.93. Samples were collected from each well in the PE-certified monitoring system shown on Figure 2.

Pursuant to §257.90(e)(3), Table 2, Groundwater Sampling Event Summary, presents a summary of groundwater sampling events completed at AP-1 and AP-2.

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).

Seven (7) monitoring wells (HGWA-1, HGWA-4, HGWC-14, HGWC-15, HGWC-16, HGWC-17, and HGWC-18) and (10) piezometers (MW-1, MW-5, MW-6, MW-7, MW-8, MW-9, MW-12, MW-16, MW-17, and MW-18) were installed between October and December 2014. Eleven (11) additional monitoring wells (HGWA-2, HGWA-3, HGWC-5, HGWC-6, HGWC-7, HGWC-8, HGWC-9, HGWC-10, HGWC-11, HGWC-12, and HGWC-3) and one (1) additional piezometer (AP1A-1) were installed in December 2015. Monitoring well and piezometer locations are shown on Figure 2.

Wells HWGA-1, HGWA-2, HGWA-3, HGWC-7, HGWC-8, HGWC-9, HGWC-10, HGWC-11, HGWC-12, and HGWC-13 monitor AP-1. Wells HWGA-1, HGWA-2, HGWA-3, HGWA-4, HGWA-5, HGWA-6, HGWC-14, HGWC-15, HGWC-16, HGWC-17 and HGWC-18 monitor AP-2.

The number, spacing, and depths of the groundwater monitoring wells were selected based on the characterization of site-specific hydrogeologic conditions and certified by a Professional Engineer (PE). Groundwater monitoring wells are designed to monitor the uppermost water-bearing zone.

2.2 DETECTION MONITORING

In accordance with §257.94(b), the detection groundwater monitoring program was implemented by collecting 8 background groundwater samples. In addition, a 9th round of groundwater samples were collected as the initial detection monitoring event.

2.2.1 Background Monitoring

A minimum of 8 independent samples were collected from each monitoring well within the well network and analyzed for Appendix III and IV constituents as part of the background monitoring period prior to October 17, 2017. Pursuant to §257.90(e)(3), data reports for the background sampling events are included in Appendix A, Analytical Data Reports. Background monitoring event analytical data is summarized in Table 5, Plant Hammond Ash Pond 1 and Ash Pond 2 Analytical Data Summary.

2.2.2 Initial Detection Monitoring

Following background monitoring (and prior to October 17, 2017), the initial detection monitoring event was completed by collecting an additional round of groundwater samples. Groundwater samples were collected from each monitoring well and analyzed for Appendix III constituents according to §257.94(a). Data reports for the initial detection monitoring event are included in Appendix A.

3.0 SAMPLE METHODOLOGY & ANALYSES

The following sections describe the methods used to conduct groundwater monitoring at AP-1 and AP-2.

3.1 GROUNDWATER ELEVATION MEASUREMENT

Prior to each sampling event, groundwater elevations were recorded from piezometers and each well in the well network at AP-1 and AP-2. Groundwater elevations recorded during the background and detection monitoring events are summarized in Table 3, Summary of Historical Groundwater Elevations. Groundwater elevation data was used to develop a potentiometric surface elevation contour map (Figure 3, Potentiometric Surface Contour Map – October 2017). The general direction of groundwater flow across the site is toward the south. The groundwater

flow pattern observed during the October 2017 detection monitoring event is consistent with recordings made during the background monitoring period.

3.2 GROUNDWATER GRADIENT AND FLOW VELOCITY

The groundwater flow velocity at AP-1 and AP-2 was calculated using a derivation of Darcy's Law. Specifically,

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

Where:

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

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

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

$n_e =$ Effective porosity

Hydraulic conductivity measurements were calculated from slug test data collected in a subset of AP-1 and AP-2 wells. Results were broadly grouped based on the lithology in which the well screens are completed. At AP-1, hydraulic conductivities for wells screened in the alluvium and/or residuum ranged from 1.07 ft/day to 3.08 ft/day, with an average value of 1.85 ft/day. At AP-2, hydraulic conductivities for wells screened in the alluvium and/or residuum ranged from 0.06 ft/day to 2.81 ft/day, with an average value of 0.47.

The hydraulic gradient was calculated between wells HGWC-7 and MW-5 (AP-1) and HGWA-5 and MW-12 (AP-2). An estimated effective porosity of 0.30 is used for the flow rate calculations for wells screened in silty sand soils and clay/silt/rock mixture soils, bases on review of several resources (Driscoll, 1869; Freeze and Cherry, 1979). Groundwater flow velocities were calculated and are tabulated in Table 4, Groundwater Flow Velocity Calculations – October 2017. The calculated groundwater flow velocity at the AP-1 is 0.117 ft/day, 42.71 ft/year and at AP-2 is 0.020 ft/day, 7.30 ft/year.

3.3 GROUNDWATER SAMPLING

Groundwater samples were collected in accordance with §257.93(a). Sixteen of eighteen monitoring wells at AP-1 and AP-2 are equipped with a dedicated QED bladder pump. If a dedicated pump was not present, purging and sampling was performed using a peristaltic pump with the intake tubing lowered to the midpoint of the well screen (or as appropriate determined by the water level). All non-disposable equipment was decontaminated before use and between well locations using procedures described in the latest version of the Region IV USEPA Science and Ecosystem Support Division (SESD) *Operating Procedure for Field Equipment Cleaning and Decontamination* as a guide. Monitoring wells were purged and sampled using low-flow sampling procedures.

A SmarTroll® (In-Situ® field instrument) was used to monitor and record field water quality parameters (pH, conductivity, dissolved oxygen, temperature and oxidation reduction potential [ORP]) during well purging to verify stabilization prior to sampling. Turbidity was monitored using a LaMotte 1970-USEPA Compliant Model 2020we®, Hach 2100Q® USEPA Compliant, or HANNA Instruments Model HI93703® USEPA and ISO Compliant turbidity meter. Groundwater samples were collected when the following stabilization criteria were met:

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

Once stabilization was achieved, unfiltered samples were collected, placed in ice-packed coolers, and submitted to the analytical laboratory following chain-of-custody protocol.

3.4 LABORATORY ANALYSES

Groundwater samples collected for background monitoring included both Appendix III and Appendix IV parameters. Groundwater samples collected in October 2017 for detection monitoring were analyzed for Appendix III monitoring parameters only. Analytical methods used for groundwater sample analysis are listed on the analytical laboratory reports included in Appendix A.

Laboratory analyses were performed by the GPC Environmental Laboratory (GPCEL) in Smyrna, Georgia, or Pace Analytical Services, LLC (Pace), of Peachtree Corners, Georgia, and Greensberg, Pennsylvania, which are accredited by National Environmental Laboratory Accreditation Program (NELAP) and maintains a NELAP certification for all parameters analyzed. In addition, GPCEL and Pace are certified to perform analysis by the State of Georgia. Groundwater data and chain of custody records for the monitoring events are presented in Appendix A.

3.5 QUALITY ASSURANCE & QUALITY CONTROL

During each sampling event, quality assurance/quality control samples (QA/QC) were collected at a rate of one sample per every 10 detection samples. QA/QC samples included field equipment rinsate blanks (FERB), field blanks (FB), and duplicate (DUP) samples. QA/QC sample data was evaluated during data validation (as discussed 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, post digestions spikes, laboratory and field duplicate relative percent differences (RPDs), field and equipment

blanks, and reporting limits. Where appropriate, validation qualifiers and flags are applied to the data using USEPA procedures as guidance (USEPA, 2017). Flagged data is identified in the statistical analysis reports described in the following section.

4.0 STATISTICAL ANALYSIS

Statistical analysis of Appendix III groundwater monitoring data was performed pursuant to §257.93 following the PE certified statistical method for AP-1 and AP-2.

4.1 STATISTICAL METHOD

The statistical test used to evaluate the groundwater monitoring data was the interwell prediction limit (PL) method combined with a 1-of-2 resample plan. The interwell PLs pool background data from the network of upgradient wells to calculate a PL. Data from the October 2017 detection monitoring event is compared to the statistical limit to determine whether any concentrations exceed background level. An "initial exceedance" occurs when any downgradient well data exceed the PL.

If data from a sampling event initially exceed the PL, the resampling strategy may be used to verify the result. In 1-of-2 resampling, one independent resample may be collected and evaluated within 90 days to determine whether the initial exceedance is verified. If the resample exceeds the PL, the initial exceedance is verified and a statistically significant increase (SSI) is determined. When a resample result does not verify the initial result, and does not exceed the PL, there is no SSI. If resampling is not performed, the initial exceedance is a confirmed exceedance.

The following guidance is also applicable to the site statistical analysis method:

- Statistical analyses are not performed on analytes containing 100% non-detects (USEPA, 2009).
- When data contain less than or equal to 15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the practical quantitation limit (PQL) as reported by the laboratory.
- When data contain between 16-50% 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 PL.
- Nonparametric PL are used on data containing greater than 50% non-detects.

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

4.2 STATISTICAL ANALYSES RESULTS

Analytical data from the October 2017 monitoring event at AP-1 and AP-2 has been statistically analyzed in accordance with the site's PE certified statistical methods. Resampling to confirm SSIs was not performed; therefore, initial SSIs are treated as verified. The statistical analysis and comparison to prediction limits are included as Appendix B.

Based on review of the statistical results presented in Appendix B, the following parameters represent SSIs over background:

AP-1

- Boron: HGWC-7, HGWC-8, HGWC-9, HGWC-10, HGWC-11, HGWC-12, and HGWC-13,
- Calcium: HGWC-8, HGWC-9, and HGWC-10
- Chloride: HGWC-7, HGWC-8, HGWC-9, HGWC-10, HGWC-11, HGWC-12, and HGWC-13,
- Fluoride: HGWC-8, HGWC-9, HGWC-10, HGWC-11, HGWC-12, and HGWC-13
- Sulfate: HGWC-7, HGWC-8, HGWC-9, HGWC-10, HGWC-11, and HGWC-12
- Total Dissolved Solids (TDS): HGWC-8, HGWC-9, HGWC-10, and HGWC-12

AP-2

- Boron: HGWC-14, HGWC-15, HGWC-16, HGWC-17, and HGWC-18
- Calcium: HGWC-14, HGWC-15, HGWC-16, HGWC-17, and HGWC-18
- Chloride: HGWC-14, HGWC-15, HGWC-16, HGWC-17, and HGWC-18
- Fluoride: HGWC-14, HGWC-15, HGWC-17, and HGWC-18
- Sulfate: HGWC-14, HGWC-15, HGWC-16, HGWC-17, and HGWC-18
- TDS: HGWC-14, HGWC-15, HGWC-16, HGWC-17, and HGWC-18
- pH: HGWC-14, and HGWC-18

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

4.3 APPENDIX IV BACKGROUND DATA

Pursuant to §257.95, Appendix IV groundwater quality data is statistically analyzed and compared to groundwater protection standards if assessment monitoring is implemented. GPC is currently performing detection monitoring per §257.94 at AP-1 and AP-2 has not implemented assessment monitoring. Therefore, statistical analysis of the Appendix IV data has not been performed.

5.0 MONITORING PROGRAM STATUS

AP-1 and AP-2 are currently in detection monitoring. SSIs of Appendix III parameters have been identified. Pursuant to §257.94(e)(1), GPC has 90 days from the date of determination to either (1) prepare a demonstration that a source other than AP-1 or AP-2 was the cause, or (2) implement assessment monitoring per §257.95. GPC will address the reported SSIs in accordance with the requirements, and options, of §257.94(e)(1-3) and (f).

6.0 CONCLUSIONS & FUTURE ACTIONS

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

The first 2018 semi-annual detection monitoring event is planned for April 2018.

7.0 REFERENCES

Clark, Jr., W. Z. and Zisa, A. C. 1976. *Physiographic Map of Georgia: Georgia Geol. Survey*.

Driscoll. 1986. *Groundwater and Wells*. Second Edition. Johnson Division, St. Paul, MN, 1986.

Freeze and Cherry. 1979. *Groundwater*. Prentice – Hall, Inc., Edgewood Cliffs, NJ.

Sanitas: Groundwater Statistical Software, Sanitas Technologies, Shawnee, KS, 2007. www.sanitastech.com

USEPA. 1989. *RCRA Facility Investigation (RFI) Guidance, Volume II of IV: Soil, Groundwater, Subsurface Gas Releases*. EPA/530/SW-89-031. Office of Solid Waste Management Division, U.S. Environmental Protection Agency, Washington, D.C.

USEPA. 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance*. Office of Resource Conservation and Recovery – Program Implementation and Information Division. March.

USEPA. 2011. *Data Validation Standard Operating Procedures*. Science and Ecosystem Support Division. Region IV. Athens, GA. September.

USEPA. 2015. Federal Register. Volume 80. No. 74. Friday April 17, 2015. Part II. Environmental Protection Agency. *40 CFR Parts 257 and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule.* [EPA-HQ-RCRA–2009–0640; FRL–9919–44–OSWER]. RIN–2050–AE81. April.

USEPA. 2017. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. Office of Superfund Remediation and Technology Innovation. OLEM 9355.0-135 [EPA-540-R-2017-001]. Washington, DC. January.

N

0 800 1,600 2,400 3,200 4,000 Feet

1 inch = 800 feet

ERM

Environmental Resources Management

FOR

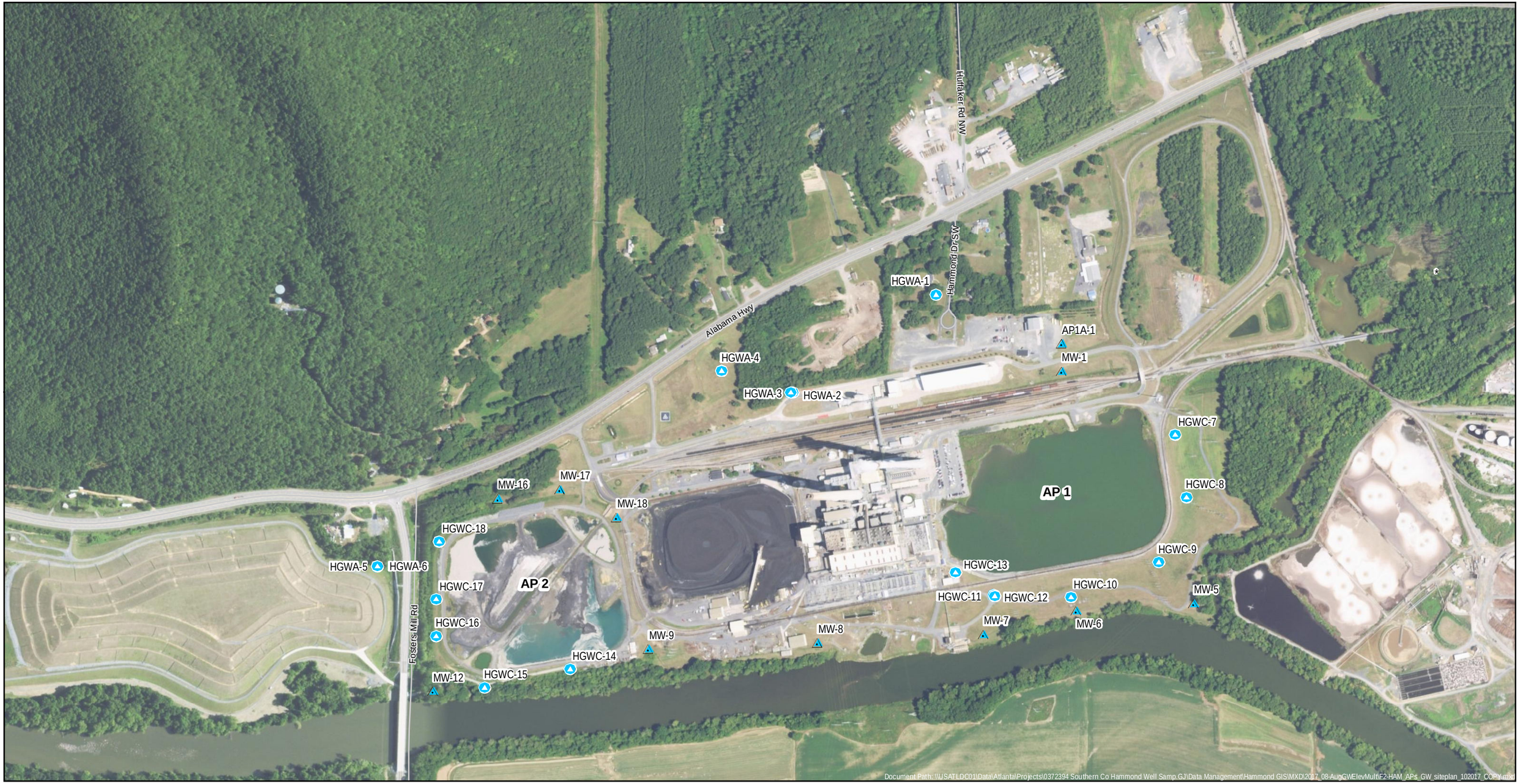
Georgia Power Company

SCALE	DRAWING NUMBER	SHEET	CONT'D	REV
	F1_AerialSiteLoc	1	As Shown	0

FIGURE 1

SITE LOCATION MAP

PLANT HAMMOND ASH PONDS 1 & 2
ROME, FLOYD COUNTY, GEORGIA



Legend

- AP 1 and 2 Monitoring Wells
- AP 1 and 2 Piezometers

N

0 300 600 1,200 1,800 2,400 Feet

1 inch = 600 feet

ERM

Environmental Resources Management

FOR

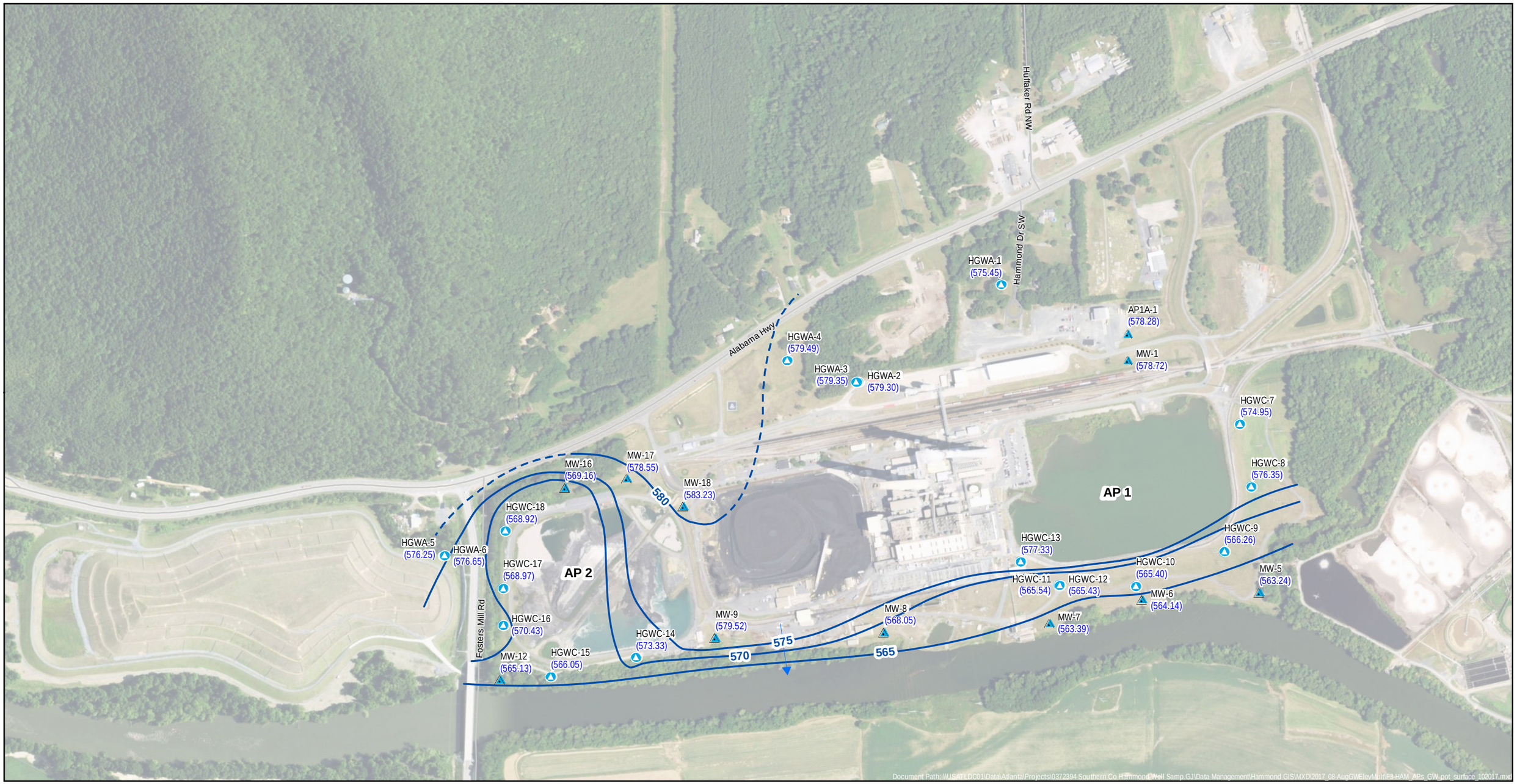
Georgia Power Company

SCALE	DRAWING NUMBER	SHEET	CONT'D	REV
As Shown	**F2-HAM-APs-SITEPLAN**	2	As Shown	0

FIGURE 2

SITE PLAN AND WELL LOCATION MAP

PLANT HAMMOND ASH PONDS 1 & 2
ROME, FLOYD COUNTY, GEORGIA



Legend

- Monitoring Wells
- Piezometers
- Apparent Potentiometric Surface Contour
- Dashed where inferred
- Groundwater Flow Direction

(579.35) = Groundwater Elevation (10/02/17, Feet Above Mean Sea Level, Ft MSL)

N

0 300 600 1,200 1,800 2,400 Feet

1 inch = 600 feet

ERM

Environmental Resources Management

FOR

Georgia Power Company

SCALE	DRAWING NUMBER	SHEET	CONT'D	REV
As Shown	F3-HAM-APs-GW_102017	2	As Shown	0

FIGURE 3

POTENTIOMETRIC SURFACE CONTOUR MAP - OCTOBER 2017
PLANT HAMMOND ASH PONDS 1 & 2
ROME, FLOYD COUNTY, GEORGIA

TABLE 1. MONITORING WELL NETWORK SUMMARY

Well ID	Hydraulic Location	Installation Date mm/dd/yyyy	Latitude	Longitude	Top of Casing Elevation (ft MSL)	Total Depth (ft)	Top of Screen Elevation (ft MSL)	Bottom of Screen Elevation (ft MSL)	Screen Length (ft)
Ash Pond 1									
HGWA-1	Upgradient	12/3/2014	34.2564070	-85.3442100	595.50	32.60	573.30	563.30	10
HGWA-2	Upgradient	12/2/2015	34.2546540	-85.3472569	588.20	27.90	570.60	560.60	10
HGWA-3	Upgradient	12/2/2015	34.2546468	-85.3472957	588.10	44.60	553.60	543.60	10
HGWC-7	Downgradient	12/3/2015	34.2539743	-85.3390579	579.50	29.80	559.90	549.90	10
HGWC-8	Downgradient	12/8/2015	34.2528610	-85.3388016	580.10	24.70	565.40	555.40	10
HGWC-9	Downgradient	12/9/2015	34.2516972	-85.3393736	580.60	46.60	544.00	534.00	10
HGWC-10	Downgradient	12/8/2015	34.2510656	-85.3412530	579.70	22.60	567.10	557.10	10
HGWC-11	Downgradient	12/10/2015	34.2510719	-85.3429003	581.00	22.30	569.00	559.00	10
HGWC-12	Downgradient	12/9/2015	34.2510673	-85.3428822	581.00	35.10	556.20	546.20	10
HGWC-13	Downgradient	12/10/2015	34.2514789	-85.3437208	594.80	44.60	560.20	550.20	10
Ash Pond 2									
HGWA-1	Upgradient	12/3/2014	34.2564070	-85.3442100	595.50	32.60	573.30	563.30	10
HGWA-2	Upgradient	12/2/2015	34.2546540	-85.3472569	588.20	27.90	570.60	560.60	10
HGWA-3	Upgradient	12/2/2015	34.2546468	-85.3472957	588.10	44.60	553.60	543.60	10
HGWA-4	Upgradient	12/3/2014	34.2550140	-85.3487810	588.30	25.70	572.90	562.90	10
HGWA-5	Upgradient	12/10/2015	34.2513715	-85.3560179	583.50	27.40	566.90	556.90	10
HGWA-6	Upgradient	12/11/2015	34.2513796	-85.3560392	583.70	50.00	544.00	534.00	10
HGWC-14	Downgradient	10/16/2014	34.2496880	-85.3519600	598.10	43.00	565.50	555.50	10
HGWC-15	Downgradient	10/20/2014	34.2493330	-85.3537790	582.50	38.00	554.90	544.90	10
HGWC-16	Downgradient	10/21/2014	34.2502410	-85.3548250	581.10	33.00	558.40	548.40	10
HGWC-17	Downgradient	10/22/2014	34.2509010	-85.3548370	585.40	27.80	568.00	558.00	10
HGWC-18	Downgradient	10/22/2014	34.2519200	-85.3547840	585.30	27.70	568.00	558.00	10

Notes:

Wells are constructed of 2-inch inside diameter American Society for Testing and Materials (ASTM) Schedule 40 PVC casing affixed to a pre-packed dual-wall slotted PVC screen.

ft = feet

MSL = mean sea level

TABLE 2. GROUNDWATER SAMPLING EVENT SUMMARY

Well ID	Hydraulic Location	Summary of Sampling Events									Status of Monitoring Well
		May 19-24, 2016	July 11-12, 2016	August 30 - September 1, 2016	October 19-25, 2016	December 6-8, 2016	January 24-26, 2017	March 21-23, 2017	May 22-25, 2017	October 3-4, 2017	
Purpose of Sampling Event		**Background**	**Background**	**Background**	**Background**	**Background**	**Background**	**Background**	**Background**	**Detection**	
HGWA-1	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
HGWA-2	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
HGWA-3	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
HGWA-4	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
HGWA-5	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
HGWA-6	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
HGWC-7	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
HGWC-8	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
HGWC-9	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
HGWC-10	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
HGWC-11	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
HGWC-12	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
HGWC-13	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
HGWC-14	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
HGWC-15	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
HGWC-16	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
HGWC-17	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
HGWC-18	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection

Notes:

BGXX = Background Event and Number

DXX = Detection Event Number

TABLE 3. SUMMARY OF HISTORICAL GROUNDWATER ELEVATIONS

Well ID	Top of Casing Elevation (ft MSL)	Groundwater Elevations (ft MSL)									
		5/18/2016	7/11/2016	8/29/2016	10/17/2016	12/5/2016	1/23/2017	3/20/2017	5/22/2017	7/20/2016	10/2/2017
HGWA-1	595.50	578.16	575.94	574.60	573.70	573.27	580.41	583.02	579.57	577.65	575.45
HGWA-2	588.20	580.18	579.60	577.48	577.98	578.92	581.37	581.89	580.95	580.32	579.30
HGWA-3	588.10	580.28	579.66	577.44	577.92	578.75	581.51	582.11	581.10	580.42	579.35
HGWA-4	588.3	580.71	579.70	577.94	577.33	578.68	583.70	582.97	581.56	580.84	579.49
HGWA-5	583.50	576.99	576.17	575.19	575.18	576.05	577.85	578.16	577.29	576.83	576.25
HGWA-6	583.70	577.53	576.55	575.57	575.52	576.40	578.29	578.95	577.93	577.40	576.65
HGWC-7	579.50	574.68	574.87	574.30	574.48	575.39	576.31	575.20	575.21	575.05	574.95
HGWC-8	580.10	576.02	576.35	575.91	575.65	576.31	578.39	576.69	576.65	576.67	576.35
HGWC-9	580.60	567.10	566.53	566.04	564.22	564.20	568.95	567.15	567.35	567.45	566.26
HGWC-10	579.70	566.29	565.18	564.99	NM	562.29	567.01	566.61	566.62	566.78	565.40
HGWC-11	581.00	566.41	565.91	565.36	NM	562.45	566.83	566.14	566.70	566.87	565.54
HGWC-12	581.00	566.30	565.81	565.24	562.95	562.41	567.81	566.00	566.63	566.80	565.43
HGWC-13	594.80	576.51	577.36	576.97	578.13	575.90	577.50	576.49	577.32	577.61	577.33
HGWC-14	598.10	573.89	573.80	573.28	572.25	572.78	575.77	574.13	574.12	574.00	573.33
HGWC-15	582.50	566.64	566.16	565.20	563.62	563.44	568.23	566.61	566.57	566.86	566.05
HGWC-16	581.10	569.53	569.18	568.75	568.66	568.22	570.05	569.15	569.46	571.10	570.43
HGWC-17	585.40	568.55	568.16	568.35	568.25	567.92	569.42	568.01	568.19	569.71	568.97
HGWC-18	585.30	568.72	568.27	568.56	568.57	568.31	567.20	567.47	567.57	569.09	568.92
AP1A-1	587.72	579.47	578.51	577.16	576.56	578.40	583.07	581.32	580.22	579.33	578.28
MW-1	588.82	579.61	578.87	577.68	577.18	578.84	582.77	581.17	580.24	579.57	578.72
MW-5	581.02	564.51	563.50	562.98	560.74	560.59	564.61	564.26	564.52	564.70	563.24
MW-6	581.90	565.25	564.42	563.83	561.54	560.97	565.51	565.13	565.46	565.67	564.14
MW-7	577.90	564.51	560.90	563.30	560.59	560.20	565.79	564.31	564.90	565.06	563.39
MW-8	587.37	568.10	569.15	568.04	566.98	566.65	567.27	567.96	568.38	568.52	568.05
MW-9	591.67	579.01	579.38	579.15	578.62	579.39	581.96	579.64	579.77	579.89	579.52
MW-12	584.33	565.89	574.97	564.28	562.26	561.60	557.83	565.19	565.91	566.43	565.13
MW-16	575.22	569.40	569.16	569.01	569.05	569.58	570.97	568.70	568.78	569.11	569.16
MW-17	587.67	578.76	579.86	578.47	579.14	579.79	582.91	579.99	578.57	578.57	578.55
MW-18	593.07	583.07	583.37	583.05	582.57	583.41	585.70	583.42	583.45	583.52	583.23

Notes:

NM = Not Measured

ft = feet MSL = mean sea level

TABLE 4. GROUNDWATER FLOW VELOCITY CALCULATIONS - OCTOBER 2017

Well ID		h_1	h_2	K (ft/day)	n_e	dh	L (ft)	i (ft/ft)	Velocity (ft/day)
HGWC-8	MW-5	576.35	563.24	1.85	0.30	13.11	675	0.019	0.117
HGWA-5	MW-12	576.25	565.13	0.47		11.12	875	0.013	0.020

Notes:

K = hydraulic conductivity

i = hydraulic gradient

n_e = effective porosity

dh = difference between h_1 and h_2

h_1 and h_2 = groundwater elevation at location 1 and 2

L = distance between locations 1 and 2

ft = feet

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWA-1	HGWA-1	HGWA-1	HGWA-1	HGWA-1	HGWA-1	HGWA-1	HGWA-1
			05/19/2016	07/11/2016	08/30/2016	10/19/2016	12/06/2016	01/24/2017	03/21/2017	05/22/2017
APPENDIX III	Boron	N/R	ND (0.0214 J)	ND (0.0142 J)	ND (0.0074 J)	ND (0.0224 J)	ND (0.0211 J)	ND (0.0165 J)	ND (0.0187 J)	0.0782
	Calcium	N/R	138	97.2	97.5	99.2	105	95.7	106	107
	Chloride	(250)	9.94	6.3	6.0	5.8	5.4	5.2	4.6	4.6
	Fluoride	4	ND (0.1050 J)	ND (0.16 J)	ND (0.09 J)	ND (0.10 J)	ND (0.11 J)	ND (0.09 J)	ND (0.13 J)	ND (0.12 J)
	Sulfate	(250)	66.9	41	36	46	59	46	63	77
	TDS	(500)	421	363	330	380	377	342	340	338
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND (0.0014 J)	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND (0.0005 J)	ND
	Barium	2	0.0346	0.0311	0.0293	0.0293	0.0304	0.0280	0.0275	0.0281
	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 (0.0005 J)	ND
	Cobalt	N/R	ND	ND (0.0004 J)	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND (0.00004 J)	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.397 U	0.738 U	0.581 U	0.213 U	0.444 U	0.373 U	0.816 U	0.554 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.

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWA-2	HGWA-2	HGWA-2	HGWA-2	HGWA-2	HGWA-2	HGWA-2	HGWA-2
			05/19/2016	07/11/2016	08/30/2016	10/19/2016	12/06/2016	01/24/2017	03/21/2017	05/22/2017
APPENDIX III	Boron	N/R	ND (0.0321 J)	ND (0.0337 J)	ND (0.0173 J)	ND (0.0341 J)	ND (0.0326 J)	ND (0.0365 J)	ND (0.0349 J)	0.0475
	Calcium	N/R	22.9	22.3	26.4	21.7	18.2	18.5	18.6	17.8
	Chloride	(250)	6.14	5.9	6.2	6.1	6.0	6.1	5.9	5.9
	Fluoride	4	ND (0.0303 J)	ND (0.05 J)	ND (0.06 J)	ND (0.04 J)	0.36	ND	ND	ND
	Sulfate	(250)	48.6	45	42	44	44	46	46	48
	TDS	(500)	143	125	168	176	145	129	103	92
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.00127 J)	ND (0.0020 J)	ND (0.0017 J)	ND	ND	ND	ND	ND (0.0006 J)
	Barium	2	0.114	0.112	0.131	0.111	0.108	0.102	0.0950	0.103
	Beryllium	0.004	ND	ND (0.0001 J)	ND	ND (0.0001 J)	ND (0.0002 J)	ND (0.0001 J)	ND (0.0001 J)	ND (0.0001 J)
	Cadmium	0.005	ND	ND	ND	ND	ND	ND (0.0001 J)	ND (0.00007 J)	ND (0.0001 J)
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	0.0293	0.0267	0.0280	0.0201	0.0184	0.0206	0.0251	0.0263
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND (0.00006 J)	ND (0.00009 J)
	Lithium	N/R	ND	ND (0.0014 J)	ND	ND	ND	ND	ND (0.0012 J)	ND
	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	0.627 U	1.38	1.05 U	1.11 U	0.741 U	0.908 U	0.567 U	0.638 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND (0.00003 J)	ND

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general 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.

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWA-3	HGWA-3	HGWA-3	HGWA-3	HGWA-3	HGWA-3	HGWA-3	HGWA-3
			05/19/2016	07/12/2016	08/30/2016	10/19/2016	12/06/2016	01/24/2017	03/21/2017	05/22/2017
APPENDIX III	Boron	N/R	ND	ND (0.0074 J)	ND	ND (0.0085 J)	ND (0.0085 J)	ND (0.0100 J)	ND (0.0079 J)	ND (0.0131 J)
	Calcium	N/R	76.2	61.5	65.1	73.2	74.9	69.6	75.7	71.5
	Chloride	(250)	5.93	6.2	6.4	6.5	7.2	6.4	7.5	6.5
	Fluoride	4	ND (0.0513 J)	ND (0.12 J)	ND (0.09 J)	ND (0.1 J)	ND (0.21 J)	ND (0.06 J)	ND (0.005 J)	ND (0.05 J)
	Sulfate	(250)	42.3	44	40	43	43	48	45	46
	TDS	(500)	267	249	254	357	285	300	288	263
APPENDIX IV	Antimony	0.006	ND	ND (0.0003 J)	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.0008 J)	ND	ND	ND	ND	ND (0.0007 J)	ND (0.0006 J)
	Barium	2	0.111	0.115	0.113	0.123	0.127	0.126	0.120	0.117
	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 (0.0007 J)
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND (0.0001 J)	ND	ND	ND	ND	ND (0.0001 J)	ND
	Lithium	N/R	ND	ND (0.0024 J)	ND (0.0025 J)	ND (0.0030 J)	ND (0.0033 J)	ND (0.0030 J)	ND (0.0034 J)	ND (0.0030 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.342 U	0.499 U	0.976 U	0.626 U	0.805 U	0.336 U	0.358 U	0.744 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.

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWA-4	HGWA-4	HGWA-4	HGWA-4	HGWA-4	HGWA-4	HGWA-4	HGWA-4
			05/19/2016	07/11/2016	08/30/2016	10/19/2016	12/06/2016	01/24/2017	03/21/2017	05/23/2017
APPENDIX III	Boron	N/R	ND	ND (0.0175 J)	ND (0.0072 J)	ND (0.0180 J)	ND (0.0158 J)	ND (0.0145 J)	ND (0.0101 J)	ND (0.0159 J)
	Calcium	N/R	48.4	73.0	85.7	89.7	80.0	30.8	34.0	43.0
	Chloride	(250)	4.56	5.0	4.9	4.6	4.5	4.7	4.3	4.5
	Fluoride	4	ND (0.0360 J)	ND (0.09 J)	ND (0.06 J)	ND (0.07 J)	ND (0.07 J)	ND	ND	ND (0.01 J)
	Sulfate	(250)	1.22	3.7	6.8	11	13	5.7	1.7	1.5
	TDS	(500)	165	266	292	338	356	131	132	183
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	0.0266	0.0309	0.031	0.0332	0.0334	0.0192	0.0175	0.0227
	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 (0.0004 J)	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND (0.0002 J)	ND	ND	ND
	Lithium	N/R	ND	ND (0.0015 J)	ND (0.0027 J)	ND (0.0042 J)	ND (0.0046 J)	ND	ND	ND
	Mercury	0.002	ND	ND	ND (0.00005 J)	ND	ND (0.00005 J)	ND (0.00010 J)	ND (0.00016 J)	ND (0.00005 J)
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.662 U	1.19	0.847 U	2.34	0.925 U	0.607 U	0.0740 U	0.550 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.

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWA-5	HGWA-5	HGWA-5	HGWA-5	HGWA-5	HGWA-5	HGWA-5	HGWA-5
			05/19/2016	07/11/2016	08/30/2016	10/20/2016	12/08/2016	01/24/2017	03/21/2017	05/23/2017
APPENDIX III	Boron	N/R	ND	ND (0.0052 J)	ND (0.0068 J)	ND (0.0135 J)	ND (0.0083 J)	ND (0.0072 J)	ND	ND (0.0095 J)
	Calcium	N/R	35.5	35.4	28.0	26.7	23.5	24.5	30.8	24.2
	Chloride	(250)	1.57	2.0	2.0	2.2	2.0	1.6	2.0	1.7
	Fluoride	4	ND (0.0800 J)	ND (0.09 J)	ND (0.08 J)	ND (0.10 J)	ND (0.08 J)	ND (0.09 J)	ND (0.04 J)	ND (0.04 J)
	Sulfate	(250)	25.0	27	23	19	20	20	23	21
	TDS	(500)	168	158	141	99	116	156	144	134
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND (0.0023 J)	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	0.0519	0.0565	0.0548	0.0539	0.0496	0.0478	0.0453	0.0496
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND (0.0010 J)	ND (0.0010 J)	ND (0.0008 J)	ND (0.0006 J)	ND (0.0006 J)	ND (0.0008 J)	ND (0.0006 J)
	Lead	0.015	ND	ND	ND	ND (0.0002 J)	ND	ND	ND	ND (0.00009 J)
	Lithium	N/R	ND	ND (0.0034 J)	ND (0.0030 J)	ND (0.0031 J)	ND (0.0027 J)	ND (0.0028 J)	ND (0.0037 J)	ND (0.0033 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.685 U	1.68	2.42	0.351 U	0.905 U	0.0774 U	0.0599 U	0.477 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND (0.0011 J)	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.

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWA-6	HGWA-6	HGWA-6	HGWA-6	HGWA-6	HGWA-6	HGWA-6	HGWA-6
			05/20/2016	07/11/2016	08/30/2016	10/20/2016	12/08/2016	01/24/2017	03/21/2017	05/23/2017
APPENDIX III	Boron	N/R	ND (0.0363 J)	ND (0.0179 J)	ND (0.0140 J)	ND (0.0197 J)	ND (0.0159 J)	ND	ND (0.0166 J)	ND (0.0167 J)
	Calcium	N/R	56.1	49.3	53.9	50.7	49.2	48.3	51.3	49.1
	Chloride	(250)	1.35	1.7	1.6	1.6	1.6	1.9	1.3	1.2
	Fluoride	4	ND (0.0650 J)	ND (0.13 J)	ND (0.07 J)	ND (0.06 J)	ND (0.06 J)	ND (0.02 J)	ND (0.08 J)	ND (0.006 J)
	Sulfate	(250)	34.4	34	36	36	36	37	37	38
	TDS	(500)	223	225	232	225	235	272	222	231
APPENDIX IV	Antimony	0.006	ND	ND (0.0010 J)	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	0.174	0.134	0.212	0.157	0.162	0.168	0.186	0.187
	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 (0.0007 J)	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND (0.0003 J)
	Lithium	N/R	ND	ND (0.0100 J)	ND (0.0095 J)	ND (0.0105 J)	ND (0.0100 J)	ND (0.0108 J)	ND (0.0115 J)	ND (0.0110 J)
	Mercury	0.002	ND	ND	ND (0.000044 J)	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND (0.0008 J)	ND	ND	ND	ND	ND (0.0002 J)	ND
	Radium	5	0.843 U	0.494 U	0.946 U	0.664 U	0.421U	0.965 U	0.139 U	0.308 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.

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWC-7	HGWC-7	HGWC-7	HGWC-7	HGWC-7	HGWC-7	HGWC-7	HGWC-7
			05/20/2016	07/12/2016	09/01/2016	10/20/2016	12/06/2016	01/25/2017	03/21/2017	05/23/2017
APPENDIX III	Boron	N/R	0.885	0.857	0.904	0.936	1.06	0.764	0.857	0.910
	Calcium	N/R	117	88.8	96.3	96.9	104	94.5	109	93.3
	Chloride	(250)	50.4	50	50	49	51	54	46	49
	Fluoride	4	ND (0.0828 J)	ND (0.20 J)	0.51	0.40	ND (0.26 J)	ND (0.24 J)	ND (0.13 J)	ND (0.11 J)
	Sulfate	(250)	96.0	100	100	110	110	110	110	110
	TDS	(500)	427	410	484	393	492	461	415	450
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	0.0687	0.0731	0.0747	0.0720	0.0752	0.0747	0.0722	0.0794
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.0001 J)
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND (0.0003 J)	ND	ND (0.0008 J)	ND (0.0009 J)	ND (0.0005 J)	ND (0.0005 J)	ND (0.0005 J)
	Lead	0.015	ND	ND	ND	ND	ND (0.0001 J)	ND (0.0001 J)	ND (0.00009 J)	ND (0.00008 J)
	Lithium	N/R	ND	ND (0.0021 J)	ND (0.0025 J)	ND (0.0021 J)	ND (0.0026 J)	ND (0.0024 J)	ND (0.0026 J)	ND (0.0026 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	0.0280	0.0273	0.0274	0.0360	0.0365	0.0317	0.0346	0.0336
	Radium	5	0.62 U	0.283 U	0.703 U	1.97	2.00	1.06 U	0.668 U	0.621 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.

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWC-8	HGWC-8	HGWC-8	HGWC-8	HGWC-8	HGWC-8	HGWC-8	HGWC-8
			05/20/2016	07/12/2016	09/01/2016	10/20/2016	12/06/2016	01/25/2017	03/21/2017	05/23/2017
APPENDIX III	Boron	N/R	1.71	1.43	1.91	1.72	2.06	2.01	2.08	2.32
	Calcium	N/R	159	127	135	134	142	142	148	140
	Chloride	(250)	109	110	110	110	100	110	110	130
	Fluoride	4	0.4990	0.67	0.94	0.56	0.76	1.1	0.46	0.65
	Sulfate	(250)	219	230	230	240	250	260	240	270
	TDS	(500)	711	704	763	644	733	744	818	765
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	0.0808	0.0830	0.0829	0.0811	0.0845	0.0780	0.0791	0.0846
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND (0.000240 J)	ND (0.0002 J)	ND (0.0001 J)	ND (0.00010 J)	0.0017	ND (0.0002 J)	ND (0.0002 J)	ND (0.0003 J)
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND (0.0005 J)	ND
	Cobalt	N/R	ND (0.00207 J)	ND (0.0019 J)	ND (0.0023 J)	ND (0.0020 J)	ND (0.0026 J)	ND (0.0020 J)	ND (0.0023 J)	ND (0.0023 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0023 J)	ND (0.0029 J)	ND (0.0027 J)	ND (0.0032 J)	ND (0.0026 J)	ND (0.0029 J)	ND (0.0029 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	0.446	0.455	0.481	0.472	0.520	0.478	0.547	0.482
	Radium	5	0.56 U	0.636 U	0.818 U	1.04 U	0.771 U	0.859 U	0.851 U	0.705 U
	Selenium	0.05	ND	ND	ND	ND	ND (0.0024 J)	ND	ND	ND
	Thallium	0.002	ND	ND (0.00007 J)	ND	ND	ND	ND	ND (0.00009 J)	ND (0.00008 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.
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.

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWC-9	HGWC-9	HGWC-9	HGWC-9	HGWC-9	HGWC-9	HGWC-9	HGWC-9
			05/23/2016	07/12/2016	09/01/2016	10/20/2016	12/06/2016	01/26/2017	03/22/2017	05/23/2017
APPENDIX III	Boron	N/R	1.76	1.56	2.00	1.68	2.15	1.87	1.99	2.29
	Calcium	N/R	179	174	170	133	181	175	183	181
	Chloride	(250)	152	160	160	110	150	170	160	150
	Fluoride	4	ND	ND (0.24 J)	0.46	0.56	0.31	ND (0.004 J)	ND (0.28 J)	ND (0.29 J)
	Sulfate	(250)	207	230	230	240	240	270	240	240
	TDS	(500)	984	887	956	642	899	869	936	939
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND (0.0008 J)	ND
	Barium	2	0.117	0.13	0.130	0.0806	0.128	0.142	0.122	0.127
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND (0.0002 J)	ND (0.0001 J)	ND	ND (0.00007 J)	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND (0.0006 J)	ND (0.0007 J)	ND (0.0020 J)	ND (0.0011 J)	ND (0.0006 J)	ND (0.0005 J)	ND (0.0006 J)
	Lead	0.015	ND	ND	ND	ND	ND (0.0002 J)	ND (0.0001 J)	ND	ND (0.0001 J)
	Lithium	N/R	ND	ND (0.0040 J)	ND (0.0044 J)	ND (0.0027 J)	ND (0.0050 J)	ND (0.0042 J)	ND (0.0043 J)	ND (0.0048 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND (0.00004 J)	ND	ND
	Molybdenum	N/R	0.0187	0.0229	0.0239	0.477	0.0236	0.0234	0.0219	0.0242
	Radium	5	0.826 U	0.511 U	0.762 U	1.17	0.126 U	0.515 U	0.451 U	0.924 U
	Selenium	0.05	ND	ND	ND	ND	ND (0.0037 J)	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.

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWC-10	HGWC-10	HGWC-10	HGWC-10	HGWC-10	HGWC-10	HGWC-10	HGWC-10
			05/23/2016	07/12/2016	09/01/2016	10/24/2016	12/07/2016	01/26/2017	03/22/2017	05/24/2017
APPENDIX III	Boron	N/R	0.720	0.778	0.786	0.831	1.01	0.108	0.788	0.814
	Calcium	N/R	167	143	156	156	183	82.6	154	171
	Chloride	(250)	56.1	63	77	99	96	7.0	82	81
	Fluoride	4	ND (0.0394 J)	ND (0.15 J)	0.50	ND (0.06 J)	0.44	ND (0.29 J)	0.34	ND (0.13 J)
	Sulfate	(250)	175	190	190	190	200	90	170	190
	TDS	(500)	629	661	769	643	697	368	683	696
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	0.0877	0.0926	0.0994	0.101	0.107	0.0538	0.0962	0.0996
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND (0.000115 J)	ND	ND (0.0001 J)	ND (0.0001 J)	ND (0.0001 J)	ND	ND (0.0001 J)	ND (0.0002 J)
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND (0.0006 J)	ND (0.0007 J)	ND (0.0009 J)	ND (0.0012 J)	ND	ND (0.0006 J)	ND (0.0006 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND (0.00005 J)	ND	ND
	Molybdenum	N/R	ND	ND (0.0013 J)	ND	ND	ND	ND	ND (0.0013 J)	ND (0.0014 J)
	Radium	5	0.419 U	0.855	0.844 U	0.917 U	0.558 U	0.922 U	0.751 U	0.725 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND (0.0041 J)	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.

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWC-11	HGWC-11	HGWC-11	HGWC-11	HGWC-11	HGWC-11	HGWC-11	HGWC-11
			05/23/2016	07/12/2016	09/01/2016	10/24/2016	12/07/2016	01/26/2017	03/22/2017	05/24/2017
APPENDIX III	Boron	N/R	0.787	1.17	1.49	2.54	2.96	2.23	0.840	2.29
	Calcium	N/R	131	124	107	145	159	121	130	117
	Chloride	(250)	51.9	100	58	220	180	90	37	69
	Fluoride	4	ND (0.2030 J)	0.44	0.67	ND (0.26 J)	0.55	ND (0.27 J)	0.66	0.35
	Sulfate	(250)	260	390	240	370	260	230	330	230
	TDS	(500)	564	627	656	836	748	571	597	566
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.0015 J)	ND	ND	ND	ND	0.0053	ND
	Barium	2	0.0466	0.0616	0.0497	0.0794	0.100	0.0696	0.0346	0.0437
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND (0.00009 J)	ND
	Cadmium	0.005	ND	ND	ND	ND	ND (0.0001 J)	ND	ND (0.0001 J)	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND (0.0003 J)	ND
	Cobalt	N/R	ND	ND (0.0021 J)	ND (0.0025 J)	ND (0.0032 J)	ND (0.0030 J)	ND (0.0014 J)	ND (0.0014 J)	ND (0.0008 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND (0.0003 J)	ND (0.00009 J)
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND (0.00005 J)	ND	ND
	Molybdenum	N/R	0.0164	0.0251	0.0259	0.0293	0.0209	0.0277	0.0110	0.0373
	Radium	5	0.509 U	0.784 U	0.261 U	1.42	0.781 U	0.842 U	0.318 U	0.687 U
	Selenium	0.05	0.0106	ND (0.0057 J)	ND (0.0057 J)	ND (0.0021 J)	ND (0.0015 J)	ND (0.0062 J)	0.0263	ND (0.0038 J)
	Thallium	0.002	ND	ND (0.00008 J)	ND	ND	ND	ND	ND	ND (0.00008 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.
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.

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWC-12	HGWC-12	HGWC-12	HGWC-12	HGWC-12	HGWC-12	HGWC-12	HGWC-12
			05/23/2016	07/12/2016	09/01/2016	10/24/2016	12/07/2016	01/26/2017	03/22/2017	05/24/2017
APPENDIX III	Boron	N/R	2.20	1.98	2.28	2.75	3.35	3.07	3.04	2.95
	Calcium	N/R	195	181	179	193	193	172	162	158
	Chloride	(250)	160	160	140	160	190	160	130	120
	Fluoride	4	ND (0.2120 J)	0.31	0.62	ND (0.19 J)	0.73	ND (0.12 J)	0.44	0.34
	Sulfate	(250)	288	320	300	270	280	260	220	210
	TDS	(500)	1060	909	1480	868	811	846	804	803
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.00460 J)	0.0050	ND (0.0043 J)	ND (0.0049 J)	ND (0.0046 J)	ND	ND (0.0019 J)	ND (0.0022 J)
	Barium	2	0.133	0.135	0.123	0.135	0.130	0.127	0.112	0.106
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND (0.0002 J)	ND	ND (0.0003 J)	ND (0.00009 J)
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND (0.0004 J)	ND
	Cobalt	N/R	ND	ND (0.0018 J)	ND (0.0016 J)	ND (0.0017 J)	ND (0.0021 J)	ND (0.0016 J)	ND (0.0018 J)	ND (0.0015 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0107 J)	ND (0.0113 J)	ND (0.0118 J)	ND (0.0114 J)	ND (0.0155 J)	ND (0.0099 J)	ND (0.0098 J)	ND (0.0105 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND (0.0413 J)	0.0484	0.0474	0.0470	0.0432	0.0484	0.0494	0.0470
	Radium	5	1.12	1.61	1.23	1.98	0.319 U	0.540 U	0.635 U	1.01
	Selenium	0.05	ND	ND	ND	ND	ND (0.0011 J)	ND	ND	ND
	Thallium	0.002	ND	ND (0.0002 J)	ND	ND	ND	ND	ND (0.0001 J)	ND (0.00009 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.
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.

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWC-13	HGWC-13	HGWC-13	HGWC-13	HGWC-13	HGWC-13	HGWC-13	HGWC-13
			05/23/2016	07/12/2016	09/01/2016	10/24/2016	12/07/2016	01/26/2017	03/22/2017	05/24/2017
APPENDIX III	Boron	N/R	2.15	1.91	2.30	4.01	3.85	2.45	1.99	1.74
	Calcium	N/R	133	101	120	127	113	77.9	85.1	77.1
	Chloride	(250)	93.2	78	100	140	110	70	59	50
	Fluoride	4	ND (0.2587 J)	0.53	0.74	0.31	1.0	0.68	0.76	0.54
	Sulfate	(250)	215	210	190	180	120	83	100	110
	TDS	(500)	683	563	702	647	465	411	427	377
APPENDIX IV	Antimony	0.006	ND	ND (0.0003 J)	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	0.329	0.297	0.314	0.334	0.350	0.424	0.419	0.393
	Barium	2	0.0779	0.0697	0.0700	0.0882	0.0798	0.0738	0.0755	0.0627
	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 (0.0004 J)	ND
	Cobalt	N/R	ND (0.00361 J)	ND (0.0032 J)	ND (0.0033 J)	ND (0.0040 J)	ND (0.0034 J)	ND (0.0024 J)	ND (0.0026 J)	ND (0.0022 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND (0.00007 J)	ND
	Lithium	N/R	ND (0.0422 J)	ND (0.0366 J)	ND (0.0400 J)	ND (0.0435 J)	ND (0.0477 J)	ND (0.0342 J)	ND (0.0353 J)	ND (0.0317 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND (0.00004 J)	ND	ND (0.00005 J)
	Molybdenum	N/R	0.0270	0.0316	0.0336	0.0352	0.0383	0.0410	0.0426	0.0400
	Radium	5	0.625 U	0.478 U	0.595 U	1.54	0.657 U	1.22	0.285 U	0.655 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
	Thallium	0.002	ND (0.000378 J)	ND (0.0004 J)	ND (0.0004 J)	ND (0.0005 J)	ND (0.0004 J)	ND (0.0004 J)	ND (0.0004 J)	ND (0.0003 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.
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.

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWC-14	HGWC-14	HGWC-14	HGWC-14	HGWC-14	HGWC-14	HGWC-14	HGWC-14
			05/23/2016	07/12/2016	09/01/2016	10/24/2016	12/07/2016	01/26/2017	03/23/2017	05/24/2017
APPENDIX III	Boron	N/R	15.4	16.0	12.3	13.7	16.5	19.2	23.1	25.8
	Calcium	N/R	664	528	586	564	590	558	652	617
	Chloride	(250)	659	620	510	110	510	640	600	510
	Fluoride	4	ND	ND (0.20 J)	ND (0.08 J)	ND (0.04 J)	ND (0.11 J)	ND (0.13 J)	ND (0.28 J)	0.32
	Sulfate	(250)	1070	1300	1300	280	1300	1400	1500	1400
	TDS	(500)	4130	3140	3200	2920	2740	3080	3060	3140
APPENDIX IV	Antimony	0.006	ND	ND (0.0003 J)	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.00268 J)	0.0059	0.0056	0.0058	ND	0.0089	0.0069	ND (0.0048 J)
	Barium	2	ND	0.0214	0.0208	0.0208	0.0220	0.0238	0.0244	0.0228
	Beryllium	0.004	ND	ND (0.0005 J)	ND (0.0005 J)	ND (0.0005 J)	ND (0.0006 J)	ND (0.0005 J)	ND (0.0006 J)	ND (0.0005 J)
	Cadmium	0.005	ND (0.000139 J)	ND	ND (0.0001 J)	ND (0.0002 J)	ND (0.0001 J)	ND (0.0001 J)	ND (0.0002 J)	ND (0.0001 J)
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	0.0232	0.0248	0.0253	0.0269	0.0294	0.0311	0.0279
	Lead	0.015	ND (0.00182 J)	ND (0.0015 J)	ND (0.0016 J)	ND (0.0016 J)	ND (0.0018 J)	ND (0.0020 J)	ND (0.0019 J)	ND (0.0016 J)
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.568 U	1.31	1.64	1.88	1.35	2.10	1.17	1.000 U
	Selenium	0.05	0.0170	0.0146	0.0137	0.0135	ND (0.0100 J)	0.0214	0.0167	ND (0.0083 J)
	Thallium	0.002	ND (0.000306 J)	ND (0.0003 J)	ND (0.0003 J)	ND (0.0004 J)	ND (0.0003 J)	ND (0.0003 J)	ND (0.0003 J)	ND (0.0003 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.
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.

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWC-15	HGWC-15	HGWC-15	HGWC-15	HGWC-15	HGWC-15	HGWC-15	HGWC-15
			05/23/2016	07/12/2016	09/01/2016	10/24/2016	12/07/2016	01/26/2017	03/23/2017	05/24/2017
APPENDIX III	Boron	N/R	2.02	1.65	1.93	1.93	2.23	2.31	2.72	2.26
	Calcium	N/R	184	186	189	200	203	212	229	265
	Chloride	(250)	209	190	200	200	240	260	280	240
	Fluoride	4	ND	ND (0.09 J)	ND (0.22 J)	ND (0.07 J)	ND (0.23 J)	ND	ND (0.12 J)	0.31
	Sulfate	(250)	424	440	440	420	450	490	530	500
	TDS	(500)	1270	1100	1180	1090	1040	1260	1360	1320
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND (0.0008 J)	ND
	Barium	2	ND (0.0315 J)	0.0372	0.0364	0.0326	0.0301	0.0287	0.0329	0.0283
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND (0.00271 J)	0.0019	0.0017	0.0018	0.0018	0.0013	0.0020	0.0041
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND (0.0005 J)	ND
	Cobalt	N/R	ND (0.0419 J)	0.0393	0.0450	0.0557	0.0536	0.0550	0.0715	0.0446
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND (0.0010 J)	ND (0.0001 J)
	Lithium	N/R	ND	ND	ND (0.0021 J)	ND	ND	ND	ND (0.0016 J)	ND (0.0029 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND (0.0007 J)	ND	ND	ND	ND	ND	ND
	Radium	5	0.171 U	0.611 U	0.766 U	0.969	0.302 U	0.626 U	0.662 U	0.202 U
	Selenium	0.05	ND	ND	ND	ND (0.0012 J)	ND (0.0041 J)	ND	ND (0.0016 J)	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.

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWC-16	HGWC-16	HGWC-16	HGWC-16	HGWC-16	HGWC-16	HGWC-16	HGWC-16
			05/23/2016	07/12/2016	09/01/2016	10/25/2016	12/07/2016	01/26/2017	03/22/2017	05/24/2017
APPENDIX III	Boron	N/R	1.36	1.62	1.31	1.27	1.42	1.19	1.32	1.67
	Calcium	N/R	146	142	141	138	146	139	150	153
	Chloride	(250)	25.8	34	34	35	38	41	41	44
	Fluoride	4	ND (0.0380 J)	ND (0.26 J)	0.42	ND (0.25 J)	ND (0.23 J)	ND (0.02 J)	0.30	0.46
	Sulfate	(250)	203	220	220	230	220	250	240	230
	TDS	(500)	570	585	625	563	561	608	599	598
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND (0.0005 J)	ND
	Barium	2	0.0841	0.0886	0.0934	0.0991	0.101	0.105	0.110	0.106
	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 (0.0021 J)	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND (0.0001 J)	ND (0.0002 J)	ND (0.0001 J)
	Lithium	N/R	ND	ND (0.0037 J)	ND (0.0033 J)	ND (0.0029 J)	ND (0.0029 J)	ND (0.0028 J)	ND (0.0025 J)	ND (0.0029 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.000 U	0.182 U	1.23	1.05 U	1.11 U	1.29 U	0.453 U	1.05
	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.

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWC-17	HGWC-17	HGWC-17	HGWC-17	HGWC-17	HGWC-17	HGWC-17	HGWC-17
			05/23/2016	07/12/2016	09/01/2016	10/25/2016	12/07/2016	01/26/2017	03/22/2017	05/25/2017
APPENDIX III	Boron	N/R	5.70	9.58	5.76	5.38	5.74	5.78	5.52	8.58
	Calcium	N/R	225	199	213	206	212	198	239	292
	Chloride	(250)	94.0	100	95	98	89	99	100	99
	Fluoride	4	ND	ND (0.09 J)	ND (0.03 J)	ND (0.07 J)	0.54	ND	ND (0.07 J)	0.42
	Sulfate	(250)	395	460	430	440	410	440	460	430
	TDS	(500)	1010	976	1060	ND	866	1000	1080	1080
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND (0.0007 J)	ND (0.0007 J)
	Barium	2	ND (0.0222 J)	0.0221	0.0227	0.0225	0.0227	0.0229	0.0248	0.0255
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND (0.00007 J)	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	0.0167	0.0148	0.0151	0.0141	0.0141	0.0154	0.0169	0.0154
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND (0.0001 J)	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND (0.0011 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.618 U	0.867	0.857 U	1.11 U	0.964 U	0.612 U	0.437 U	1.21 U
	Selenium	0.05	ND	ND	ND (0.0014 J)	ND	ND (0.0023 J)	ND	ND	ND
	Thallium	0.002	ND	ND (0.0001 J)	ND	ND	ND	ND	ND (0.0001 J)	ND (0.0001 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.
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.

TABLE 5. PLANT HAMMOND ASH POND 1 AND ASH POND 2
ANLAYTICAL DATA SUMMARY

Substance		MCL/ (SMCL)	Well ID							
			HGWC-18	HGWC-18	HGWC-18	HGWC-18	HGWC-18	HGWC-18	HGWC-18	HGWC-18
			05/24/2016	07/12/2016	09/01/2016	10/25/2016	12/08/2016	01/26/2017	03/23/2017	05/25/2017
APPENDIX III	Boron	N/R	9.33	11.9	8.80	8.50	7.15	9.17	10.6	13.2
	Calcium	N/R	403	328	379	362	366	394	440	492
	Chloride	(250)	280	300	270	290	300	340	350	290
	Fluoride	4	ND	0.54	0.49	0.58	0.63	0.71	0.57	0.54
	Sulfate	(250)	834	930	890	950	910	970	980	920
	TDS	(500)	1900	1950	2000	1870	1930	1950	2080	1970
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.00294 J)	0.0074	0.0073	0.0060	0.0070	0.0068	0.0082	0.0060
	Barium	2	ND	0.0346	0.0336	0.0349	0.0339	0.0293	0.0313	0.0336
	Beryllium	0.004	ND (0.00278 J)	0.0032	0.0034	0.0034	0.0033	0.0034	0.0036	0.0036
	Cadmium	0.005	ND	0.0022	0.0024	0.0022	0.0024	0.0025	0.0025	0.0027
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND (0.0005 J)	ND
	Cobalt	N/R	ND (0.170 J)	0.168	0.180	0.188	0.206	0.195	0.223	0.209
	Lead	0.015	ND (0.00154 J)	ND (0.0012 J)	ND (0.0014 J)	ND (0.0015 J)	ND (0.0017 J)	ND (0.0013 J)	ND (0.0010 J)	ND (0.0012 J)
	Lithium	N/R	ND (0.0142 J)	ND (0.0141 J)	ND (0.0158 J)	ND (0.0160 J)	ND (0.0144 J)	ND (0.0136 J)	ND (0.0151 J)	ND (0.0154 J)
	Mercury	0.002	ND	ND	ND (0.00006 J)	ND (0.00004 J)	ND	ND (0.00008 J)	ND (0.00009 J)	ND (0.00008 J)
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.82	1.76	1.51	2.69	2.21	2.26	1.81	1.63
	Selenium	0.05	ND	0.036	0.0347	0.0282	0.0373	0.0385	0.0414	0.0190
	Thallium	0.002	ND	ND (0.0002 J)	ND	ND	ND	ND	ND (0.0002 J)	ND (0.0002 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.
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.

Appendix A
Analytical Data Reports

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

June 10, 2016

Joju Abraham
Southern Company Services
Earth Sciences & Env Eng
42 Inverness Center Parkway
Birmingham, AL 35242

RE: Workorder: 103518 CCR - Hammond AP

Dear Joju Abraham:

The Environmental Laboratory has completed the analysis of your samples and reports the results on the attached pages. Our laboratory maintains current NELAC accreditation for those analytes listed under the scope of accreditation. Analytes not listed in this scope are currently not maintained under an accreditation program. The analytes of this report that are listed under our NELAC scope of accreditation meet all requirements of the NELAC standards, unless otherwise noted by data qualifiers. Internal clients can view the scope and effective dates of our accreditation at:

http://environmental.southernco.com/gpc/environmental-lab/chem.html

External clients can receive a copy of our scope of accreditation by contacting the laboratory.

All results relate only to the contents of the samples submitted. Samples will be disposed of after 30 days unless otherwise instructed. This report should only be reproduced in full with all associated records. This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

If you have any questions or comments, contact your Program Manager:

L. Biddy

lbbiddy@southernco.com

(404) 799-2132 / 8-530-2132

Respectfully submitted,

R. S. Dickerson
rsdicker@southernco.com
QA/QC Specialist

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

SAMPLE SUMMARY

Workorder: 103518 CCR - Hammond AP

Lab ID	Sample ID	Analysis Request Number	Matrix	Date Collected	Date Received
103518001	HGWC-7	N/A	Water	5/20/2016 09:05	5/20/2016 13:16
103518002	HGWC-8	N/A	Water	5/20/2016 09:09	5/20/2016 13:16
103518003	HGWA-6	N/A	Water	5/20/2016 09:23	5/20/2016 13:16

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103518 CCR - Hammond AP

Lab ID:	**103518001**	**Date Received:**	**5/20/2016 13:16**
Sample ID:	**HGWC-7**	**Date Collected:**	**5/20/2016 09:05**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					6/1/2016 11:30	KLW	6/6/2016 18:45	MRP	
Calcium	117	mg/L	1.00	5.00	6/1/2016 11:30	KLW	6/6/2016 18:45	MRP	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
TOTAL METALS					5/26/2016 06:33	WCM	5/27/2016 09:04	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 09:04	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/25/2016 10:15	KLW	5/27/2016 21:20	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/25/2016 10:15	KLW	5/27/2016 21:20	ELS	
Boron	0.885	mg/L	0.0400	0.200	5/25/2016 10:15	KLW	6/3/2016 16:29	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/27/2016 21:20	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/27/2016 21:20	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/25/2016 10:15	KLW	5/27/2016 21:20	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/27/2016 21:20	ELS	
Molybdenum	0.0280	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/27/2016 21:20	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/25/2016 10:15	KLW	5/27/2016 21:20	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/25/2016 10:15	KLW	5/27/2016 21:20	ELS	
Barium	0.0687	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/27/2016 21:20	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/25/2016 10:15	KLW	5/27/2016 21:20	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/25/2016 10:15	KLW	5/27/2016 21:20	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/3/2016 13:44	LBB	
Sulfate	96.0	mg/L	7.50	25.0			6/3/2016 13:44	LBB	
Chloride	50.4	mg/L	1.00	6.25			6/3/2016 13:44	LBB	
Fluoride	0.0828J	mg/L	0.0100	0.3000			6/3/2016 09:45	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/24/2016 18:35	KLW	
TDS	427	mg/L	25	25			5/24/2016 18:35	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103518 CCR - Hammond AP

Lab ID:	**103518002**	**Date Received:**	**5/20/2016 13:16**
Sample ID:	**HGWC-8**	**Date Collected:**	**5/20/2016 09:09**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					6/1/2016 11:30	KLW	6/6/2016 18:51	MRP	
Calcium	159	mg/L	1.00	5.00	6/1/2016 11:30	KLW	6/6/2016 18:51	MRP	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
TOTAL METALS					5/26/2016 06:33	WCM	5/27/2016 09:12	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 09:12	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/25/2016 10:15	KLW	5/27/2016 21:24	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/25/2016 10:15	KLW	5/27/2016 21:24	ELS	
Boron	1.71	mg/L	0.100	0.500	5/25/2016 10:15	KLW	6/3/2016 16:34	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/27/2016 21:24	ELS	
Cobalt	0.00207J	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/27/2016 21:24	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/25/2016 10:15	KLW	5/27/2016 21:24	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/27/2016 21:24	ELS	
Molybdenum	0.446	mg/L	0.0100	0.0500	5/25/2016 10:15	KLW	6/3/2016 16:34	ELS	
Cadmium	0.000240J	mg/L	0.000100	0.00100	5/25/2016 10:15	KLW	5/27/2016 21:24	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/25/2016 10:15	KLW	5/27/2016 21:24	ELS	
Barium	0.0808	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/27/2016 21:24	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/25/2016 10:15	KLW	5/27/2016 21:24	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/25/2016 10:15	KLW	5/27/2016 21:24	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/1/2016 11:19	LBB	
Sulfate	219	mg/L	30.0	100			6/1/2016 11:19	LBB	
Chloride	109	mg/L	4.00	25.0			6/1/2016 11:19	LBB	
Fluoride	0.4990	mg/L	0.0100	0.3000			5/31/2016 14:51	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/24/2016 18:35	KLW	
TDS	711	mg/L	25	25			5/24/2016 18:35	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103518 CCR - Hammond AP

Lab ID:	**103518003**	**Date Received:**	**5/20/2016 13:16**
Sample ID:	**HGWA-6**	**Date Collected:**	**5/20/2016 09:23**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					6/1/2016 11:30	KLW	6/6/2016 18:57	MRP	
Calcium	56.1	mg/L	0.200	1.00	6/1/2016 11:30	KLW	6/6/2016 18:57	MRP	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
TOTAL METALS					5/26/2016 06:33	WCM	5/27/2016 09:17	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 09:17	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/25/2016 10:15	KLW	5/27/2016 21:29	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/25/2016 10:15	KLW	5/27/2016 21:29	ELS	
Boron	0.0363J	mg/L	0.0200	0.100	5/25/2016 10:15	KLW	5/27/2016 21:29	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/27/2016 21:29	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/27/2016 21:29	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/25/2016 10:15	KLW	5/27/2016 21:29	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/27/2016 21:29	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/27/2016 21:29	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/25/2016 10:15	KLW	5/27/2016 21:29	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/25/2016 10:15	KLW	5/27/2016 21:29	ELS	
Barium	0.174	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/27/2016 21:29	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/25/2016 10:15	KLW	5/27/2016 21:29	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/25/2016 10:15	KLW	5/27/2016 21:29	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/1/2016 11:58	LBB	
Sulfate	34.4	mg/L	0.6000	2.00			6/1/2016 11:58	LBB	
Chloride	1.35	mg/L	0.0400	0.2500			5/31/2016 16:46	LBB	
Fluoride	0.0650J	mg/L	0.0100	0.3000			5/31/2016 16:46	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/24/2016 18:35	KLW	
TDS	223	mg/L	25	25			5/24/2016 18:35	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS QUALIFIERS

Workorder: 103518 CCR - Hammond AP

PARAMETER QUALIFIERS

ND	None detected at the laboratory Method Detection Limit
MDL	Method Detection Limit
RL	Reporting Limit
J	The reported value is between the laboratory method detection limit and the laboratory reporting limit

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103518 CCR - Hammond AP

QC Batch: DIGM/4321 Analysis Method: EPA 6020B

QC Batch Method: EPA 3005A

Associated Lab Samples: 103518001 103518002 103518003

METHOD BLANK: 106220

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
TOTAL METALS				
Lithium	mg/L	<0.0500	0.0500	
Beryllium	mg/L	<0.00300	0.00300	
Boron	mg/L	<0.100	0.100	
Chromium	mg/L	<0.0100	0.0100	
Cobalt	mg/L	<0.0100	0.0100	
Arsenic	mg/L	<0.00500	0.00500	
Selenium	mg/L	<0.0100	0.0100	
Molybdenum	mg/L	<0.0100	0.0100	
Cadmium	mg/L	<0.00100	0.00100	
Antimony	mg/L	<0.00300	0.00300	
Barium	mg/L	<0.0100	0.0100	
Thallium	mg/L	<0.00100	0.00100	
Lead	mg/L	<0.00500	0.00500	

LABORATORY CONTROL SAMPLE: 106221

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Lithium	mg/L	0.2	0.205	102	80-120	
Beryllium	mg/L	0.1	0.0978	97.8	80-120	
Boron	mg/L	0.3	0.313	104	80-120	
Chromium	mg/L	0.1	0.105	105	80-120	
Cobalt	mg/L	0.1	0.106	106	80-120	
Arsenic	mg/L	0.1	0.102	102	80-120	
Selenium	mg/L	0.1	0.0979	97.9	80-120	
Molybdenum	mg/L	0.1	0.0992	99.2	80-120	
Cadmium	mg/L	0.1	0.104	104	80-120	
Antimony	mg/L	0.1	0.105	105	80-120	
Barium	mg/L	0.1	0.102	102	80-120	
Thallium	mg/L	0.1	0.0918	91.8	80-120	
Lead	mg/L	0.1	0.0954	95.4	80-120	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103518 CCR - Hammond AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106222 106223 Original: 103483005

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Lithium	mg/L	0.00069	0.2	0.198	0.193	98.8	96.3	75-125	2.6	20	
Beryllium	mg/L	7e-006	0.1	0.0956	0.0944	95.6	94.4	75-125	1.3	20	
Boron	mg/L	0.0289	0.3	0.334	0.329	102	100	75-125	2	20	
Chromium	mg/L	0.00014	0.1	0.107	0.106	107	106	75-125	0.94	20	
Cobalt	mg/L	0.00191	0.1	0.108	0.106	106	105	75-125	0.95	20	
Arsenic	mg/L	0.00064	0.1	0.104	0.103	104	103	75-125	0.97	20	
Selenium	mg/L	0.00013	0.1	0.101	0.0991	101	99	75-125	2	20	
Molybdenum	mg/L	0.00083	0.1	0.106	0.104	105	103	75-125	1.9	20	
Cadmium	mg/L	8.7e-005	0.1	0.106	0.104	106	103	75-125	2.9	20	
Antimony	mg/L	8.8e-005	0.1	0.109	0.106	108	106	75-125	1.9	20	
Barium	mg/L	0.0557	0.1	0.157	0.154	101	98.6	75-125	2.4	20	
Thallium	mg/L	6e-006	0.1	0.0933	0.0922	93.3	92.1	75-125	1.3	20	
Lead	mg/L	2.4e-005	0.1	0.0962	0.0946	96.2	94.6	75-125	1.7	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103518 CCR - Hammond AP

QC Batch: GRAV/2876 Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Associated Lab Samples: 103518001 103518002 103518003 103520001 103520002 103520003 103520004 103520005

METHOD BLANK: 106278

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
TDS	mg/L	<25	25	

LABORATORY CONTROL SAMPLE: 106281

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
TDS	mg/L	241	240	99.6	90-110	

SAMPLE DUPLICATE: 106279 Original: 103515002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	93	100	7.3	20	

SAMPLE DUPLICATE: 106280 Original: 103520001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	127	128	0.78	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103518 CCR - Hammond AP

QC Batch: DIGM/4326 Analysis Method: EPA 6010D

QC Batch Method: EPA 3005A

Associated Lab Samples: 103518001 103518002 103518003

METHOD BLANK: 106296

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
INORGANICS				
Calcium	mg/L	<0.500	0.500	

LABORATORY CONTROL SAMPLE: 106297

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
INORGANICS						
Calcium	mg/L	5	5.31	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106298 106299 Original: 103518003

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
INORGANICS											
Calcium	mg/L	56.1	5	62.3	61.4	123	107	75-125	13.9	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103518 CCR - Hammond AP

QC Batch: IC/3035 Analysis Method: EPA 300

QC Batch Method: EPA 300

Associated Lab Samples: 103518001

METHOD BLANK: 106360

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Sulfate	mg/L	<1.00	1.00	
Fluoride	mg/L	<0.3000	0.3000	

LABORATORY CONTROL SAMPLE: 106353

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	11.3	11.9	105	90-110	
Fluoride	mg/L	6.83	6.92	101	90-110	

LABORATORY CONTROL SAMPLE: 106361

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.4843	96.9	90-110	
Sulfate	mg/L	5	4.95	99	90-110	
Fluoride	mg/L	0.5	0.5255	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106356 Original: 103517002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Fluoride	mg/L	0	1	1.07		107	0	90-110	0	0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106366 106367 Original: 103517006

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Sulfate	mg/L	9.58	10	19.4	19.4	98.1	98	90-110	0.1	10	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103518 CCR - Hammond AP

QC Batch: IC/3036 Analysis Method: EPA 300

QC Batch Method: EPA 300

Associated Lab Samples: 103518002 103518003 103520001 103520002 103520003 103520004 103520005

METHOD BLANK: 106368

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Fluoride	mg/L	<0.3000	0.3000	

METHOD BLANK: 106378

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Fluoride	mg/L	<0.3000	0.3000	

METHOD BLANK: 106634

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Sulfate	mg/L	<1.00	1.00	

METHOD BLANK: 106670

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Sulfate	mg/L	<1.00	1.00	

LABORATORY CONTROL SAMPLE: 106369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.5010	100	90-110	
Fluoride	mg/L	0.5	0.5320	106	90-110	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103518 CCR - Hammond AP

LABORATORY CONTROL SAMPLE: 106371

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	11.3	11.7	104	90-110	
Fluoride	mg/L	6.83	6.90	101	90-110	

LABORATORY CONTROL SAMPLE: 106379

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.5010	100	90-110	
Fluoride	mg/L	0.5	0.5350	107	90-110	

LABORATORY CONTROL SAMPLE: 106635

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.5020	100	90-110	

LABORATORY CONTROL SAMPLE: 106671

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.4990	99.8	90-110	
Sulfate	mg/L	5	5.01	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106374 106375 Original: 103518002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Fluoride	mg/L	0.499	1	1.52	1.52	102	102	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106380 106381 Original: 103532005

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Chloride	mg/L	0.005	1	1.02	1.01	101	101	90-110	0	10	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103518 CCR - Hammond AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106384 106385 Original: 103532005

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Sulfate	mg/L	0	10	10.2	10.2	102	102	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106628 106629 Original: 103532003

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Chloride	mg/L	1.4	1	2.37	2.37	96.5	96.7	90-110	0.21	10	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103518 CCR - Hammond AP

QC Batch: HGPR/1661 Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Associated Lab Samples: 103518001 103518002 103518003 103520001 103520002 103520003 103520004 103520005

METHOD BLANK: 106460

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
TOTAL METALS				
Mercury	mg/L	<0.000500	0.000500	

LABORATORY CONTROL SAMPLE: 106456

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.0122	0.0123	101	80-120	

LABORATORY CONTROL SAMPLE: 106461

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.002	0.00194	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106457 106458 Original: 103517001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Mercury	mg/L	0	0.002	0.00201	0.00196	100	98	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106462 106463 Original: 103518001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Mercury	mg/L	0	0.002	0.00196	0.00196	98	98	80-120	0	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103518 CCR - Hammond AP

SAMPLE DUPLICATE: 106459 Original: 103517002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
TOTAL METALS						
Mercury	mg/L	<0.000500	<0.000500	0	20	

SAMPLE DUPLICATE: 106464 Original: 103518002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
TOTAL METALS						
Mercury	mg/L	<0.000500	<0.000500	0	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 103518 CCR - Hammond AP

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
103518001	HGWC-7	EPA 3005A	DIGM/4321	EPA 6020B	ICPM/1076
103518002	HGWC-8	EPA 3005A	DIGM/4321	EPA 6020B	ICPM/1076
103518003	HGWA-6	EPA 3005A	DIGM/4321	EPA 6020B	ICPM/1076
103518001	HGWC-7	SM 2540C	GRAV/2876		
103518002	HGWC-8	SM 2540C	GRAV/2876		
103518003	HGWA-6	SM 2540C	GRAV/2876		
103518001	HGWC-7	EPA 3005A	DIGM/4326	EPA 6010D	ICP/5019
103518002	HGWC-8	EPA 3005A	DIGM/4326	EPA 6010D	ICP/5019
103518003	HGWA-6	EPA 3005A	DIGM/4326	EPA 6010D	ICP/5019
103518001	HGWC-7	EPA 300	IC/3035		
103518002	HGWC-8	EPA 300	IC/3036		
103518003	HGWA-6	EPA 300	IC/3036		
103518001	HGWC-7	EPA 7470A	HGPR/1661	EPA 7470A	CVAA/1845
103518002	HGWC-8	EPA 7470A	HGPR/1661	EPA 7470A	CVAA/1845
103518003	HGWA-6	EPA 7470A	HGPR/1661	EPA 7470A	CVAA/1845

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

LABORATORY CERTIFICATIONS

Workorder: 103518 CCR - Hammond AP

Certification Program	Certification Number
NELAC	E57554

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratory
2480 Maner Road, Bin 39110
Atlanta, Georgia 30339
Phone: (404) 799-2100
Company: 8-530-2100

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

LAB USE ONLY Work Order No. 103518
Reviewed By: [signature] 5-20-16

12 Page 1 of 1

[X] 13 Standard Turnaround Time
[ ] # of Business Days (Rush)
(Must be cleared through Env. Lab. prior to shipment)

Company: 1 Southern Company Services
Report To Joju Abraham
Address: 2 241 Ralph McGill Blvd. SE Bin 10185
Atlanta, GA 30308
Phone/Fax: 3 404-506-7239
Contact: 4 Joju Abraham
Project Location: 5 Plant Hammond
Account Number: 6
Special Instructions: 7 Hammond AP CCR GW

Sample Shipment Date: 8 5-20-2016
Sampled By: 9 Andreas Shoredits (AS) Myles Rogers (MR) Tracy Wardell (TW) Print Name
Signature
Sample Received Date: 10
Sample Received By: 11
Authorization to subcontract analysis will be assumed acceptable by customer unless stated otherwise.

Sample Type Key: 23 G-Grab, C-Composite, O-Other
Matrix Key: 24 O-Oil, S-Solid, SL-Sludge, W-Wipe, LQ-Liquid, SW-Surface Water, GW-Ground Water, WW-Waste Water, DW-Drinking Water, OW-Other Water
Preservative Key: 25 H-Hydrochloric Acid, N-Nitric Acid, S-Sulfuric Acid, SH-Sodium Hydroxide, P-Phosphoric Acid, ST-Sodium Thiosulfate, I-Ice, U-Unpreserved, O-Other (Specify)

LAB USE ONLY 14 LAB ID	Sample Number 15	Collection 16 Date	Collection Time	Sample Description 17	Sample Type 18	Matrix 19	No. of Containers 20	Metals App. III + IV EPA6020 & EPA7470 (Preservative 21: HNO3 N)	Cl, F, SO4 EPA 300 / TDS SM2540C (Preservative 21: Ice I)	Radium 226+228 Ga Tech (Preservative 21: HNO3 N)					LAB USE ONLY 26 Comments
103518001	HGWC-7	5-20-16	09:05	Hammond AP GW	G	GW	3	1	1	1					AS
2	HGWC-8	5-20-16	09:09	Hammond AP GW	G	GW	3	1	1	1					MR
3	HGWA-6	5-20-16	09:23	Hammond AP GW	G	GW	3	1	1	1					TW

FOR CHAIN OF CUSTODY USE ONLY 27

Relinquished by: 28 [signature] Date/Time 5-20-2016 13:15
Received by: 29 [signature] Date/Time 5-20-16 @13:16
Relinquished by: Date/Time
Received by: AW 5/20/16 Date/Time

LAB USE ONLY: Sample Receipt Information 30
5.5° (GPEL-IR-4P), with ice, cooler in good condition, seal
pH<2, Hand.

347156B

WHITE, CANARY & PINK—Laboratory GOLDENROD—Originator *(See Back For Instructions)*

Sample Receipt Checklist

GEORGIA POWER
A SOUTHERN COMPANY

Client: Hammond
Workorder No.: 103518
Carrier: HAND

# of Samples: 3
Tracking No:

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter	True	
Custody seals were present on cooler	True	
Custody seals on cooler were intact	True	
Custody seals were present on sample	False	
The cooler or samples do not appear to have been compromised or tampered with	True	
Samples were received on ice	True	
Cooler temperature is acceptable	True	
Cooler temperature is recorded	True	5.5
COC is present	True	
COC is filled out in ink and is legible	True	
COC is filled out with pertinent information	True	
The field sampler's name is on the COC	True	
Sample containers have legible labels	True	
Information on the sample label agrees with information on the COC	True	
Samples are received within holding times	True	
Containers are not broken or leaking	True	
Sample collection date/times are present	True	
Appropriate sample containers are used	True	
Sample bottles are completely filled	True	
Sample preservation is checked	True	
Sample preservation is acceptable	True	
There is sufficient sample volume for all requested analyses	True	
Containers requiring zero headspace have no headspace or the bubble is < 6mm (1/4 inch)	True	
Multiphasic samples are not present	True	
Samples do not require splitting or compositing	True	

Receiving Narrative:

No non-conformance noticed.

Completed By: Jassim, Ayssar

Date: 05/20/2016

ENVIRONMENTAL LABORATORY

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

June 10, 2016

Joju Abraham
Southern Company Services
Earth Sciences & Env Eng
42 Inverness Center Parkway
Birmingham, AL 35242

RE: Workorder: 103533 CCR - Hammond AP

Dear Joju Abraham:

The Environmental Laboratory has completed the analysis of your samples and reports the results on the attached pages. Our laboratory maintains current NELAC accreditation for those analytes listed under the scope of accreditation. Analytes not listed in this scope are currently not maintained under an accreditation program. The analytes of this report that are listed under our NELAC scope of accreditation meet all requirements of the NELAC standards, unless otherwise noted by data qualifiers. Internal clients can view the scope and effective dates of our accreditation at:

http://environmental.southernco.com/gpc/environmental-lab/chem.html

External clients can receive a copy of our scope of accreditation by contacting the laboratory.

All results relate only to the contents of the samples submitted. Samples will be disposed of after 30 days unless otherwise instructed. This report should only be reproduced in full with all associated records. This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

If you have any questions or comments, contact your Program Manager:

L. Biddy

lbbiddy@southernco.com

(404) 799-2132 / 8-530-2132

Respectfully submitted,

R. S. Dickerson
rsdicker@southernco.com
QA/QC Specialist

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

SAMPLE SUMMARY

Workorder: 103533 CCR - Hammond AP

Lab ID	Sample ID	Analysis Request Number	Matrix	Date Collected	Date Received
103533001	HGWA-1	N/A	Water	5/19/2016 09:30	5/20/2016 08:15
103533002	HGWA-2	N/A	Water	5/19/2016 11:26	5/20/2016 08:15
103533003	HGWA-4	N/A	Water	5/19/2016 17:37	5/20/2016 08:15
103533004	HGWA-3	N/A	Water	5/19/2016 16:05	5/20/2016 08:15
103533005	DUP-1	N/A	Water	5/19/2016 00:00	5/20/2016 08:15
103533006	HGWA-5	N/A	Water	5/19/2016 10:27	5/20/2016 08:15

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103533 CCR - Hammond AP

Lab ID:	**103533001**	**Date Received:**	**5/20/2016 08:15**
Sample ID:	**HGWA-1**	**Date Collected:**	**5/19/2016 09:30**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/8/2016 11:05	MRP	
Calcium	138	mg/L	1.00	5.00	5/26/2016 10:40	KLW	6/8/2016 11:05	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 14:26	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 08:30	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 14:26	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 14:26	ELS	
Boron	0.0214J	mg/L	0.0200	0.100	5/26/2016 10:15	KLW	5/27/2016 14:26	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:26	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:26	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 14:26	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:26	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:26	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 14:26	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 14:26	ELS	
Barium	0.0346	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:26	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 14:26	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 14:26	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/3/2016 11:15	LBB	
Sulfate	66.9	mg/L	3.00	10.0			6/3/2016 11:15	LBB	
Chloride	9.94	mg/L	0.4000	2.50			6/3/2016 11:15	LBB	
Fluoride	0.1050J	mg/L	0.0100	0.3000			6/3/2016 06:46	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/24/2016 18:35	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103533 CCR - Hammond AP

Lab ID:	**103533001**	**Date Received:**	**5/20/2016 08:15**
Sample ID:	**HGWA-1**	**Date Collected:**	**5/19/2016 09:30**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	421	mg/L	25	25			5/24/2016 18:35	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103533 CCR - Hammond AP

Lab ID:	**103533002**	**Date Received:**	**5/20/2016 08:15**
Sample ID:	**HGWA-2**	**Date Collected:**	**5/19/2016 11:26**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 15:28	MRP	
Calcium	22.9	mg/L	0.100	0.500	5/26/2016 10:40	KLW	6/7/2016 15:28	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 14:30	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 08:33	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 14:30	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 14:30	ELS	
Boron	0.0321J	mg/L	0.0200	0.100	5/26/2016 10:15	KLW	5/27/2016 14:30	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:30	ELS	
Cobalt	0.0293	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:30	ELS	
Arsenic	0.00127J	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 14:30	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:30	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:30	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 14:30	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 14:30	ELS	
Barium	0.114	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:30	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 14:30	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 14:30	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/3/2016 11:45	LBB	
Sulfate	48.6	mg/L	1.50	5.00			6/3/2016 11:45	LBB	
Chloride	6.14	mg/L	0.2000	1.25			6/3/2016 11:45	LBB	
Fluoride	0.0303J	mg/L	0.0100	0.3000			6/3/2016 07:15	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/24/2016 18:35	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103533 CCR - Hammond AP

Lab ID:	**103533002**	**Date Received:**	**5/20/2016 08:15**
Sample ID:	**HGWA-2**	**Date Collected:**	**5/19/2016 11:26**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	143	mg/L	25	25			5/24/2016 18:35	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103533 CCR - Hammond AP

Lab ID:	**103533003**	**Date Received:**	**5/20/2016 08:15**
Sample ID:	**HGWA-4**	**Date Collected:**	**5/19/2016 17:37**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					6/8/2016 09:30	MRP	6/8/2016 14:45	MRP	
Calcium	48.4	mg/L	0.100	0.500	6/8/2016 09:30	MRP	6/8/2016 14:45	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 14:35	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 08:36	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 14:35	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 14:35	ELS	
Boron	<0.100	mg/L	0.0200	0.100	5/26/2016 10:15	KLW	5/27/2016 14:35	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:35	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:35	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 14:35	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:35	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:35	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 14:35	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 14:35	ELS	
Barium	0.0266	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:35	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 14:35	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 14:35	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/3/2016 12:15	LBB	
Sulfate	1.22	mg/L	0.3000	1.00			6/3/2016 07:45	LBB	
Chloride	4.56	mg/L	0.0800	0.5000			6/3/2016 12:15	LBB	
Fluoride	0.0360J	mg/L	0.0100	0.3000			6/3/2016 07:45	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/24/2016 18:35	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103533 CCR - Hammond AP

Lab ID:	**103533003**	**Date Received:**	**5/20/2016 08:15**
Sample ID:	**HGWA-4**	**Date Collected:**	**5/19/2016 17:37**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	165	mg/L	25	25			5/24/2016 18:35	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103533 CCR - Hammond AP

Lab ID:	**103533004**	**Date Received:**	**5/20/2016 08:15**
Sample ID:	**HGWA-3**	**Date Collected:**	**5/19/2016 16:05**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 15:52	MRP	
Calcium	76.2	mg/L	1.00	5.00	5/26/2016 10:40	KLW	6/7/2016 15:52	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 14:40	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 08:38	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 14:40	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 14:40	ELS	
Boron	<0.100	mg/L	0.0200	0.100	5/26/2016 10:15	KLW	5/27/2016 14:40	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:40	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:40	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 14:40	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:40	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:40	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 14:40	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 14:40	ELS	
Barium	0.111	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:40	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 14:40	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 14:40	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/3/2016 12:45	LBB	
Sulfate	42.3	mg/L	1.50	5.00			6/3/2016 12:45	LBB	
Chloride	5.93	mg/L	0.2000	1.25			6/3/2016 12:45	LBB	
Fluoride	0.0513J	mg/L	0.0100	0.3000			6/3/2016 08:15	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/24/2016 18:35	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103533 CCR - Hammond AP

Lab ID:	**103533004**	**Date Received:**	**5/20/2016 08:15**
Sample ID:	**HGWA-3**	**Date Collected:**	**5/19/2016 16:05**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	267	mg/L	25	25			5/24/2016 18:35	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103533 CCR - Hammond AP

Lab ID:	**103533005**	**Date Received:**	**5/20/2016 08:15**
Sample ID:	**DUP-1**	**Date Collected:**	**5/19/2016 00:00**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 15:58	MRP	
Calcium	75.5	mg/L	1.00	5.00	5/26/2016 10:40	KLW	6/7/2016 15:58	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 14:45	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 08:41	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 14:45	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 14:45	ELS	
Boron	<0.100	mg/L	0.0200	0.100	5/26/2016 10:15	KLW	5/27/2016 14:45	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:45	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:45	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 14:45	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:45	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:45	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 14:45	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 14:45	ELS	
Barium	0.116	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:45	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 14:45	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 14:45	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/3/2016 13:14	LBB	
Sulfate	44.4	mg/L	1.50	5.00			6/3/2016 13:14	LBB	
Chloride	6.22	mg/L	0.2000	1.25			6/3/2016 13:14	LBB	
Fluoride	0.0519J	mg/L	0.0100	0.3000			6/3/2016 08:45	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/24/2016 18:35	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103533 CCR - Hammond AP

Lab ID:	**103533005**	**Date Received:**	**5/20/2016 08:15**
Sample ID:	**DUP-1**	**Date Collected:**	**5/19/2016 00:00**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	265	mg/L	25	25			5/24/2016 18:35	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103533 CCR - Hammond AP

Lab ID:	**103533006**	**Date Received:**	**5/20/2016 08:15**
Sample ID:	**HGWA-5**	**Date Collected:**	**5/19/2016 10:27**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 16:04	MRP	
Calcium	35.5	mg/L	0.100	0.500	5/26/2016 10:40	KLW	6/7/2016 16:04	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 14:49	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 08:44	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 14:49	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 14:49	ELS	
Boron	<0.100	mg/L	0.0200	0.100	5/26/2016 10:15	KLW	5/27/2016 14:49	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:49	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:49	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 14:49	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:49	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:49	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 14:49	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 14:49	ELS	
Barium	0.0519	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:49	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 14:49	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 14:49	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/3/2016 09:15	LBB	
Sulfate	25.0	mg/L	0.3000	1.00			6/3/2016 09:15	LBB	
Chloride	1.57	mg/L	0.0400	0.2500			6/3/2016 09:15	LBB	
Fluoride	0.0800J	mg/L	0.0100	0.3000			6/3/2016 09:15	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/24/2016 18:35	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103533 CCR - Hammond AP

Lab ID:	**103533006**	**Date Received:**	**5/20/2016 08:15**
Sample ID:	**HGWA-5**	**Date Collected:**	**5/19/2016 10:27**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	168	mg/L	25	25			5/24/2016 18:35	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS QUALIFIERS

Workorder: 103533 CCR - Hammond AP

PARAMETER QUALIFIERS

ND	None detected at the laboratory Method Detection Limit
MDL	Method Detection Limit
RL	Reporting Limit
J	The reported value is between the laboratory method detection limit and the laboratory reporting limit

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103533 CCR - Hammond AP

QC Batch: GRAV/2877 Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Associated Lab Samples: 103533001 103533002 103533003 103533004 103533005 103533006

METHOD BLANK: 106282

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
TDS	mg/L	<25	25	

LABORATORY CONTROL SAMPLE: 106285

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
TDS	mg/L	241	240	99.6	90-110	

SAMPLE DUPLICATE: 106283 Original: 103532001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	99	96	3.1	20	

SAMPLE DUPLICATE: 106284 Original: 103533006

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	168	168	0	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103533 CCR - Hammond AP

QC Batch: IC/3035 Analysis Method: EPA 300

QC Batch Method: EPA 300

Associated Lab Samples: 103518001 103533001 103533002 103533003 103533004 103533005 103533006

METHOD BLANK: 106360

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Sulfate	mg/L	<1.00	1.00	
Fluoride	mg/L	<0.3000	0.3000	

LABORATORY CONTROL SAMPLE: 106353

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	11.3	11.9	105	90-110	
Fluoride	mg/L	6.83	6.92	101	90-110	

LABORATORY CONTROL SAMPLE: 106361

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.4843	96.9	90-110	
Sulfate	mg/L	5	4.95	99	90-110	
Fluoride	mg/L	0.5	0.5255	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106356 Original: 103517002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Fluoride	mg/L	0	1	1.07		107	0	90-110	0	0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106366 106367 Original: 103517006

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Sulfate	mg/L	9.58	10	19.4	19.4	98.1	98	90-110	0.1	10	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103533 CCR - Hammond AP

QC Batch: HGPR/1661 Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Associated Lab Samples: 103518001, 103518002, 103518003, 103520001, 103520002, 103520003, 103520004, 103520005, 103533001, 103533002, 103533003, 103533004, 103533005, 103533006

METHOD BLANK: 106454

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
TOTAL METALS				
Mercury	mg/L	<0.000500	0.000500	

METHOD BLANK: 106460

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
TOTAL METALS				
Mercury	mg/L	<0.000500	0.000500	

LABORATORY CONTROL SAMPLE: 106455

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.002	0.00199	100	80-120	

LABORATORY CONTROL SAMPLE: 106456

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.0122	0.0123	101	80-120	

LABORATORY CONTROL SAMPLE: 106461

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.002	0.00194	97	80-120	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103533 CCR - Hammond AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106457 106458 Original: 103517001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Mercury	mg/L	0	0.002	0.00201	0.00196	100	98	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106462 106463 Original: 103518001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Mercury	mg/L	0	0.002	0.00196	0.00196	98	98	80-120	0	20	

SAMPLE DUPLICATE: 106459 Original: 103517002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
TOTAL METALS						
Mercury	mg/L	<0.000500	<0.000500	0	20	

SAMPLE DUPLICATE: 106464 Original: 103518002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
TOTAL METALS						
Mercury	mg/L	<0.000500	<0.000500	0	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103533 CCR - Hammond AP

QC Batch: DIGM/4329 Analysis Method: EPA 6010D

QC Batch Method: EPA 3005A

Associated Lab Samples: 103533001 103533002 103533004 103533005 103533006

METHOD BLANK: 106465

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
INORGANICS				
Calcium	mg/L	<0.500	0.500	

LABORATORY CONTROL SAMPLE: 106466

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
INORGANICS						
Calcium	mg/L	5	4.87	97.5	80-120	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103533 CCR - Hammond AP

QC Batch: DIGM/4330 Analysis Method: EPA 6020B

QC Batch Method: EPA 3005A

Associated Lab Samples: 103533001 103533002 103533003 103533004 103533005 103533006

METHOD BLANK: 106469

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
TOTAL METALS				
Lithium	mg/L	<0.0500	0.0500	
Beryllium	mg/L	<0.00300	0.00300	
Boron	mg/L	<0.100	0.100	
Chromium	mg/L	<0.0100	0.0100	
Cobalt	mg/L	<0.0100	0.0100	
Arsenic	mg/L	<0.00500	0.00500	
Selenium	mg/L	<0.0100	0.0100	
Molybdenum	mg/L	<0.0100	0.0100	
Cadmium	mg/L	<0.00100	0.00100	
Antimony	mg/L	<0.00300	0.00300	
Barium	mg/L	<0.0100	0.0100	
Thallium	mg/L	<0.00100	0.00100	
Lead	mg/L	<0.00500	0.00500	

LABORATORY CONTROL SAMPLE: 106470

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Lithium	mg/L	0.2	0.203	102	80-120	
Beryllium	mg/L	0.1	0.0942	94.2	80-120	
Boron	mg/L	0.3	0.291	97.1	80-120	
Chromium	mg/L	0.1	0.0981	98.1	80-120	
Cobalt	mg/L	0.1	0.0989	98.9	80-120	
Arsenic	mg/L	0.1	0.0943	94.3	80-120	
Selenium	mg/L	0.1	0.0944	94.4	80-120	
Molybdenum	mg/L	0.1	0.0939	93.9	80-120	
Cadmium	mg/L	0.1	0.0963	96.3	80-120	
Antimony	mg/L	0.1	0.0960	96	80-120	
Barium	mg/L	0.1	0.0962	96.2	80-120	
Thallium	mg/L	0.1	0.0867	86.7	80-120	
Lead	mg/L	0.1	0.0894	89.4	80-120	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103533 CCR - Hammond AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106471 106472 Original: 103563002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Lithium	mg/L	0.0107	0.2	0.212	0.213	101	101	75-125	0	20	
Beryllium	mg/L	5e-006	0.1	0.0988	0.0940	98.8	94	75-125	5	20	
Chromium	mg/L	0.00017	0.1	0.108	0.104	108	104	75-125	3.8	20	
Cobalt	mg/L	0.00178	0.1	0.107	0.104	105	103	75-125	1.9	20	
Arsenic	mg/L	0.0046	0.1	0.111	0.107	107	102	75-125	4.8	20	
Selenium	mg/L	0.00023	0.1	0.103	0.0962	103	95.9	75-125	7.1	20	
Cadmium	mg/L	1.1e-005	0.1	0.106	0.103	106	103	75-125	2.9	20	
Antimony	mg/L	0.00013	0.1	0.110	0.107	110	107	75-125	2.8	20	
Thallium	mg/L	8.8e-005	0.1	0.0956	0.0932	95.5	93.1	75-125	2.5	20	
Lead	mg/L	3.7e-005	0.1	0.0986	0.0953	98.6	95.3	75-125	3.4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106471 106472 Original: 103563002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Boron	mg/L	2.2	0.3	2.54	2.51	113	104	75-125	8.3	20	
Molybdenum	mg/L	0.0413	0.1	0.149	0.146	108	105	75-125	2.8	20	
Barium	mg/L	0.133	0.1	0.239	0.235	106	102	75-125	3.8	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103533 CCR - Hammond AP

QC Batch: DIGM/4348 Analysis Method: EPA 6010D

QC Batch Method: EPA 3005A

Associated Lab Samples: 103533003

METHOD BLANK: 106745

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
INORGANICS				
Calcium	mg/L	<0.500	0.500	

LABORATORY CONTROL SAMPLE: 106746

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
INORGANICS						
Calcium	mg/L	10	10.5	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106467 106468 Original: 103533003

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
INORGANICS											
Calcium	mg/L	48.4	10	58.6	58.8	103	104	75-125	0.97	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 103533 CCR - Hammond AP

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
103533001	HGWA-1	SM 2540C	GRAV/2877		
103533002	HGWA-2	SM 2540C	GRAV/2877		
103533003	HGWA-4	SM 2540C	GRAV/2877		
103533004	HGWA-3	SM 2540C	GRAV/2877		
103533005	DUP-1	SM 2540C	GRAV/2877		
103533006	HGWA-5	SM 2540C	GRAV/2877		
103533001	HGWA-1	EPA 300	IC/3035		
103533002	HGWA-2	EPA 300	IC/3035		
103533003	HGWA-4	EPA 300	IC/3035		
103533004	HGWA-3	EPA 300	IC/3035		
103533005	DUP-1	EPA 300	IC/3035		
103533006	HGWA-5	EPA 300	IC/3035		
103533001	HGWA-1	EPA 7470A	HGPR/1661	EPA 7470A	CVAA/1845
103533002	HGWA-2	EPA 7470A	HGPR/1661	EPA 7470A	CVAA/1845
103533003	HGWA-4	EPA 7470A	HGPR/1661	EPA 7470A	CVAA/1845
103533004	HGWA-3	EPA 7470A	HGPR/1661	EPA 7470A	CVAA/1845
103533005	DUP-1	EPA 7470A	HGPR/1661	EPA 7470A	CVAA/1845
103533006	HGWA-5	EPA 7470A	HGPR/1661	EPA 7470A	CVAA/1845
103533001	HGWA-1	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103533002	HGWA-2	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103533004	HGWA-3	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103533005	DUP-1	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103533006	HGWA-5	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103533001	HGWA-1	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103533002	HGWA-2	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103533003	HGWA-4	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103533004	HGWA-3	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103533005	DUP-1	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103533006	HGWA-5	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 103533 CCR - Hammond AP

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
103533003	HGWA-4	EPA 3005A	DIGM/4348	EPA 6010D	ICP/5029

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

LABORATORY CERTIFICATIONS

Workorder: 103533 CCR - Hammond AP

Certification Program	Certification Number
NELAC	E57554

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratory
2480 Maner Road, Bin 39110
Atlanta, Georgia 30339
Phone: (404) 799-2100
Company: 8-530-2100

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

LAB USE ONLY
Work Order No. 103533
Reviewed By: 5-23-16

[12] Page 1 of 1

[X] [13] Standard Turnaround Time

[ ] # of Business Days (Rush)
(Must be cleared through Env. Lab. prior to shipment)

Company: [1] Southern Company Services
Report To Joju Abraham
Address: [2] 241 Ralph McGill Blvd SE
B10185
Atlanta, GA 30308
Phone/Fax: [3] 404-506-7239
Contact: [4] Joju Abraham
Project Location: [5] Plant Hammond
Account Number: [6]
Special Instructions: [7] Hammond AP CCR GW

Sample Shipment Date: [8] 5-20-2016
Sampled By: [9] Myles Rogers (MR)
Print Name
Signature
Sample Received Date: [10]
Sample Received By: [11]

Authorization to subcontract analysis will be assumed acceptable by customer unless stated otherwise.

PRESERVATIVE [21]

HNO3	Ice	HNO3				
N	I	N				

ANALYSIS REQUESTED [22]

Sample Type Key: [23]
G-Grab C-Composite
O-Other

Matrix Key: [24]
O-Oil SW-Surface Water
S-Solid GW-Ground Water
SL-Sludge WW-Waste Water
W-Wipe DW-Drinking Water
LQ-Liquid OW-Other Water

Preservative Key: [25]
H-Hydrochloric Acid
N-Nitric Acid
S-Sulfuric Acid
SH-Sodium Hydroxide
P-Phosphoric Acid
ST-Sodium Thiosulfate
I-Ice
U-Unpreserved
O-Other (Specify)

LAB USE ONLY [14] LAB ID	Sample Number [15]	Collection [16] Date	Collection [16] Time	Sample Description [17]	18 Sample Type	19 Matrix	20 No. of Containers	Metals Appendix III + IV EPA 6020+EPA 7470	Cl, F, SO4 EPA 300	TDS SM2540C	Radium 226 + 228 GA Tech					LAB USE ONLY [26] Comments
103533001	HGWA-1	5-19-16	09:30	Hammond AP GW	G	GW	3	1	1	1						103533001
AMJ 5/20/16 2	HGWA-2	5-19-16	11:26	Hammond AP GW	G	GW	3	1	1	1						2
3	HGWA-4	5-19-16	17:37	Hammond AP GW	G	GW	3	1	1	1						3

FOR CHAIN OF CUSTODY USE ONLY [27]

Relinquished by: [28] Seal # 20160519-3 Date/Time 5/19/16 1900
Received by: [29] Date/Time 5/20/16 @8:15
Relinquished by: Date/Time
Received by: AMJ 5/20/16 Date/Time

LAB USE ONLY: Sample Receipt Information [30]

W-ICE(GPEL-1R-4P), with ice, cooler in good condition, Seal, FedEx Courier.

347156B

WHITE, CANARY & PINK—Laboratory GOLDENROD—Originator

(See Back For Instructions)

Georgia Power Environmental Laboratory
NELAP Certification #E57554
2480 Maner Road, BIN 39110
Atlanta, Georgia 30339
Phone: (404) 799-2100
Company: 8-530-2100

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

LAB USE ONLY — Work Order No. 103533 — Reviewed By: 5-23-16

[11] Page 1 of 1

Sample Shipment Date:[8] 5-19-2016 — [X] [12] Standard Turnaround Time
Sample Received Date:[9]
Sampled By:[10] ANDREAS SHORELOTS — [ ] # of Business Days (Rush) (Must be cleared through Env. Lab. Prior to shipment)

Company:[1] Southern Company Services
Report To Joju Abraham
Address:[2] 241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
Phone/Fax:[3] 404-506-7239
Contact:[4] Joju Abraham
Project Location:[5] Plant Hammond
Account Number:[6]
Special Instructions:[7] Hammond Huffaker CCR GW

Signature
Authorization to subcontract analysis will be assumed acceptable by customer unless stated otherwise.

LAB USE ONLY [13] LAB ID	Sample Number [14]	Collection [15] Date	Collection [15] Time	Sample Description [16]	[17] Sample Type	[18] Matrix	[19] No. of Containers	PRESERVATIVE [20] HNO3 N	Ice I	HNO3 N	ANALYSIS REQUESTED [21] Metals app. III & IV EPA 6020 & EPA 7470	Cl, F, SO4 EPA 300 TDS SM2540C	Radium 226 & 228 Ga Tech	LAB USE ONLY [25] Comments
103533004	HGWA-3	5/19/16	16:05	HAMMOND AP GW	G	GW	3	1	1	1				
↓ S	DUP-1	5/19/16	-	HAMMOND AP GW	G	GW	3	1	1	1				

Sample Type Key: [22] G-Grab O-Other C-Composite

Matrix Key: [23] O-Oil S-Solid SL-Sludge W-Wipe SW-Surface Water GW-Ground Water WW-Waste Water DW-Drinking Water

Preservative Key: [24] H-Hydrochloric Acid N-Nitric Acid S-Sulfuric Acid SH-Sodium Hydroxide SB-Sodium Bisulfate P-Phosphoric Acid ST-Sodium Thiosulfate I-Ice U-Unpreserved

Relinquished by:[26]	Date/Time	5/19/16 17:00
Received by:[27]	Date/Time	5/20/16 8:15
Relinquished by:	Date/Time	
Received by: AMJ 5/20/16	Date/Time	

LAB USE ONLY: Sample Receipt Information [28]
4.1°C GPTEL-IR-4P1, with ice, cooler in good Condition Seal, PHL 2, Courier, Project location was writing wrong on COC sample were logged Based on sample container label location.

cooler # 001065

Georgia Power Environmental Laboratory
2480 Maner Road, Bin 39110
Atlanta, Georgia 30339
Phone: (404) 799-2100
Company: 8-530-2100

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

LAB USE ONLY
Work Order No. 103533
Reviewed By: 5-23-16

[12] Page 1 of 1

[X] [13] Standard Turnaround Time

[ ] # of Business Days (Rush)
(Must be cleared through Env. Lab. prior to shipment)

Company: [1] Southern Company Services
Report To Joju Abraham
Address: [2] 241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308

Phone/Fax: [3] 404-306-7239
Contact: [4] Joju Abraham
Project Location: [5] Plant Hammond
Account Number: [6]
Special Instructions: [7] Hammond AP CCR GW

Sample Shipment Date: [8] 5-20-2016
Sampled By: [9] Tracy Wardell (TW)
Print Name
X
Signature
Sample Received Date: [10]
Sample Received By: [11]

Authorization to subcontract analysis will be assumed acceptable by customer unless stated otherwise.

PRESERVATIVE [21]

HNO_3	ICE	HNO_3				
N	I	N				

ANALYSIS REQUESTED [22]

LAB USE ONLY [14] LAB ID	Sample Number [15]	Collection [16] Date	Collection [16] Time	Sample Description [17]	[18] Sample Type	[19] Matrix	[20] No. of Containers	Metals App III + IV EPA 6020 + EPA 7470	Cl, F, SO_4 EPA 300	TDS SM2540C	Radium 226 + 228 Ga Tech				
103533006	HGWA-5	5-19-16	10:27	Hammond AP GW	GF	GW	3	1	1	1					

Sample Type Key: [23]
G-Grab C-Composite
O-Other

Matrix Key: [24]
O-Oil SW-Surface Water
S-Solid GW-Ground Water
SL-Sludge WW-Waste Water
W-Wipe DW-Drinking Water
LQ-Liquid OW-Other Water

Preservative Key: [25]
H-Hydrochloric Acid
N-Nitric Acid
S-Sulfuric Acid
SH-Sodium Hydroxide
P-Phosphoric Acid
ST-Sodium Thiosulfate
I-Ice
U-Unpreserved
O-Other (Specify)

LAB USE ONLY [26] Comments

FOR CHAIN OF CUSTODY USE ONLY [27]

Relinquished by: [28] TW Seal # 20160519-4	Date/Time 5/19/2016 16:30	4.1°C (GPEL-IR-4P), within, cooler in good condition, seal
Received by: [29]	Date/Time 5/20/16 @ 8:15	PHL2
Relinquished by:	Date/Time	
Received by: AMJ 5/20/16	Date/Time	

LAB USE ONLY: Sample Receipt Information [30]

WHITE, CANARY & PINK—Laboratory GOLDENROD—Originator

(See Back For Instructions)

Sample Receipt Checklist

GEORGIA POWER
A SOUTHERN COMPANY

Client: Hammond **# of Samples:** 6
Workorder No.: 103533 **Tracking No:**
Carrier: COURIER

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter	True	
Custody seals were present on cooler	True	
Custody seals on cooler were intact	True	
Custody seals were present on sample	False	
The cooler or samples do not appear to have been compromised or tampered with	True	
Samples were received on ice	True	
Cooler temperature is acceptable	True	
Cooler temperature is recorded	True	4.1
COC is present	True	
COC is filled out in ink and is legible	True	Sample HGWA-3 and Dup-1 the project name is different from COC to sample container label. Samples were logged in based on conformation email from customer.
COC is filled out with pertinent information	True	
The field sampler's name is on the COC	True	
Sample containers have legible labels	True	
Information on the sample label agrees with information on the COC	True	
Samples are received within holding times	True	
Containers are not broken or leaking	True	
Sample collection date/times are present	True	
Appropriate sample containers are used	True	
Sample bottles are completely filled	True	
Sample preservation is checked	True	
Sample preservation is acceptable	True	
There is sufficient sample volume for all requested analyses	True	
Containers requiring zero headspace have no headspace or the bubble is < 6mm (1/4 inch)	True	
Multiphasic samples are not present	True	
Samples do not require splitting or compositing	True	

Receiving Narrative:

Completed By: Jassim, Ayssar **Date:** 05/20/2016

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

June 14, 2016

Joju Abraham
Southern Company Services
Earth Sciences & Env Eng
42 Inverness Center Parkway
Birmingham, AL 35242

RE: Workorder: 103563 CCR - Hammond AP

Dear Joju Abraham:

The Environmental Laboratory has completed the analysis of your samples and reports the results on the attached pages. Our laboratory maintains current NELAC accreditation for those analytes listed under the scope of accreditation. Analytes not listed in this scope are currently not maintained under an accreditation program. The analytes of this report that are listed under our NELAC scope of accreditation meet all requirements of the NELAC standards, unless otherwise noted by data qualifiers. Internal clients can view the scope and effective dates of our accreditation at:

http://environmental.southernco.com/gpc/environmental-lab/chem.html

External clients can receive a copy of our scope of accreditation by contacting the laboratory.

All results relate only to the contents of the samples submitted. Samples will be disposed of after 30 days unless otherwise instructed. This report should only be reproduced in full with all associated records. This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

If you have any questions or comments, contact your Program Manager:

L. Biddy

lbbiddy@southernco.com

(404) 799-2132 / 8-530-2132

Respectfully submitted,

R. S. Dickerson
rsdicker@southernco.com
QA/QC Specialist

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

SAMPLE SUMMARY

Workorder: 103563 CCR - Hammond AP

Lab ID	Sample ID	Analysis Request Number	Matrix	Date Collected	Date Received
103563001	HGWC-11	N/A	Water	5/23/2016 12:10	5/24/2016 08:55
103563002	HGWC-12	N/A	Water	5/23/2016 13:51	5/24/2016 08:55
103563003	DUP-2	N/A	Water	5/23/2016 00:00	5/24/2016 08:55
103563004	HGWC-14	N/A	Water	5/23/2016 12:28	5/24/2016 08:55
103563005	HGWC-15	N/A	Water	5/23/2016 13:59	5/24/2016 08:55
103563006	HGWC-16	N/A	Water	5/23/2016 15:25	5/24/2016 08:55
103563007	FB-1	N/A	Water	5/23/2016 09:00	5/24/2016 08:55
103563008	FB-2	N/A	Water	5/23/2016 09:30	5/24/2016 08:55
103563009	FERB-1	N/A	Water	5/23/2016 16:30	5/24/2016 08:55
103563010	FERB-2	N/A	Water	5/23/2016 17:00	5/24/2016 08:55
103563011	HGWC-9	N/A	Water	5/23/2016 12:00	5/24/2016 08:55
103563012	HGWC-10	N/A	Water	5/23/2016 14:06	5/24/2016 08:55
103563013	HGWC-17	N/A	Water	5/23/2016 16:21	5/24/2016 08:55
103563014	HGWC-13	N/A	Water	5/23/2016 15:15	5/24/2016 08:55

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563001**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-11**	**Date Collected:**	**5/23/2016 12:10**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 16:10	MRP	
Calcium	131	mg/L	1.00	5.00	5/26/2016 10:40	KLW	6/7/2016 16:10	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 14:54	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 10:46	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 14:54	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 14:54	ELS	
Boron	0.787	mg/L	0.0200	0.100	5/26/2016 10:15	KLW	5/27/2016 14:54	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:54	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:54	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 14:54	ELS	
Selenium	0.0106	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:54	ELS	
Molybdenum	0.0164	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:54	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 14:54	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 14:54	ELS	
Barium	0.0466	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:54	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 14:54	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 14:54	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/1/2016 07:29	LBB	
Sulfate	260	mg/L	7.50	25.0			6/1/2016 19:00	LBB	
Chloride	51.9	mg/L	1.00	6.25			6/1/2016 19:00	LBB	
Fluoride	0.2030J	mg/L	0.0100	0.3000			6/1/2016 07:29	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563001**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-11**	**Date Collected:**	**5/23/2016 12:10**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	564	mg/L	25	25			5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563002**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-12**	**Date Collected:**	**5/23/2016 13:51**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 16:16	MRP	
Calcium	195	mg/L	2.00	10.0	5/26/2016 10:40	KLW	6/7/2016 16:16	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 14:59	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 10:51	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	0.0107J	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 14:59	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 14:59	ELS	
Boron	2.20	mg/L	0.100	0.500	5/26/2016 10:15	KLW	5/27/2016 17:48	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:59	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:59	ELS	
Arsenic	0.00460J	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 14:59	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 14:59	ELS	
Molybdenum	0.0413J	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 17:48	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 14:59	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 14:59	ELS	
Barium	0.133	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 17:48	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 14:59	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 14:59	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/1/2016 08:07	LBB	
Sulfate	288	mg/L	7.50	25.0			6/1/2016 19:39	LBB	
Chloride	160	mg/L	4.00	25.0			6/2/2016 11:50	LBB	
Fluoride	0.2120J	mg/L	0.0100	0.3000			6/1/2016 08:07	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563002**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-12**	**Date Collected:**	**5/23/2016 13:51**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	1060	mg/L	25	25			5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563003**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**DUP-2**	**Date Collected:**	**5/23/2016 00:00**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 16:22	MRP	
Calcium	130	mg/L	1.00	5.00	5/26/2016 10:40	KLW	6/7/2016 16:22	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 15:36	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 10:54	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 15:36	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 15:36	ELS	
Boron	0.845	mg/L	0.0400	0.200	5/26/2016 10:15	KLW	5/27/2016 18:02	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:36	ELS	
Cobalt	0.00204J	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:36	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 15:36	ELS	
Selenium	0.0101	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:36	ELS	
Molybdenum	0.0168	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:36	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 15:36	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 15:36	ELS	
Barium	0.0476	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:36	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 15:36	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 15:36	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/6/2016 20:56	LBB	
Sulfate	270	mg/L	15.0	50.0			6/8/2016 17:53	LBB	
Chloride	53.3	mg/L	2.00	12.5			6/8/2016 17:53	LBB	
Fluoride	0.1881J	mg/L	0.0100	0.3000			6/6/2016 20:56	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563003**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**DUP-2**	**Date Collected:**	**5/23/2016 00:00**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	553	mg/L	25	25			5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563004**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-14**	**Date Collected:**	**5/23/2016 12:28**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 17:10	MRP	
Calcium	664	mg/L	5.00	25.0	5/26/2016 10:40	KLW	6/7/2016 17:10	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 15:41	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 10:56	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 15:41	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 15:41	ELS	
Boron	15.4	mg/L	0.500	2.50	5/26/2016 10:15	KLW	5/27/2016 18:06	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:41	ELS	
Cobalt	<0.250	mg/L	0.0500	0.250	5/26/2016 10:15	KLW	5/27/2016 18:06	ELS	
Arsenic	0.00268J	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 15:41	ELS	
Selenium	0.0170	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:41	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:41	ELS	
Cadmium	0.000139J	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 15:41	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 15:41	ELS	
Barium	<0.250	mg/L	0.0500	0.250	5/26/2016 10:15	KLW	5/27/2016 18:06	ELS	
Thallium	0.000306J	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 15:41	ELS	
Lead	0.00182J	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 15:41	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/6/2016 21:26	LBB	
Sulfate	1070	mg/L	30.0	100			6/8/2016 18:23	LBB	
Chloride	659	mg/L	8.00	50.0			6/8/2016 18:53	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			6/6/2016 21:26	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563004**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-14**	**Date Collected:**	**5/23/2016 12:28**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	4130	mg/L	25	25			5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563005**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-15**	**Date Collected:**	**5/23/2016 13:59**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 17:16	MRP	
Calcium	184	mg/L	2.00	10.0	5/26/2016 10:40	KLW	6/7/2016 17:16	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 15:46	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 10:59	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 15:46	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 15:46	ELS	
Boron	2.02	mg/L	0.100	0.500	5/26/2016 10:15	KLW	5/27/2016 18:11	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:46	ELS	
Cobalt	0.0419J	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 18:11	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 15:46	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:46	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:46	ELS	
Cadmium	0.00271J	mg/L	0.000500	0.00500	5/26/2016 10:15	KLW	5/27/2016 18:11	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 15:46	ELS	
Barium	0.0315J	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 18:11	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 15:46	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 15:46	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/6/2016 21:56	LBB	
Sulfate	424	mg/L	30.0	100			6/8/2016 19:23	LBB	
Chloride	209	mg/L	4.00	25.0			6/8/2016 19:23	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			6/6/2016 21:56	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563005**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-15**	**Date Collected:**	**5/23/2016 13:59**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	1270	mg/L	25	25			5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563006**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-16**	**Date Collected:**	**5/23/2016 15:25**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 17:23	MRP	
Calcium	146	mg/L	1.00	5.00	5/26/2016 10:40	KLW	6/7/2016 17:23	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 15:50	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 11:02	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 15:50	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 15:50	ELS	
Boron	1.36	mg/L	0.0400	0.200	5/26/2016 10:15	KLW	5/27/2016 18:16	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:50	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:50	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 15:50	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:50	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:50	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 15:50	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 15:50	ELS	
Barium	0.0841	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:50	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 15:50	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 15:50	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/6/2016 22:26	LBB	
Sulfate	203	mg/L	3.00	10.0			6/8/2016 19:53	LBB	
Chloride	25.8	mg/L	0.4000	2.50			6/8/2016 19:53	LBB	
Fluoride	0.0380J	mg/L	0.0100	0.3000			6/6/2016 22:26	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563006**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-16**	**Date Collected:**	**5/23/2016 15:25**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	570	mg/L	25	25			5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563007**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**FB-1**	**Date Collected:**	**5/23/2016 09:00**
Sample Description	**Hammond AP GW-Field Blank**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 17:29	MRP	
Calcium	<0.500	mg/L	0.100	0.500	5/26/2016 10:40	KLW	6/7/2016 17:29	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 15:55	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 11:05	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 15:55	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 15:55	ELS	
Boron	<0.100	mg/L	0.0200	0.100	5/26/2016 10:15	KLW	5/27/2016 19:03	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:55	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:55	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 15:55	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:55	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:55	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 15:55	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 15:55	ELS	
Barium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 15:55	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 15:55	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 15:55	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/6/2016 22:55	LBB	
Sulfate	<1.00	mg/L	0.3000	1.00			6/6/2016 22:55	LBB	
Chloride	<0.2500	mg/L	0.0400	0.2500			6/6/2016 22:55	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			6/6/2016 22:55	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563007**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**FB-1**	**Date Collected:**	**5/23/2016 09:00**
Sample Description	**Hammond AP GW-Field Blank**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	<25	mg/L	25	25			5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563008**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**FB-2**	**Date Collected:**	**5/23/2016 09:30**
Sample Description	**Hammond AP GW-Field Blank**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 17:35	MRP	
Calcium	<0.500	mg/L	0.100	0.500	5/26/2016 10:40	KLW	6/7/2016 17:35	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 16:00	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 11:07	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 16:00	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 16:00	ELS	
Boron	<0.100	mg/L	0.0200	0.100	5/26/2016 10:15	KLW	5/27/2016 19:08	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:00	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:00	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 16:00	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:00	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:00	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 16:00	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 16:00	ELS	
Barium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:00	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 16:00	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 16:00	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/7/2016 00:25	LBB	
Sulfate	<1.00	mg/L	0.3000	1.00			6/7/2016 00:25	LBB	
Chloride	<0.2500	mg/L	0.0400	0.2500			6/7/2016 00:25	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			6/7/2016 00:25	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563008**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**FB-2**	**Date Collected:**	**5/23/2016 09:30**
Sample Description	**Hammond AP GW-Field Blank**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	<25	mg/L	25	25			5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563009**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**FERB-1**	**Date Collected:**	**5/23/2016 16:30**
Sample Description	**Hammond AP GW-Equip Rinse**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 17:41	MRP	
Calcium	<0.500	mg/L	0.100	0.500	5/26/2016 10:40	KLW	6/7/2016 17:41	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 16:04	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 11:10	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 16:04	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 16:04	ELS	
Boron	<0.100	mg/L	0.0200	0.100	5/26/2016 10:15	KLW	5/27/2016 19:12	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:04	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:04	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 16:04	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:04	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:04	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 16:04	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 16:04	ELS	
Barium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:04	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 16:04	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 16:04	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/7/2016 00:55	LBB	
Sulfate	<1.00	mg/L	0.3000	1.00			6/7/2016 00:55	LBB	
Chloride	<0.2500	mg/L	0.0400	0.2500			6/7/2016 00:55	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			6/7/2016 00:55	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563009**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**FERB-1**	**Date Collected:**	**5/23/2016 16:30**
Sample Description	**Hammond AP GW-Equip Rinse**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	<25	mg/L	25	25			5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563010**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**FERB-2**	**Date Collected:**	**5/23/2016 17:00**
Sample Description	**Hammond AP GW-Equip Rinse**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 17:47	MRP	
Calcium	<0.500	mg/L	0.100	0.500	5/26/2016 10:40	KLW	6/7/2016 17:47	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 16:37	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/31/2016 06:22	WCM	5/31/2016 11:52	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 16:37	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 16:37	ELS	
Boron	<0.100	mg/L	0.0200	0.100	5/26/2016 10:15	KLW	5/27/2016 16:37	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:37	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:37	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 16:37	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:37	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:37	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 16:37	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 16:37	ELS	
Barium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:37	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 16:37	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 16:37	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/7/2016 01:25	LBB	
Sulfate	<1.00	mg/L	0.3000	1.00			6/7/2016 01:25	LBB	
Chloride	0.0497J	mg/L	0.0400	0.2500			6/7/2016 01:25	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			6/7/2016 01:25	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563010**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**FERB-2**	**Date Collected:**	**5/23/2016 17:00**
Sample Description	**Hammond AP GW-Equip Rinse**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	<25	mg/L	25	25			5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563011**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-9**	**Date Collected:**	**5/23/2016 12:00**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 17:53	MRP	
Calcium	179	mg/L	2.00	10.0	5/26/2016 10:40	KLW	6/7/2016 17:53	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 16:42	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/31/2016 06:22	WCM	5/31/2016 11:55	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 16:42	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 16:42	ELS	
Boron	1.76	mg/L	0.100	0.500	5/26/2016 10:15	KLW	5/27/2016 18:49	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:42	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:42	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 16:42	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:42	ELS	
Molybdenum	0.0187	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:42	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 16:42	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 16:42	ELS	
Barium	0.117	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:42	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 16:42	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 16:42	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/7/2016 01:55	LBB	
Sulfate	207	mg/L	30.0	100			6/8/2016 20:23	LBB	
Chloride	152	mg/L	4.00	25.0			6/8/2016 20:23	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			6/7/2016 01:55	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563011**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-9**	**Date Collected:**	**5/23/2016 12:00**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	984	mg/L	25	25			5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563012**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-10**	**Date Collected:**	**5/23/2016 14:06**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 17:59	MRP	
Calcium	167	mg/L	2.00	10.0	5/26/2016 10:40	KLW	6/7/2016 17:59	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 16:47	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/31/2016 06:22	WCM	5/31/2016 11:58	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 16:47	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 16:47	ELS	
Boron	0.720	mg/L	0.0200	0.100	5/26/2016 10:15	KLW	5/27/2016 16:47	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:47	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:47	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 16:47	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:47	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:47	ELS	
Cadmium	0.000115J	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 16:47	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 16:47	ELS	
Barium	0.0877	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:47	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 16:47	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 16:47	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/7/2016 02:25	LBB	
Sulfate	175	mg/L	3.00	10.0			6/8/2016 20:53	LBB	
Chloride	56.1	mg/L	0.4000	2.50			6/8/2016 20:53	LBB	
Fluoride	0.0394J	mg/L	0.0100	0.3000			6/7/2016 02:25	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563012**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-10**	**Date Collected:**	**5/23/2016 14:06**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	629	mg/L	25	25			5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563013**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-17**	**Date Collected:**	**5/23/2016 16:21**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 18:05	MRP	
Calcium	225	mg/L	2.00	10.0	5/26/2016 10:40	KLW	6/7/2016 18:05	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 16:51	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/31/2016 06:22	WCM	5/31/2016 12:00	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 16:51	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 16:51	ELS	
Boron	5.70	mg/L	0.200	1.00	5/26/2016 10:15	KLW	5/27/2016 18:58	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:51	ELS	
Cobalt	0.0167	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:51	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 16:51	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:51	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:51	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 16:51	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 16:51	ELS	
Barium	0.0222J	mg/L	0.0200	0.100	5/26/2016 10:15	KLW	5/27/2016 18:58	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 16:51	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 16:51	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/7/2016 04:54	LBB	
Sulfate	395	mg/L	30.0	100			6/8/2016 21:23	LBB	
Chloride	94.0	mg/L	4.00	25.0			6/8/2016 21:23	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			6/7/2016 04:54	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563013**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-17**	**Date Collected:**	**5/23/2016 16:21**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	1010	mg/L	25	25			5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563014**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-13**	**Date Collected:**	**5/23/2016 15:15**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/26/2016 10:40	KLW	6/7/2016 18:35	MRP	
Calcium	133	mg/L	2.00	10.0	5/26/2016 10:40	KLW	6/7/2016 18:35	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/26/2016 10:15	KLW	5/27/2016 16:56	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/31/2016 06:22	WCM	5/31/2016 12:03	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	0.0422J	mg/L	0.0100	0.0500	5/26/2016 10:15	KLW	5/27/2016 16:56	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 16:56	ELS	
Boron	2.15	mg/L	0.100	0.500	5/26/2016 10:15	KLW	5/27/2016 17:43	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:56	ELS	
Cobalt	0.00361J	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:56	ELS	
Arsenic	0.329	mg/L	0.00500	0.0250	5/26/2016 10:15	KLW	5/27/2016 17:43	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:56	ELS	
Molybdenum	0.0270	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:56	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/26/2016 10:15	KLW	5/27/2016 16:56	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/26/2016 10:15	KLW	5/27/2016 16:56	ELS	
Barium	0.0779	mg/L	0.00200	0.0100	5/26/2016 10:15	KLW	5/27/2016 16:56	ELS	
Thallium	0.000378J	mg/L	0.000200	0.00100	5/26/2016 10:15	KLW	5/27/2016 16:56	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/26/2016 10:15	KLW	5/27/2016 16:56	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/7/2016 06:24	LBB	
Sulfate	215	mg/L	15.0	50.0			6/8/2016 22:52	LBB	
Chloride	93.2	mg/L	2.00	12.5			6/8/2016 22:52	LBB	
Fluoride	0.2587J	mg/L	0.0100	0.3000			6/7/2016 06:24	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103563 CCR - Hammond AP

Lab ID:	**103563014**	**Date Received:**	**5/24/2016 08:55**
Sample ID:	**HGWC-13**	**Date Collected:**	**5/23/2016 15:15**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	683	mg/L	25	25			5/25/2016 17:33	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS QUALIFIERS

Workorder: 103563 CCR - Hammond AP

PARAMETER QUALIFIERS

ND	None detected at the laboratory Method Detection Limit
MDL	Method Detection Limit
RL	Reporting Limit
J	The reported value is between the laboratory method detection limit and the laboratory reporting limit

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103563 CCR - Hammond AP

QC Batch: IC/3036 Analysis Method: EPA 300

QC Batch Method: EPA 300

Associated Lab Samples: 103518002 103518003 103520001 103520002 103520003 103520004 103520005 103563001 103563002

METHOD BLANK: 106378

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Fluoride	mg/L	<0.3000	0.3000	

METHOD BLANK: 106634

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Sulfate	mg/L	<1.00	1.00	

METHOD BLANK: 106670

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Sulfate	mg/L	<1.00	1.00	
Fluoride	mg/L	<0.3000	0.3000	

LABORATORY CONTROL SAMPLE: 106371

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	11.3	11.7	104	90-110	
Fluoride	mg/L	6.83	6.90	101	90-110	

LABORATORY CONTROL SAMPLE: 106379

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	0.5	0.5350	107	90-110	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103563 CCR - Hammond AP

LABORATORY CONTROL SAMPLE: 106635

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.5020	100	90-110	

LABORATORY CONTROL SAMPLE: 106671

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.4990	99.8	90-110	
Sulfate	mg/L	5	5.01	100	90-110	
Fluoride	mg/L	0.5	0.5320	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106630 106631 Original: 103532003

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Sulfate	mg/L	1.31	10	11.5	11.4	102	101	90-110	0.99	10	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103563 CCR - Hammond AP

QC Batch: IC/3037 Analysis Method: EPA 300

QC Batch Method: EPA 300

Associated Lab Samples: 103563003 103563004 103563005 103563006 103563007 103563008 103563009 103563010 103563011 103563012 103563013 103563014

METHOD BLANK: 106386

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Sulfate	mg/L	<1.00	1.00	
Fluoride	mg/L	<0.3000	0.3000	

METHOD BLANK: 106396

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Sulfate	mg/L	<1.00	1.00	
Fluoride	mg/L	<0.3000	0.3000	

METHOD BLANK: 106754

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Sulfate	mg/L	<1.00	1.00	
Fluoride	mg/L	<0.3000	0.3000	

LABORATORY CONTROL SAMPLE: 106387

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.4858	97.2	90-110	
Sulfate	mg/L	5	5.01	100	90-110	
Fluoride	mg/L	0.5	0.5287	106	90-110	

LABORATORY CONTROL SAMPLE: 106389

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	11.3	11.4	101	90-110	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103563 CCR - Hammond AP

LABORATORY CONTROL SAMPLE: 106389

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	6.83	6.70	98	90-110	

LABORATORY CONTROL SAMPLE: 106397

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.4655	93.1	90-110	
Sulfate	mg/L	5	4.90	97.9	90-110	
Fluoride	mg/L	0.5	0.5194	104	90-110	

LABORATORY CONTROL SAMPLE: 106755

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.4766	95.3	90-110	
Sulfate	mg/L	5	4.90	98	90-110	
Fluoride	mg/L	0.5	0.5231	105	90-110	

LABORATORY CONTROL SAMPLE: 106756

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	6.95	6.92	99.6	90-110	

LABORATORY CONTROL SAMPLE: 106757

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	11.3	11.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106390 106391 Original: 103563007

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Chloride	mg/L	0.0041	1	0.9645	0.9204	96	91.6	90-110	4.7	10	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103563 CCR - Hammond AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106392 106393 Original: 103563007

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Fluoride	mg/L	0	1	1.02	0.9657	102	96.6	90-110	5.4	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106394 106395 Original: 103563007

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Sulfate	mg/L	0	10	9.87	9.42	98.7	94.2	90-110	4.7	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106398 106399 Original: 103563013

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Chloride	mg/L	94	100	194	195	99.7	101	90-110	1.3	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106400 106404 Original: 103563013

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Fluoride	mg/L	0	1	1.06	1.05	106	105	90-110	0.95	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106405 106406 Original: 103563013

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Sulfate	mg/L	395	1000	1400	1400	100	101	90-110	1	10	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103563 CCR - Hammond AP

QC Batch: GRAV/2878 Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Associated Lab Samples: 103563001, 103563002, 103563003, 103563004, 103563005, 103563006, 103563007, 103563008, 103563009, 103563010, 103563011, 103563012, 103563013, 103563014

METHOD BLANK: 106427

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
TDS	mg/L	<25	25	

LABORATORY CONTROL SAMPLE: 106430

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
TDS	mg/L	241	240	99.6	90-110	

SAMPLE DUPLICATE: 106428 Original: 103563002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	1060	1070	0.75	20	

SAMPLE DUPLICATE: 106429 Original: 103567002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	48	47	2.1	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103563 CCR - Hammond AP

QC Batch: DIGM/4329 Analysis Method: EPA 6010D

QC Batch Method: EPA 3005A

Associated Lab Samples: 103533001, 103533002, 103533004, 103533005, 103533006, 103563001, 103563002, 103563003, 103563004, 103563005, 103563006, 103563007, 103563008, 103563009, 103563010, 103563011, 103563012, 103563013, 103563014

METHOD BLANK: 106465

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
INORGANICS				
Calcium	mg/L	<0.500	0.500	

LABORATORY CONTROL SAMPLE: 106466

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
INORGANICS						
Calcium	mg/L	5	4.87	97.5	80-120	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103563 CCR - Hammond AP

QC Batch: DIGM/4330 Analysis Method: EPA 6020B

QC Batch Method: EPA 3005A

Associated Lab Samples: 103533001, 103533002, 103533003, 103533004, 103533005, 103533006, 103563001, 103563002, 103563003, 103563004, 103563005, 103563006, 103563007, 103563008, 103563009, 103563010, 103563011, 103563012, 103563013, 103563014

METHOD BLANK: 106469

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
TOTAL METALS				
Lithium	mg/L	<0.0500	0.0500	
Beryllium	mg/L	<0.00300	0.00300	
Boron	mg/L	<0.100	0.100	
Chromium	mg/L	<0.0100	0.0100	
Cobalt	mg/L	<0.0100	0.0100	
Arsenic	mg/L	<0.00500	0.00500	
Selenium	mg/L	<0.0100	0.0100	
Molybdenum	mg/L	<0.0100	0.0100	
Cadmium	mg/L	<0.00100	0.00100	
Antimony	mg/L	<0.00300	0.00300	
Barium	mg/L	<0.0100	0.0100	
Thallium	mg/L	<0.00100	0.00100	
Lead	mg/L	<0.00500	0.00500	

LABORATORY CONTROL SAMPLE: 106470

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Lithium	mg/L	0.2	0.203	102	80-120	
Beryllium	mg/L	0.1	0.0942	94.2	80-120	
Boron	mg/L	0.3	0.291	97.1	80-120	
Chromium	mg/L	0.1	0.0981	98.1	80-120	
Cobalt	mg/L	0.1	0.0989	98.9	80-120	
Arsenic	mg/L	0.1	0.0943	94.3	80-120	
Selenium	mg/L	0.1	0.0944	94.4	80-120	
Molybdenum	mg/L	0.1	0.0939	93.9	80-120	
Cadmium	mg/L	0.1	0.0963	96.3	80-120	
Antimony	mg/L	0.1	0.0960	96	80-120	
Barium	mg/L	0.1	0.0962	96.2	80-120	
Thallium	mg/L	0.1	0.0867	86.7	80-120	
Lead	mg/L	0.1	0.0894	89.4	80-120	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103563 CCR - Hammond AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106471 106472 Original: 103563002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Lithium	mg/L	0.0107	0.2	0.212	0.213	101	101	75-125	0	20	
Beryllium	mg/L	5e-006	0.1	0.0988	0.0940	98.8	94	75-125	5	20	
Chromium	mg/L	0.00017	0.1	0.108	0.104	108	104	75-125	3.8	20	
Cobalt	mg/L	0.00178	0.1	0.107	0.104	105	103	75-125	1.9	20	
Arsenic	mg/L	0.0046	0.1	0.111	0.107	107	102	75-125	4.8	20	
Selenium	mg/L	0.00023	0.1	0.103	0.0962	103	95.9	75-125	7.1	20	
Cadmium	mg/L	1.1e-005	0.1	0.106	0.103	106	103	75-125	2.9	20	
Antimony	mg/L	0.00013	0.1	0.110	0.107	110	107	75-125	2.8	20	
Thallium	mg/L	8.8e-005	0.1	0.0956	0.0932	95.5	93.1	75-125	2.5	20	
Lead	mg/L	3.7e-005	0.1	0.0986	0.0953	98.6	95.3	75-125	3.4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106471 106472 Original: 103563002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Boron	mg/L	2.2	0.3	2.54	2.51	113	104	75-125	8.3	20	
Molybdenum	mg/L	0.0413	0.1	0.149	0.146	108	105	75-125	2.8	20	
Barium	mg/L	0.133	0.1	0.239	0.235	106	102	75-125	3.8	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103563 CCR - Hammond AP

QC Batch: HGPR/1662 Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Associated Lab Samples: 103563001 103563002 103563003 103563004 103563005 103563006 103563007 103563008 103563009

METHOD BLANK: 106483

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
TOTAL METALS				
Mercury	mg/L	<0.000500	0.000500	

LABORATORY CONTROL SAMPLE: 106479

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.0122	0.0123	101	80-120	

LABORATORY CONTROL SAMPLE: 106484

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.002	0.00197	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106485 106486 Original: 103561002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Mercury	mg/L	0	0.002	0.00210	0.00207	105	104	80-120	0.96	20	

SAMPLE DUPLICATE: 106482 Original: 103532002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
TOTAL METALS						
Mercury	mg/L	<0.000500	<0.000500	0	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103563 CCR - Hammond AP

SAMPLE DUPLICATE: 106487 Original: 103563001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
TOTAL METALS						
Mercury	mg/L	<0.000500	<0.000500	0	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103563 CCR - Hammond AP

QC Batch: HGPR/1663 Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Associated Lab Samples: 103563010 103563011 103563012 103563013 103563014

METHOD BLANK: 106531

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
TOTAL METALS				
Mercury	mg/L	<0.000500	0.000500	

METHOD BLANK: 106537

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
TOTAL METALS				
Mercury	mg/L	<0.000500	0.000500	

LABORATORY CONTROL SAMPLE: 106532

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.002	0.00204	102	80-120	

LABORATORY CONTROL SAMPLE: 106533

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.0122	0.0126	103	80-120	

LABORATORY CONTROL SAMPLE: 106538

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.002	0.00209	104	80-120	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103563 CCR - Hammond AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106534 106535 Original: 103567001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Mercury	mg/L	8.7e-006	0.002	0.00208	0.00201	104	100	80-120	3.9	20	

SAMPLE DUPLICATE: 106536 Original: 103567002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
TOTAL METALS						
Mercury	mg/L	<0.000500	<0.000500	0	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 103563 CCR - Hammond AP

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
103563001	HGWC-11	EPA 300	IC/3036		
103563002	HGWC-12	EPA 300	IC/3036		
103563003	DUP-2	EPA 300	IC/3037		
103563004	HGWC-14	EPA 300	IC/3037		
103563005	HGWC-15	EPA 300	IC/3037		
103563006	HGWC-16	EPA 300	IC/3037		
103563007	FB-1	EPA 300	IC/3037		
103563008	FB-2	EPA 300	IC/3037		
103563009	FERB-1	EPA 300	IC/3037		
103563010	FERB-2	EPA 300	IC/3037		
103563011	HGWC-9	EPA 300	IC/3037		
103563012	HGWC-10	EPA 300	IC/3037		
103563013	HGWC-17	EPA 300	IC/3037		
103563014	HGWC-13	EPA 300	IC/3037		
103563001	HGWC-11	SM 2540C	GRAV/2878		
103563002	HGWC-12	SM 2540C	GRAV/2878		
103563003	DUP-2	SM 2540C	GRAV/2878		
103563004	HGWC-14	SM 2540C	GRAV/2878		
103563005	HGWC-15	SM 2540C	GRAV/2878		
103563006	HGWC-16	SM 2540C	GRAV/2878		
103563007	FB-1	SM 2540C	GRAV/2878		
103563008	FB-2	SM 2540C	GRAV/2878		
103563009	FERB-1	SM 2540C	GRAV/2878		
103563010	FERB-2	SM 2540C	GRAV/2878		
103563011	HGWC-9	SM 2540C	GRAV/2878		
103563012	HGWC-10	SM 2540C	GRAV/2878		
103563013	HGWC-17	SM 2540C	GRAV/2878		
103563014	HGWC-13	SM 2540C	GRAV/2878		
103563001	HGWC-11	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103563002	HGWC-12	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103563003	DUP-2	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 103563 CCR - Hammond AP

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
103563004	HGWC-14	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103563005	HGWC-15	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103563006	HGWC-16	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103563007	FB-1	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103563008	FB-2	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103563009	FERB-1	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103563010	FERB-2	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103563011	HGWC-9	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103563012	HGWC-10	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103563013	HGWC-17	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103563014	HGWC-13	EPA 3005A	DIGM/4329	EPA 6010D	ICP/5025
103563001	HGWC-11	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103563002	HGWC-12	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103563003	DUP-2	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103563004	HGWC-14	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103563005	HGWC-15	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103563006	HGWC-16	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103563007	FB-1	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103563008	FB-2	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103563009	FERB-1	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103563010	FERB-2	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103563011	HGWC-9	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103563012	HGWC-10	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103563013	HGWC-17	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103563014	HGWC-13	EPA 3005A	DIGM/4330	EPA 6020B	ICPM/1079
103563001	HGWC-11	EPA 7470A	HGPR/1662	EPA 7470A	CVAA/1846
103563002	HGWC-12	EPA 7470A	HGPR/1662	EPA 7470A	CVAA/1846
103563003	DUP-2	EPA 7470A	HGPR/1662	EPA 7470A	CVAA/1846
103563004	HGWC-14	EPA 7470A	HGPR/1662	EPA 7470A	CVAA/1846
103563005	HGWC-15	EPA 7470A	HGPR/1662	EPA 7470A	CVAA/1846
103563006	HGWC-16	EPA 7470A	HGPR/1662	EPA 7470A	CVAA/1846
103563007	FB-1	EPA 7470A	HGPR/1662	EPA 7470A	CVAA/1846

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 103563 CCR - Hammond AP

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
103563008	FB-2	EPA 7470A	HGPR/1662	EPA 7470A	CVAA/1846
103563009	FERB-1	EPA 7470A	HGPR/1662	EPA 7470A	CVAA/1846
103563010	FERB-2	EPA 7470A	HGPR/1663	EPA 7470A	CVAA/1848
103563011	HGWC-9	EPA 7470A	HGPR/1663	EPA 7470A	CVAA/1848
103563012	HGWC-10	EPA 7470A	HGPR/1663	EPA 7470A	CVAA/1848
103563013	HGWC-17	EPA 7470A	HGPR/1663	EPA 7470A	CVAA/1848
103563014	HGWC-13	EPA 7470A	HGPR/1663	EPA 7470A	CVAA/1848

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

LABORATORY CERTIFICATIONS

Workorder: 103563 CCR - Hammond AP

Certification Program	Certification Number
NELAC	E57554

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratory
2480 Maner Road, Bin 39110
Atlanta, Georgia 30339
Phone: (404) 799-2100
Company: 8-530-2100

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

LAB USE ONLY — Work Order No. 103563 — Reviewed By: 5-24-16

[12] Page 1 of 2

[X] [13] Standard Turnaround Time

[ ] # of Business Days (Rush) *(Must be cleared through Env. Lab. prior to shipment)*

Company: [1] Southern Company Services
Report To Joju Abraham
Address: [2] 241 Ralph McGill Blvd SE B1185
Atlanta, GA 30308
Phone/Fax: [3] 404-506-7239
Contact: [4] Joju Abraham
Project Location: [5] Plant Hammond
Account Number: [6]
Special Instructions: [7] Hammond APCCR GW

Sample Shipment Date: [8] 5-24-2016
Sampled By: [9] Will Virgo (WV) Myles Rogers (MR) Tracy Wardell (TW) Greg Jirak (GJ)
Print Name
Signature
Sample Received Date: [10]
Sample Received By: [11]

Authorization to subcontract analysis will be assumed acceptable by customer unless stated otherwise.

PRESERVATIVE [21]: HNO3 N | ~~HNO3~~ C20 ICE I | HNO3 N

ANALYSIS REQUESTED [22]

Sample Type Key: [23] G-Grab C-Composite O-Other

Matrix Key: [24] O-Oil SW-Surface Water S-Solid GW-Ground Water SL-Sludge WW-Waste Water W-Wipe DW-Drinking Water LQ-Liquid OW-Other Water

Preservative Key: [25] H-Hydrochloric Acid N-Nitric Acid S-Sulfuric Acid SH-Sodium Hydroxide P-Phosphoric Acid ST-Sodium Thiosulfate I-Ice U-Unpreserved O-Other (Specify)

LAB USE ONLY [14] LAB ID	Sample Number [15]	Collection [16] Date	Time	Sample Description [17]	18 Sample Type	19 Matrix	20 No. of Containers	Metals SAP. II + IV	EPA 9020 + EPA 7470	Cl, F, SO4 EPA 300	TDS SM2540C	Radium 226 + 228 Ga Tech				LAB USE ONLY [26] Comments
103563001	HGWC-11	5-23-16	12:10	Hammond AP GW	G	GW	3	1		1		1				TW
2	HGWC-12	5-23-16	13:51	Hammond AP GW	G	GW	3	1		1		1				↓
3	DUP-2	5-23-16		Hammond AP GW	G	GW	3	1		1		1				↓
4	HGWC-14	5-23-16	12:28	Hammond AP GW	G	GW	3	1		1		1				WV
5	HGWC-15	5-23-16	13:59	Hammond AP GW	G	GW	3	1		1		1				↓
6	HGWC-16	5-23-16	15:25	Hammond AP GW	G	GW	3	1		1		1				↓
7	FB-1	5-23-16	09:00	Hammond AP GW - Field Blank	G		3	1		1		1				GJ
8	FB-2	5-23-16	09:30	Hammond AP GW - Field Blank	G		3	1		1		1				↓
9	FERB-1	5-23-16	16:30	Hammond AP GW - Equip Rinse	G		3	1		1		1				WV
10	FERB-2	5-23-16	17:00	Hammond AP GW - Equip Rinse	G		3	1		1		1				↓

FOR CHAIN OF CUSTODY USE ONLY [27]

Relinquished by: [28]	Date/Time 5/24/16 0853	**LAB USE ONLY:** Sample Receipt Information [30]: 3.0°C (GPEL-IR-4P), with ice, cooler in good condition, no seal, FHL2 Hand.
Received by: [29]	Date/Time 5-24-16 @0855	
Relinquished by:	Date/Time	
Received by:	Date/Time	

347156B

WHITE, CANARY & PINK—Laboratory GOLDENROD—Originator

(See Back For Instructions)

Georgia Power Environmental Laboratory
2480 Maner Road, Bin 39110
Atlanta, Georgia 30339
Phone: (404) 799-2100
Company: 8-530-2100

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

LAB USE ONLY
Work Order No. 1035563
Reviewed By: 5-24-16

[12] Page 2 of 2

[X] [13] Standard Turnaround Time

[ ] # of Business Days (Rush)
(Must be cleared through Env. Lab. prior to shipment)

Company: [1] Southern Company Services
Report To Joju Abraham
Address: [2] 241 Ralph McGill Blvd SE B10185
Atlanta GA 30308

Phone/Fax: [3] 404-506-7239
Contact: [4] Joju Abraham
Project Location: [5] Plant Hammond
Account Number: [6]
Special Instructions: [7] Hammond AP CCR GW

Sample Shipment Date: [8] 5-24-2016
Sampled By: [9] Will Virgo (WV) Myles Rogers (MR)
Tracy Wardell (TW) Greg Jirak (GJ)
Print Name
Signature
Sample Received Date: [10]
Sample Received By: [11]
Authorization to subcontract analysis will be assumed acceptable by customer unless stated otherwise.

PRESERVATIVE [21]

HNO3	ICE	HNO3				
N	I	N				

ANALYSIS REQUESTED [22]

LAB USE ONLY [14] LAB ID	Sample Number [15]	Collection [16] Date	Collection [16] Time	Sample Description [17]	[18] Sample Type	[19] Matrix	[20] No. of Containers	Metals App. III + IV	EPA 9020 + EPA 7470 Cl, F, SO4 EPA 300	TDS SM 2540C	Radium 226 + 228 Ga Tech				LAB USE ONLY [26] Comments
1035630 11	HGWC-9	5-23-16	1200	Hammond AP GW	G	GW	3	1	1	1					MR
12	HGWC-10	5-23-16	1406	Hammond AP GW	G	GW	3	1	1	1					↓
13	HGWC-17	5-23-16	1621	Hammond AP GW	G	GW	3	1	1	1					
↓ 14	HGWC-13	5-23-16	15:15	Hammond AP GW	G	GW	3	1	1	1					TW

Sample Type Key: [23]
G-Grab C-Composite
O-Other

Matrix Key: [24]
O-Oil SW-Surface Water
S-Solid GW-Ground Water
SL-Sludge WW-Waste Water
W-Wipe DW-Drinking Water
LQ-Liquid OW-Other Water

Preservative Key: [25]
H-Hydrochloric Acid
N-Nitric Acid
S-Sulfuric Acid
SH-Sodium Hydroxide
P-Phosphoric Acid
ST-Sodium Thiosulfate
I-Ice
U-Unpreserved
O-Other (Specify)

FOR CHAIN OF CUSTODY USE ONLY [27]

Relinquished by: [28]	Date/Time	5/24/16 0853
Received by: [29]	Date/Time	5-24-16 0855
Relinquished by:	Date/Time	
Received by:	Date/Time	

LAB USE ONLY: Sample Receipt Information [30]
3.0°C (GFEL-IR-4P) with ice, cooler in good Condition, No Seals, PHL, Hunch

Sample Receipt Checklist

GEORGIA POWER
A SOUTHERN COMPANY

Client: Hammond **# of Samples:** 14
Workorder No.: 103563 **Tracking No:**
Carrier: HAND

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter	True	
Custody seals were present on cooler	False	
Custody seals were present on sample	False	
The cooler or samples do not appear to have been compromised or tampered with	True	
Samples were received on ice	True	
Cooler temperature is acceptable	True	
Cooler temperature is recorded	True	3
COC is present	True	
COC is filled out in ink and is legible	True	Missing matrix field on COC.
COC is filled out with pertinent information	True	
The field sampler's name is on the COC	True	
Sample containers have legible labels	True	
Information on the sample label agrees with information on the COC	True	
Samples are received within holding times	True	
Containers are not broken or leaking	True	
Sample collection date/times are present	True	Missing collection time on Dup-2 sample.
Appropriate sample containers are used	True	
Sample bottles are completely filled	True	
Sample preservation is checked	True	
Sample preservation is acceptable	True	
There is sufficient sample volume for all requested analyses	True	
Containers requiring zero headspace have no headspace or the bubble is < 6mm (1/4 inch)	True	
Multiphasic samples are not present	True	
Samples do not require splitting or compositing	True	

Receiving Narrative:

Completed By: Jassim, Ayssar **Date: 05/24/2016**

ENVIRONMENTAL LABORATORY

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

June 14, 2016

Joju Abraham
Southern Company Services
Earth Sciences & Env Eng
42 Inverness Center Parkway
Birmingham, AL 35242

RE: Workorder: 103584 CCR - Hammond AP

Dear Joju Abraham:

The Environmental Laboratory has completed the analysis of your samples and reports the results on the attached pages. Our laboratory maintains current NELAC accreditation for those analytes listed under the scope of accreditation. Analytes not listed in this scope are currently not maintained under an accreditation program. The analytes of this report that are listed under our NELAC scope of accreditation meet all requirements of the NELAC standards, unless otherwise noted by data qualifiers. Internal clients can view the scope and effective dates of our accreditation at:

http://environmental.southernco.com/gpc/environmental-lab/chem.html

External clients can receive a copy of our scope of accreditation by contacting the laboratory.

All results relate only to the contents of the samples submitted. Samples will be disposed of after 30 days unless otherwise instructed. This report should only be reproduced in full with all associated records. This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

If you have any questions or comments, contact your Program Manager:

L. Biddy

lbbiddy@southernco.com

(404) 799-2132 / 8-530-2132

Respectfully submitted,

R. S. Dickerson
rsdicker@southernco.com
QA/QC Specialist

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

SAMPLE SUMMARY

Workorder: 103584 CCR - Hammond AP

Lab ID	Sample ID	Analysis Request Number	Matrix	Date Collected	Date Received
103584001	HGWC-18	N/A	Water	5/24/2016 10:24	5/24/2016 15:35

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103584 CCR - Hammond AP

Lab ID:	**103584001**	**Date Received:**	**5/24/2016 15:35**
Sample ID:	**HGWC-18**	**Date Collected:**	**5/24/2016 10:24**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A Analytical Method: EPA 6010D						
INORGANICS					5/31/2016 10:30	KLW	6/7/2016 13:03	MRP	
Calcium	403	mg/L	2.00	10.0	5/31/2016 10:30	KLW	6/7/2016 13:03	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
TOTAL METALS					5/31/2016 10:45	KLW	6/4/2016 13:00	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/31/2016 06:22	WCM	5/31/2016 12:52	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A Analytical Method: EPA 6020B						
Lithium	0.0142J	mg/L	0.0100	0.0500	5/31/2016 10:45	KLW	6/4/2016 13:00	ELS	
Beryllium	0.00278J	mg/L	0.000600	0.00300	5/31/2016 10:45	KLW	6/4/2016 13:00	ELS	
Boron	9.33	mg/L	0.400	2.00	5/31/2016 10:45	KLW	6/6/2016 12:05	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/31/2016 10:45	KLW	6/4/2016 13:00	ELS	
Cobalt	0.170J	mg/L	0.0400	0.200	5/31/2016 10:45	KLW	6/6/2016 12:05	ELS	
Arsenic	0.00294J	mg/L	0.00100	0.00500	5/31/2016 10:45	KLW	6/4/2016 13:00	ELS	
Selenium	<0.200	mg/L	0.0400	0.200	5/31/2016 10:45	KLW	6/6/2016 12:05	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/31/2016 10:45	KLW	6/4/2016 13:00	ELS	
Cadmium	<0.0200	mg/L	0.00200	0.0200	5/31/2016 10:45	KLW	6/6/2016 12:05	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/31/2016 10:45	KLW	6/4/2016 13:00	ELS	
Barium	<0.200	mg/L	0.0400	0.200	5/31/2016 10:45	KLW	6/6/2016 12:05	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/31/2016 10:45	KLW	6/4/2016 13:00	ELS	
Lead	0.00154J	mg/L	0.00100	0.00500	5/31/2016 10:45	KLW	6/4/2016 13:00	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							6/7/2016 09:54	LBB	
Sulfate	834	mg/L	60.0	200			6/9/2016 00:52	LBB	
Chloride	280	mg/L	8.00	50.0			6/9/2016 00:52	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			6/7/2016 09:54	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/26/2016 17:40	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS

Workorder: 103584 CCR - Hammond AP

Lab ID:	**103584001**	**Date Received:**	**5/24/2016 15:35**
Sample ID:	**HGWC-18**	**Date Collected:**	**5/24/2016 10:24**
Sample Description	**Hammond AP GW**	**Matrix:**	**Water**
Location	**Hammond AP**		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	1900	mg/L	25	25			5/26/2016 17:40	KLW	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

ANALYTICAL RESULTS QUALIFIERS

Workorder: 103584 CCR - Hammond AP

PARAMETER QUALIFIERS

ND	None detected at the laboratory Method Detection Limit
MDL	Method Detection Limit
RL	Reporting Limit
J	The reported value is between the laboratory method detection limit and the laboratory reporting limit

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103584 CCR - Hammond AP

QC Batch: IC/3037 Analysis Method: EPA 300

QC Batch Method: EPA 300

Associated Lab Samples: 103563003, 103563004, 103563005, 103563006, 103563007, 103563008, 103563009, 103563010, 103563011, 103563012, 103563013, 103563014, 103584001

METHOD BLANK: 106396

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Fluoride	mg/L	<0.3000	0.3000	

METHOD BLANK: 106754

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Sulfate	mg/L	<1.00	1.00	
Fluoride	mg/L	<0.3000	0.3000	

LABORATORY CONTROL SAMPLE: 106389

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	6.83	6.70	98	90-110	

LABORATORY CONTROL SAMPLE: 106397

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	0.5	0.5194	104	90-110	

LABORATORY CONTROL SAMPLE: 106755

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.4766	95.3	90-110	
Sulfate	mg/L	5	4.90	98	90-110	
Fluoride	mg/L	0.5	0.5231	105	90-110	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103584 CCR - Hammond AP

LABORATORY CONTROL SAMPLE: 106757

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	11.3	11.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106400 106404 Original: 103563013

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Fluoride	mg/L	0	1	1.06	1.05	106	105	90-110	0.95	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106405 106406 Original: 103563013

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Sulfate	mg/L	395	1000	1400	1400	100	101	90-110	1	10	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103584 CCR - Hammond AP

QC Batch: GRAV/2879 Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Associated Lab Samples: 103584001

METHOD BLANK: 106503

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
TDS	mg/L	<25	25	

LABORATORY CONTROL SAMPLE: 106506

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
TDS	mg/L	241	236	97.9	90-110	

SAMPLE DUPLICATE: 106504 Original: 103561002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	32	29	9.8	20	

SAMPLE DUPLICATE: 106505 Original: 103621008

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	196	183	6.9	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103584 CCR - Hammond AP

QC Batch: HGPR/1663 Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Associated Lab Samples: 103563010 103563011 103563012 103563013 103563014 103584001

METHOD BLANK: 106537

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
TOTAL METALS				
Mercury	mg/L	<0.000500	0.000500	

LABORATORY CONTROL SAMPLE: 106533

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.0122	0.0126	103	80-120	

LABORATORY CONTROL SAMPLE: 106538

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.002	0.00209	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106539 106540 Original: 103567006

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Mercury	mg/L	9.1e-006	0.002	0.00205	0.00213	102	106	80-120	3.8	20	

SAMPLE DUPLICATE: 106536 Original: 103567002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
TOTAL METALS						
Mercury	mg/L	<0.000500	<0.000500	0	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103584 CCR - Hammond AP

SAMPLE DUPLICATE: 106541 Original: 103584001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
TOTAL METALS						
Mercury	mg/L	<0.000500	<0.000500	2.1	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103584 CCR - Hammond AP

QC Batch: DIGM/4336 Analysis Method: EPA 6010D

QC Batch Method: EPA 3005A

Associated Lab Samples: 103584001

METHOD BLANK: 106558

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
INORGANICS				
Calcium	mg/L	<0.500	0.500	

LABORATORY CONTROL SAMPLE: 106559

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
INORGANICS						
Calcium	mg/L	5	5.03	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106560 106561 Original: 103621002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
INORGANICS											
Calcium	mg/L	13	5	18.0	17.6	101	92.3	75-125	9	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103584 CCR - Hammond AP

QC Batch: DIGM/4337 Analysis Method: EPA 6020B

QC Batch Method: EPA 3005A

Associated Lab Samples: 103584001

METHOD BLANK: 106562

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
TOTAL METALS				
Lithium	mg/L	<0.0500	0.0500	
Beryllium	mg/L	<0.00300	0.00300	
Boron	mg/L	<0.100	0.100	
Chromium	mg/L	<0.0100	0.0100	
Cobalt	mg/L	<0.0100	0.0100	
Arsenic	mg/L	<0.00500	0.00500	
Selenium	mg/L	<0.0100	0.0100	
Molybdenum	mg/L	<0.0100	0.0100	
Cadmium	mg/L	<0.00100	0.00100	
Antimony	mg/L	<0.00300	0.00300	
Barium	mg/L	<0.0100	0.0100	
Thallium	mg/L	<0.00100	0.00100	
Lead	mg/L	<0.00500	0.00500	

LABORATORY CONTROL SAMPLE: 106563

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Lithium	mg/L	0.2	0.199	99.4	80-120	
Beryllium	mg/L	0.1	0.0964	96.4	80-120	
Boron	mg/L	0.3	0.296	98.6	80-120	
Chromium	mg/L	0.1	0.0971	97.1	80-120	
Cobalt	mg/L	0.1	0.100	100	80-120	
Arsenic	mg/L	0.1	0.0918	91.8	80-120	
Selenium	mg/L	0.1	0.0897	89.7	80-120	
Molybdenum	mg/L	0.1	0.0938	93.8	80-120	
Cadmium	mg/L	0.1	0.0986	98.6	80-120	
Antimony	mg/L	0.1	0.0937	93.7	80-120	
Barium	mg/L	0.1	0.101	101	80-120	
Thallium	mg/L	0.1	0.0967	96.7	80-120	
Lead	mg/L	0.1	0.0951	95.1	80-120	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA

Workorder: 103584 CCR - Hammond AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106564 106565 Original: 103567005

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Lithium	mg/L	0.021	0.2	0.214	0.215	96.4	97.1	75-125	0.72	20	
Beryllium	mg/L	0.00038	0.1	0.0955	0.0951	95.1	94.7	75-125	0.42	20	
Boron	mg/L	0.0035	0.3	0.295	0.297	97	97.9	75-125	0.92	20	
Chromium	mg/L	0.00051	0.1	0.102	0.103	102	102	75-125	0	20	
Cobalt	mg/L	3.1e-005	0.1	0.102	0.101	102	101	75-125	0.99	20	
Arsenic	mg/L	6e-005	0.1	0.0992	0.100	99.1	100	75-125	0.9	20	
Selenium	mg/L	0.00028	0.1	0.0994	0.0994	99.1	99.1	75-125	0	20	
Molybdenum	mg/L	0.0085	0.1	0.110	0.112	102	103	75-125	0.98	20	
Cadmium	mg/L	6.8e-005	0.1	0.101	0.101	100	101	75-125	1	20	
Antimony	mg/L	0.00103	0.1	0.102	0.102	101	101	75-125	0	20	
Barium	mg/L	0.00102	0.1	0.106	0.107	105	106	75-125	0.95	20	
Thallium	mg/L	8e-006	0.1	0.0976	0.0978	97.6	97.8	75-125	0.2	20	
Lead	mg/L	6.7e-005	0.1	0.0978	0.0984	97.7	98.3	75-125	0.61	20	

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 103584 CCR - Hammond AP

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
103584001	HGWC-18	EPA 300	IC/3037		
103584001	HGWC-18	SM 2540C	GRAV/2879		
103584001	HGWC-18	EPA 7470A	HGPR/1663	EPA 7470A	CVAA/1848
103584001	HGWC-18	EPA 3005A	DIGM/4336	EPA 6010D	ICP/5024
103584001	HGWC-18	EPA 3005A	DIGM/4337	EPA 6020B	ICPM/1080

Georgia Power Environmental Laboratories
2480 Maner Road
Atlanta, Ga. 30339
Phone: (404) 799-2100
Fax: (404) 799-2141

LABORATORY CERTIFICATIONS

Workorder: 103584 CCR - Hammond AP

Certification Program	Certification Number
NELAC	E57554

CERTIFICATE OF ANALYSIS

Georgia Power Environmental Laboratory
2480 Maner Road, Bin 39110
Atlanta, Georgia 30339
Phone: (404) 799-2100
Company: 8-530-2100

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

LAB USE ONLY
Work Order No. 103584
Reviewed By: AMJ 5/25/16

[12] Page 1 of 1

[13] Standard Turnaround Time

# of Business Days (Rush)
(Must be cleared through Env. Lab. prior to shipment)

Company: [1] Southern Company Services
Report To Joju Abraham
Address: [2] 241 Ralph McGill Blvd SE B15185
Atlanta, GA 30308

Phone/Fax: [3] 404-506-7239
Contact: [4] Joju Abraham
Project Location: [5] Plant Hammond
Account Number: [6]
Special Instructions: [7] Hammond AP CCR GW

Sample Shipment Date: [8] 5-24-2016
Sampled By: [9] Myles Rogers (MR)
Print Name

Signature

Sample Received Date: [10] 5/24/16 @ 15:35
Sample Received By: [11]

Authorization to subcontract analysis will be assumed acceptable by customer unless stated otherwise.

PRESERVATIVE [21]

HNO3	ICE	HNO_3				
N	I	N				

ANALYSIS REQUESTED [22]

LAB USE ONLY [14] LAB ID	Sample Number [15]	Collection [16] Date	Collection [16] Time	Sample Description [17]	[18] Sample Type	[19] Matrix	[20] No. of Containers	Metals App. III + IV	EPA 6020 + EPA 7470 Cl, F, SO4 EPA 300	TDS SM2540C	Radium 226 + 228 Ga Tech					LAB USE ONLY [26] Comments
10358400 1	HGWC-18	5-24-16	10:24	Hammond AP GW	G	GW	3	1	1		1					

Sample Type Key: [23]
G-Grab C-Composite
O-Other

Matrix Key: [24]
O-Oil SW-Surface Water
S-Solid GW-Ground Water
SL-Sludge WW-Waste Water
W-Wipe DW-Drinking Water
LQ-Liquid OW-Other Water

Preservative Key: [25]
H-Hydrochloric Acid
N-Nitric Acid
S-Sulfuric Acid
SH-Sodium Hydroxide
P-Phosphoric Acid
ST-Sodium Thiosulfate
I-Ice
U-Unpreserved
O-Other (Specify)

FOR CHAIN OF CUSTODY USE ONLY [27]

Relinquished by: [28] Date/Time
Received by: [29] Date/Time
Relinquished by: Date/Time
Received by: Date/Time

LAB USE ONLY: Sample Receipt Information [30]

5.0°C (GPEL-IR-4P), with ice; cooler in good condition; no seal
pH<2, Hand.

347156B

WHITE, CANARY & PINK—Laboratory GOLDENROD—Originator

(See Back For Instructions)

Sample Receipt Checklist

GEORGIA POWER
A SOUTHERN COMPANY

Client: Hammond
Workorder No.: 103584
Carrier: HAND

# of Samples: 1
Tracking No:

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter	True	
Custody seals were present on cooler	False	
Custody seals were present on sample	False	
The cooler or samples do not appear to have been compromised or tampered with	True	
Samples were received on ice	True	
Cooler temperature is acceptable	True	
Cooler temperature is recorded	True	5
COC is present	True	
COC is filled out in ink and is legible	True	
COC is filled out with pertinent information	True	
The field sampler's name is on the COC	True	
Sample containers have legible labels	True	
Information on the sample label agrees with information on the COC	True	
Samples are received within holding times	True	
Containers are not broken or leaking	True	
Sample collection date/times are present	True	
Appropriate sample containers are used	True	
Sample bottles are completely filled	True	
Sample preservation is checked	True	
Sample preservation is acceptable	True	
There is sufficient sample volume for all requested analyses	True	
Containers requiring zero headspace have no headspace or the bubble is < 6mm (1/4 inch)	True	
Multiphasic samples are not present	True	
Samples do not require splitting or compositing	True	

Receiving Narrative:

No non-conformance noted.

Completed By: Sutton, Nick

Date: 05/25/2016

ENVIRONMENTAL LABORATORY

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: AAA0792
February 02, 2017
Project: CCR Event
Project #:Plant Hammond

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

February 02, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWA-1	AAA0792-01	Ground Water	01/24/17 10:05	01/25/17 11:30
HGWA-2	AAA0792-02	Ground Water	01/24/17 11:30	01/25/17 11:30
HGWA-3	AAA0792-03	Ground Water	01/24/17 11:29	01/25/17 11:30
HGWA-4	AAA0792-04	Ground Water	01/24/17 13:08	01/25/17 11:30
HGWA-5	AAA0792-05	Ground Water	01/24/17 15:15	01/25/17 11:30
HGWA-6	AAA0792-06	Ground Water	01/24/17 15:08	01/25/17 11:30

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

February 02, 2017

Report No.: AAA0792
Client ID: HGWA-1
Date/Time Sampled: 1/24/2017 10:05:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0792-01
Date/Time Received: 1/25/2017 11:30:00AM

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	01/27/17 15:00	01/27/17 15:00	7010698	JPT
Inorganic Anions											
Chloride	5.2	0.25	0.01	mg/L	EPA 300.0		1	01/26/17 08:07	01/26/17 11:02	7010651	RLC
Fluoride	0.09	0.30	0.004	mg/L	EPA 300.0	J	1	01/26/17 08:07	01/26/17 11:02	7010651	RLC
Sulfate	46	1.0	0.09	mg/L	EPA 300.0		1	01/26/17 08:07	01/26/17 11:02	7010651	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:27	7010649	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:27	7010649	CSW
Barium	0.0280	0.0100	0.0004	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:27	7010649	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:27	7010649	CSW
Boron	0.0165	0.0400	0.0064	mg/L	EPA 6020B	J	1	01/26/17 15:50	01/30/17 19:27	7010649	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:27	7010649	CSW
Calcium	95.7	25.0	1.55	mg/L	EPA 6020B		50	01/26/17 15:50	01/30/17 19:32	7010649	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:27	7010649	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:27	7010649	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:27	7010649	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:27	7010649	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:27	7010649	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:27	7010649	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:27	7010649	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/31/17 11:00	01/31/17 14:55	7010766	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

February 02, 2017

Report No.: AAA0792
Client ID: HGWA-2
Date/Time Sampled: 1/24/2017 11:30:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0792-02
Date/Time Received: 1/25/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	129	25	10	mg/L	SM 2540 C		1	01/27/17 15:00	01/27/17 15:00	7010698	JPT
Inorganic Anions											
Chloride	6.1	0.25	0.01	mg/L	EPA 300.0		1	01/26/17 08:07	01/26/17 11:22	7010651	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	01/26/17 08:07	01/26/17 11:22	7010651	RLC
Sulfate	46	1.0	0.09	mg/L	EPA 300.0		1	01/26/17 08:07	01/26/17 11:22	7010651	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:50	7010649	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:50	7010649	CSW
Barium	0.102	0.0100	0.0004	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:50	7010649	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	01/26/17 15:50	01/30/17 19:50	7010649	CSW
Boron	0.0365	0.0400	0.0064	mg/L	EPA 6020B	J	1	01/26/17 15:50	01/30/17 19:50	7010649	CSW
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	01/26/17 15:50	01/30/17 19:50	7010649	CSW
Calcium	18.5	5.00	0.311	mg/L	EPA 6020B		10	01/26/17 15:50	01/31/17 14:02	7010649	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:50	7010649	CSW
Cobalt	0.0206	0.0100	0.0005	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:50	7010649	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:50	7010649	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:50	7010649	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:50	7010649	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:50	7010649	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 19:50	7010649	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/31/17 11:00	01/31/17 14:57	7010766	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

February 02, 2017

Report No.: AAA0792
Client ID: HGWA-3
Date/Time Sampled: 1/24/2017 11:29:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0792-03
Date/Time Received: 1/25/2017 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	01/27/17 15:00	01/27/17 15:00	7010698	JPT
Inorganic Anions											
Chloride	6.4	0.25	0.01	mg/L	EPA 300.0		1	01/26/17 08:07	01/26/17 11:43	7010651	RLC
Fluoride	0.06	0.30	0.004	mg/L	EPA 300.0	J	1	01/26/17 08:07	01/26/17 11:43	7010651	RLC
Sulfate	48	1.0	0.09	mg/L	EPA 300.0		1	01/26/17 08:07	01/26/17 11:43	7010651	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:01	7010649	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:01	7010649	CSW
Barium	0.126	0.0100	0.0004	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:01	7010649	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:01	7010649	CSW
Boron	0.0100	0.0400	0.0064	mg/L	EPA 6020B	J	1	01/26/17 15:50	01/30/17 20:01	7010649	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:01	7010649	CSW
Calcium	69.6	25.0	1.55	mg/L	EPA 6020B		50	01/26/17 15:50	01/30/17 20:07	7010649	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:01	7010649	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:01	7010649	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:01	7010649	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:01	7010649	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:01	7010649	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:01	7010649	CSW
Lithium	0.0030	0.0500	0.0021	mg/L	EPA 6020B	J	1	01/26/17 15:50	01/30/17 20:01	7010649	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/31/17 11:00	01/31/17 14:59	7010766	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

February 02, 2017

Report No.: AAA0792
Client ID: HGWA-4
Date/Time Sampled: 1/24/2017 1:08:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0792-04
Date/Time Received: 1/25/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	131	25	10	mg/L	SM 2540 C		1	01/27/17 15:00	01/27/17 15:00	7010698	JPT
Inorganic Anions											
Chloride	4.7	0.25	0.01	mg/L	EPA 300.0		1	01/26/17 08:07	01/26/17 12:04	7010651	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	01/26/17 08:07	01/26/17 12:04	7010651	RLC
Sulfate	5.7	1.0	0.09	mg/L	EPA 300.0		1	01/26/17 08:07	01/26/17 12:04	7010651	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:13	7010649	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:13	7010649	CSW
Barium	0.0192	0.0100	0.0004	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:13	7010649	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:13	7010649	CSW
Boron	0.0145	0.0400	0.0064	mg/L	EPA 6020B	J	1	01/26/17 15:50	01/30/17 20:13	7010649	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:13	7010649	CSW
Calcium	30.8	25.0	1.55	mg/L	EPA 6020B		50	01/26/17 15:50	01/30/17 20:18	7010649	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:13	7010649	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:13	7010649	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:13	7010649	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:13	7010649	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:13	7010649	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:13	7010649	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:13	7010649	CSW
Mercury	0.00010	0.00050	0.000041	mg/L	EPA 7470A	J	1	01/31/17 11:00	01/31/17 15:02	7010766	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

February 02, 2017

Report No.: AAA0792
Client ID: HGWA-5
Date/Time Sampled: 1/24/2017 3:15:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0792-05
Date/Time Received: 1/25/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	156	25	10	mg/L	SM 2540 C		1	01/27/17 15:00	01/27/17 15:00	7010698	JPT
Inorganic Anions											
Chloride	1.6	0.25	0.01	mg/L	EPA 300.0		1	01/26/17 08:07	01/26/17 12:24	7010651	RLC
Fluoride	0.09	0.30	0.004	mg/L	EPA 300.0	J	1	01/26/17 08:07	01/26/17 12:24	7010651	RLC
Sulfate	20	1.0	0.09	mg/L	EPA 300.0		1	01/26/17 08:07	01/26/17 12:24	7010651	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:24	7010649	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:24	7010649	CSW
Barium	0.0478	0.0100	0.0004	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:24	7010649	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:24	7010649	CSW
Boron	0.0072	0.0400	0.0064	mg/L	EPA 6020B	J	1	01/26/17 15:50	01/30/17 20:24	7010649	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:24	7010649	CSW
Calcium	24.5	5.00	0.311	mg/L	EPA 6020B		10	01/26/17 15:50	01/31/17 14:08	7010649	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:24	7010649	CSW
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/26/17 15:50	01/30/17 20:24	7010649	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:24	7010649	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:24	7010649	CSW
Selenium	0.0011	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/26/17 15:50	01/30/17 20:24	7010649	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/26/17 15:50	01/30/17 20:24	7010649	CSW
Lithium	0.0028	0.0500	0.0021	mg/L	EPA 6020B	J	1	01/26/17 15:50	01/30/17 20:24	7010649	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/31/17 11:00	01/31/17 15:04	7010766	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

February 02, 2017

Report No.: AAA0792
Client ID: HGWA-6
Date/Time Sampled: 1/24/2017 3:08:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0792-06
Date/Time Received: 1/25/2017 11:30:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	272	25	10	mg/L	SM 2540 C		1	01/27/17 15:00	01/27/17 15:00	7010698	JPT
Inorganic Anions											
Chloride	1.9	0.25	0.01	mg/L	EPA 300.0		1	01/26/17 08:07	01/26/17 12:45	7010651	RLC
Fluoride	0.02	0.30	0.004	mg/L	EPA 300.0	J	1	01/26/17 08:07	01/26/17 12:45	7010651	RLC
Sulfate	37	1.0	0.09	mg/L	EPA 300.0		1	01/26/17 08:07	01/26/17 12:45	7010651	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/26/17 15:50	01/31/17 14:13	7010649	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/26/17 15:50	01/31/17 14:13	7010649	CSW
Barium	0.168	0.0100	0.0004	mg/L	EPA 6020B		1	01/26/17 15:50	01/31/17 14:13	7010649	CSW
Beryllium	ND	0.0030	0.0004	mg/L	EPA 6020B		5	01/26/17 15:50	01/31/17 14:26	7010649	CSW
Boron	ND	0.200	0.0321	mg/L	EPA 6020B	R-01	5	01/26/17 15:50	01/31/17 14:26	7010649	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/26/17 15:50	01/31/17 14:13	7010649	CSW
Calcium	48.3	25.0	1.55	mg/L	EPA 6020B		50	01/26/17 15:50	01/31/17 14:20	7010649	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/26/17 15:50	01/31/17 14:13	7010649	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/26/17 15:50	01/31/17 14:13	7010649	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/26/17 15:50	01/31/17 14:13	7010649	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/26/17 15:50	01/31/17 14:13	7010649	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/26/17 15:50	01/31/17 14:13	7010649	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/26/17 15:50	01/31/17 14:13	7010649	CSW
Lithium	0.0108	0.0500	0.0103	mg/L	EPA 6020B	J	5	01/26/17 15:50	01/31/17 14:26	7010649	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/31/17 11:00	01/31/17 15:11	7010766	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

February 02, 2017

Report No.: AAA0792

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010698 - SM 2540 C											
Blank (7010698-BLK1)						Prepared & Analyzed: 01/27/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7010698-BS1)						Prepared & Analyzed: 01/27/17					
Total Dissolved Solids	403	25	10	mg/L	400.00		101	84-108			
Duplicate (7010698-DUP1)		**Source: AAA0792-05**				Prepared & Analyzed: 01/27/17					
Total Dissolved Solids	121	25	10	mg/L		156			25	10	QR-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

February 02, 2017

Report No.: AAA0792

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010651 - EPA 300.0											
Blank (7010651-BLK1)						Prepared & Analyzed: 01/26/17					
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 (7010651-BS1)						Prepared & Analyzed: 01/26/17					
Chloride	10.2	0.25	0.01	mg/L	10.010		102	90-110			
Fluoride	9.89	0.30	0.004	mg/L	10.020		99	90-110			
Sulfate	10.4	1.0	0.09	mg/L	10.020		104	90-110			
Matrix Spike (7010651-MS1)		**Source: AAA0799-01**				Prepared & Analyzed: 01/26/17					
Chloride	12.1	0.25	0.01	mg/L	10.010	2.11	100	90-110			
Fluoride	10.0	0.30	0.004	mg/L	10.020	0.01	100	90-110			
Sulfate	17.6	1.0	0.09	mg/L	10.020	8.18	94	90-110			
Matrix Spike Dup (7010651-MSD1)		**Source: AAA0799-01**				Prepared & Analyzed: 01/26/17					
Chloride	12.1	0.25	0.01	mg/L	10.010	2.11	100	90-110	0.1	15	
Fluoride	10.1	0.30	0.004	mg/L	10.020	0.01	100	90-110	0.3	15	
Sulfate	17.6	1.0	0.09	mg/L	10.020	8.18	94	90-110	0.1	15	

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

February 02, 2017

Report No.: AAA0792

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010649 - EPA 3005A											
Blank (7010649-BLK1)						Prepared: 01/26/17 Analyzed: 01/30/17					
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 (7010649-BS1)						Prepared: 01/26/17 Analyzed: 01/30/17					
Antimony	0.108	0.0030	0.0008	mg/L	0.10000		108	80-120			
Arsenic	0.0978	0.0050	0.0016	mg/L	0.10000		98	80-120			
Barium	0.102	0.0100	0.0004	mg/L	0.10000		102	80-120			
Beryllium	0.0974	0.0030	0.00008	mg/L	0.10000		97	80-120			
Boron	0.985	0.0400	0.0064	mg/L	1.0000		99	80-120			
Cadmium	0.100	0.0010	0.00007	mg/L	0.10000		100	80-120			
Calcium	1.02	0.500	0.0311	mg/L	1.0000		102	80-120			
Chromium	0.100	0.0100	0.0009	mg/L	0.10000		100	80-120			
Cobalt	0.0969	0.0100	0.0005	mg/L	0.10000		97	80-120			
Copper	0.114	0.0250	0.0005	mg/L	0.10000		114	80-120			
Lead	0.100	0.0050	0.0001	mg/L	0.10000		100	80-120			
Molybdenum	0.107	0.0100	0.0017	mg/L	0.10000		107	80-120			
Nickel	0.0999	0.0100	0.0006	mg/L	0.10000		100	80-120			
Selenium	0.0998	0.0100	0.0010	mg/L	0.10000		100	80-120			
Silver	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			
Thallium	0.0988	0.0010	0.0002	mg/L	0.10000		99	80-120			
Vanadium	0.0978	0.0100	0.0071	mg/L	0.10000		98	80-120			
Zinc	0.102	0.0100	0.0021	mg/L	0.10000		102	80-120			
Lithium	0.0988	0.0500	0.0021	mg/L	0.10000		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

February 02, 2017

Report No.: AAA0792

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010649 - EPA 3005A											
Matrix Spike (7010649-MS1)		**Source: AAA0800-01**				Prepared: 01/26/17 Analyzed: 01/30/17					
Antimony	0.110	0.0030	0.0008	mg/L	0.10000	0.0024	107	75-125			
Arsenic	0.100	0.0050	0.0016	mg/L	0.10000	ND	100	75-125			
Barium	0.110	0.0100	0.0004	mg/L	0.10000	0.0071	103	75-125			
Beryllium	0.101	0.0030	0.00008	mg/L	0.10000	ND	101	75-125			
Boron	1.04	0.0400	0.0064	mg/L	1.0000	ND	104	75-125			
Cadmium	0.103	0.0010	0.00007	mg/L	0.10000	0.0002	103	75-125			
Calcium	2.58	0.500	0.0311	mg/L	1.0000	1.62	96	75-125			
Chromium	0.105	0.0100	0.0009	mg/L	0.10000	ND	105	75-125			
Cobalt	0.104	0.0100	0.0005	mg/L	0.10000	0.0049	100	75-125			
Copper	0.105	0.0250	0.0005	mg/L	0.10000	ND	105	75-125			
Lead	0.0991	0.0050	0.0001	mg/L	0.10000	0.0002	99	75-125			
Molybdenum	0.108	0.0100	0.0017	mg/L	0.10000	ND	108	75-125			
Nickel	0.108	0.0100	0.0006	mg/L	0.10000	0.0050	103	75-125			
Selenium	0.0942	0.0100	0.0010	mg/L	0.10000	ND	94	75-125			
Silver	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125			
Thallium	0.0975	0.0010	0.0002	mg/L	0.10000	ND	98	75-125			
Vanadium	0.103	0.0100	0.0071	mg/L	0.10000	ND	103	75-125			
Zinc	0.109	0.0100	0.0021	mg/L	0.10000	0.0053	104	75-125			
Lithium	0.104	0.0500	0.0021	mg/L	0.10000	ND	104	75-125			
Matrix Spike Dup (7010649-MSD1)		**Source: AAA0800-01**				Prepared: 01/26/17 Analyzed: 01/30/17					
Antimony	0.107	0.0030	0.0008	mg/L	0.10000	0.0024	105	75-125	2	20	
Arsenic	0.0973	0.0050	0.0016	mg/L	0.10000	ND	97	75-125	3	20	
Barium	0.107	0.0100	0.0004	mg/L	0.10000	0.0071	100	75-125	3	20	
Beryllium	0.0933	0.0030	0.00008	mg/L	0.10000	ND	93	75-125	8	20	
Boron	0.972	0.0400	0.0064	mg/L	1.0000	ND	97	75-125	6	20	
Cadmium	0.0992	0.0010	0.00007	mg/L	0.10000	0.0002	99	75-125	4	20	
Calcium	2.58	0.500	0.0311	mg/L	1.0000	1.62	95	75-125	0.3	20	
Chromium	0.0990	0.0100	0.0009	mg/L	0.10000	ND	99	75-125	6	20	
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000	0.0049	98	75-125	2	20	
Copper	0.0985	0.0250	0.0005	mg/L	0.10000	ND	98	75-125	7	20	
Lead	0.0981	0.0050	0.0001	mg/L	0.10000	0.0002	98	75-125	1	20	
Molybdenum	0.102	0.0100	0.0017	mg/L	0.10000	ND	102	75-125	5	20	
Nickel	0.103	0.0100	0.0006	mg/L	0.10000	0.0050	98	75-125	5	20	
Selenium	0.0935	0.0100	0.0010	mg/L	0.10000	ND	94	75-125	0.7	20	
Silver	0.0970	0.0100	0.0005	mg/L	0.10000	ND	97	75-125	4	20	
Thallium	0.0958	0.0010	0.0002	mg/L	0.10000	ND	96	75-125	2	20	
Vanadium	0.0966	0.0100	0.0071	mg/L	0.10000	ND	97	75-125	6	20	
Zinc	0.103	0.0100	0.0021	mg/L	0.10000	0.0053	98	75-125	6	20	
Lithium	0.0994	0.0500	0.0021	mg/L	0.10000	ND	99	75-125	4	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

February 02, 2017

Report No.: AAA0792

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010649 - EPA 3005A											
Post Spike (7010649-PS1)			**Source: AAA0800-01**			Prepared: 01/26/17 Analyzed: 01/30/17					
Antimony	96.9			ug/L	100.00	2.42	95	80-120			
Arsenic	98.9			ug/L	100.00	-0.106	99	80-120			
Barium	109			ug/L	100.00	7.12	102	80-120			
Beryllium	105			ug/L	100.00	0.0204	105	80-120			
Boron	1100			ug/L	1000.0	5.27	110	80-120			
Cadmium	105			ug/L	100.00	0.164	105	80-120			
Calcium	2820			ug/L	1000.0	1620	120	80-120			
Chromium	101			ug/L	100.00	0.290	101	80-120			
Cobalt	102			ug/L	100.00	4.89	97	80-120			
Copper	99.4			ug/L	100.00	0.407	99	80-120			
Lead	97.3			ug/L	100.00	0.162	97	80-120			
Molybdenum	106			ug/L	100.00	0.0327	106	80-120			
Nickel	105			ug/L	100.00	5.00	100	80-120			
Selenium	98.4			ug/L	100.00	0.289	98	80-120			
Silver	95.8			ug/L	100.00	0.0041	96	80-120			
Thallium	97.2			ug/L	100.00	0.0553	97	80-120			
Vanadium	98.7			ug/L	100.00	-1.32	99	80-120			
Zinc	104			ug/L	100.00	5.30	99	80-120			
Lithium	108			ug/L	100.00	1.20	107	80-120			
Batch 7010766 - EPA 7470A											
Blank (7010766-BLK1)						Prepared & Analyzed: 01/31/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7010766-BS1)						Prepared & Analyzed: 01/31/17					
Mercury	0.00245	0.00050	0.000041	mg/L	2.5000E-3		98	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

February 02, 2017

Report No.: AAA0792

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010766 - EPA 7470A											
Matrix Spike (7010766-MS1)		**Source: AAA0792-01**				Prepared & Analyzed: 01/31/17					
Mercury	0.00236	0.00050	0.000041	mg/L	2.5000E-3	ND	94	75-125			
Matrix Spike Dup (7010766-MSD1)		**Source: AAA0792-01**				Prepared & Analyzed: 01/31/17					
Mercury	0.00246	0.00050	0.000041	mg/L	2.5000E-3	ND	98	75-125	4	20	
Post Spike (7010766-PS1)		**Source: AAA0792-01**				Prepared & Analyzed: 01/31/17					
Mercury	1.66			ug/L	1.6667	0.0236	98	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

February 02, 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.

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:
42 Invernass Center Parkway BIN B426
Birmingham, AL 35242
205-992-5417

REPORT TO: Lauren Petty

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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							
01/24/17	10:05	GW		x	HGWA-1	4		1	1	2							1
01/24/17	11:30	GW		x	HGWA-2	4		1	1	2							2
01/24/17	11:29	GW		x	HGWA-3	4		1	1	2							3
01/24/17	13:08	GW		x	HGWA-4	4		1	1	2							4
01/24/17	15:15	GW		x	HGWA-5	4		1	1	2							5
01/24/17	15:08	GW		x	HGWA-6	4		1	1	2							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: M.Burch MB W.Virgo WV
DATE/TIME: 1/24/2017 / 15:15

RELINQUISHED BY: William Virgo (ERM)
DATE/TIME: 1/24/17 2100

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB: M Laumann
DATE/TIME: 01/25/17 1130

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

pH checked: Yes No NA
Ice: Yes No NA
Temperature: 1.6 Min 1.6 Max
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AAA0792
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: 1/26/2017 11:58:07AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 01/25/17 11:30

Work Order: AAA0792
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 6 **#Containers:** 24

Minimum Temp(C): 1.0 **Maximum Temp(C):** 1.0 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

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

Comments:

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

February 23, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Hammond
Pace Project No.: 30209047

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

Enclosures

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

CERTIFICATIONS

Project: Plant Hammond
Pace Project No.: 30209047

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 Hammond
Pace Project No.: 30209047

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30209047001	**HGWA-1**	Water	01/24/17 10:05	01/26/17 10:15
30209047002	**HGWA-2**	Water	01/24/17 11:30	01/26/17 10:15
30209047003	**HGWA-3**	Water	01/24/17 11:29	01/26/17 10:15
30209047004	**HGWA-4**	Water	01/24/17 13:08	01/26/17 10:15
30209047005	**HGWA-5**	Water	01/24/17 15:15	01/26/17 10:15
30209047006	**HGWA-6**	Water	01/24/17 15:08	01/26/17 10:15

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

SAMPLE ANALYTE COUNT

Project: Plant Hammond
Pace Project No.: 30209047

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30209047001	**HGWA-1**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30209047002	**HGWA-2**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30209047003	**HGWA-3**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30209047004	**HGWA-4**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30209047005	**HGWA-5**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30209047006	**HGWA-6**	EPA 9315	LAL	1
		EPA 9320	JLW	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: Plant Hammond
Pace Project No.: 30209047

Sample: HGWA-1 **Lab ID: 30209047001** Collected: 01/24/17 10:05 Received: 01/26/17 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	**-0.00387 ± 0.0679 (0.203) C:82% T:NA**	pCi/L	02/14/17 10:42	13982-63-3	
Radium-228	EPA 9320	**0.373 ± 0.449 (0.948) C:66% T:75%**	pCi/L	02/22/17 12:44	15262-20-1	
Total Radium	Total Radium Calculation	**0.373 ± 0.551 (1.25)**	pCi/L	02/22/17 17:32	7440-14-4	

Sample: HGWA-2 **Lab ID: 30209047002** Collected: 01/24/17 11:30 Received: 01/26/17 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	**0.172 ± 0.121 (0.183) C:89% T:NA**	pCi/L	02/14/17 10:42	13982-63-3	
Radium-228	EPA 9320	**0.650 ± 0.415 (0.770) C:67% T:85%**	pCi/L	02/22/17 12:44	15262-20-1	
Total Radium	Total Radium Calculation	**0.908 ± 0.597 (1.04)**	pCi/L	02/22/17 17:32	7440-14-4	

Sample: HGWA-3 **Lab ID: 30209047003** Collected: 01/24/17 11:29 Received: 01/26/17 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	**0.127 ± 0.104 (0.174) C:95% T:NA**	pCi/L	02/14/17 10:42	13982-63-3	
Radium-228	EPA 9320	**0.146 ± 0.336 (0.749) C:76% T:78%**	pCi/L	02/22/17 12:45	15262-20-1	
Total Radium	Total Radium Calculation	**0.336 ± 0.492 (1.01)**	pCi/L	02/22/17 17:32	7440-14-4	

Sample: HGWA-4 **Lab ID: 30209047004** Collected: 01/24/17 13:08 Received: 01/26/17 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	**0.0576 ± 0.111 (0.256) C:95% T:NA**	pCi/L	02/14/17 10:42	13982-63-3	
Radium-228	EPA 9320	**0.521 ± 0.529 (1.10) C:63% T:77%**	pCi/L	02/22/17 12:45	15262-20-1	
Total Radium	Total Radium Calculation	**0.607 ± 0.696 (1.48)**	pCi/L	02/22/17 17:32	7440-14-4	

Sample: HGWA-5 **Lab ID: 30209047005** Collected: 01/24/17 15:15 Received: 01/26/17 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	**0.0516 ± 0.0854 (0.188) C:86% T:NA**	pCi/L	02/14/17 10:42	13982-63-3	
Radium-228	EPA 9320	**-0.197 ± 0.527 (1.26) C:68% T:66%**	pCi/L	02/22/17 13:05	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 Hammond
Pace Project No.: 30209047

Sample: HGWA-5 **Lab ID: 30209047005** Collected: 01/24/17 15:15 Received: 01/26/17 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	**0.0774 ± 0.655 (1.54)**	pCi/L	02/22/17 17:32	7440-14-4	

Sample: HGWA-6 **Lab ID: 30209047006** Collected: 01/24/17 15:08 Received: 01/26/17 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	**0.0606 ± 0.0963 (0.211) C:81% T:NA**	pCi/L	02/14/17 10:42	13982-63-3	
Radium-228	EPA 9320	**0.874 ± 0.570 (1.08) C:64% T:75%**	pCi/L	02/20/17 20:10	15262-20-1	
Total Radium	Total Radium Calculation	**0.965 ± 0.714 (1.40)**	pCi/L	02/22/17 16:57	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 Hammond
Pace Project No.: 30209047

QC Batch: 248823 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30209047001, 30209047002, 30209047003, 30209047004, 30209047005, 30209047006

METHOD BLANK: 1223621 Matrix: Water
Associated Lab Samples: 30209047001, 30209047002, 30209047003, 30209047004, 30209047005, 30209047006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0812 ± 0.121 (0.265) C:94% T:NA	pCi/L	02/14/17 10:57	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30209047

QC Batch: 248898 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30209047001, 30209047002, 30209047003, 30209047004, 30209047005, 30209047006

METHOD BLANK: 1224047 Matrix: Water
Associated Lab Samples: 30209047001, 30209047002, 30209047003, 30209047004, 30209047005, 30209047006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.520 ± 0.375 (0.722) C:72% T:87%	pCi/L	02/20/17 20:11	

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

QUALIFIERS

Project: Plant Hammond
Pace Project No.: 30209047

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# : 30209047

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAA0792 Workorder Name: Plant Hammond Owner Received Date: Results Requested By: 2/17/2017

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

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	HGWA-1	G	1/24/2017 10:05	AAA0792-01	GW	2	X	001
2	HGWA-2	G	1/24/2017 11:30	AAA0792-02	GW	2	X	002
3	HGWA-3	G	1/24/2017 11:29	AAA0792-03	GW	2	X	003
4	HGWA-4	G	1/24/2017 13:08	AAA0792-04	GW	2	X	004
5	HGWA-5	G	1/24/2017 15:15	AAA0792-05	GW	2	X	005
6	HGWA-6	G	1/24/2017 15:08	AAA0792-06	GW	2	X	006
7								
8								
9								
10								

Transfers	Released By	Date/Time	Received By	Date/Time
1			Alyssa K. McKinney Pace	1/26/17 1105
2				
3				

Comments: EQuIS deliverable required.

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.

30209047

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: 42 Inverness Center Parkway BIN B426, Birmingham, AL 35242, 205-992-5417

REPORT TO: Lauren Petty

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Part 257 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	
01/24/17	10:05	GW		x	HGWA-1	4	1	1	2	1
01/24/17	11:30	GW		x	HGWA-2	4	1	1	2	2
01/24/17	11:29	GW		x	HGWA-3	4	1	1	2	3
01/24/17	13:08	GW		x	HGWA-4	4	1	1	2	4
01/24/17	15:15	GW		x	HGWA-5	4	1	1	2	5
01/24/17	15:08	GW		x	HGWA-6	4	1	1	2	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 | 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: M.Burch MB W.Virgo WFV — DATE/TIME: 1/24/2017 / 15:15

RELINQUISHED BY: William Virgo (ERM) — DATE/TIME: 1/24/17 2100

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: M Zalmann — DATE/TIME: 01/25/17 1130

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER (circled) CLIENT OTHER FS — Pace

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

FOR LAB USE ONLY
LAB #: AAA0792
Entered into LIMS: MR
Tracking #:

2017 01 24 Hammond COCs.xlsx

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace GA Project # 30209047

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

Tracking #: 6812510189 80

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: ARM 11/20/17

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: -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. 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: ARM 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: ARM Date: 11/20/17

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:	LAL
Date:	2/10/2017
Worklist:	33938
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1223621
MB concentration:	0.122
M/B Counting Uncertainty:	0.180
MB MDC:	0.397
MB Numerical Performance Indicator:	1.33
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS33938	LCSD33938
Count Date:	2/14/2017	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.669	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.502	
Target Conc. (pCi/L, g, F):	8.890	
Uncertainty (Calculated):	0.418	
Result (pCi/L, g, F):	7.710	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.698	
Numerical Performance Indicator:	-2.84	
Percent Recovery:	86.73%	
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.:	30208670001	Enter Duplicate
Duplicate Sample I.D.	30208670001DUP	sample IDs if
Sample Result (pCi/L, g, F):	0.075	other than
Sample Result Counting Uncertainty (pCi/L, g, F):	0.156	LCS/LCSD in the
Sample Duplicate Result (pCi/L, g, F):	0.159	space below.
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.199	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.651	30208670001
Duplicate RPD:	71.67%	30208670001DUP
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.

LMK 2/23/17

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	2/9/2017
Worklist:	33964
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1224047
MB concentration:	0.520
M/B Counting Uncertainty:	0.364
MB MDC:	0.722
MB Numerical Performance Indicator:	2.81
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS33964	LCSD33964
Count Date:	2/20/2017	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	25.250	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.804	
Target Conc. (pCi/L, g, F):	6.281	
Uncertainty (Calculated):	0.452	
Result (pCi/L, g, F):	6.644	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.773	
Numerical Performance Indicator:	0.79	
Percent Recovery:	105.78%	
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.:	30209047006	Enter Duplicate
Duplicate Sample I.D.	30209047006DUP	sample IDs if
Sample Result (pCi/L, g, F):	0.874	other than
Sample Result Counting Uncertainty (pCi/L, g, F):	0.548	LCS/LCSD in
Sample Duplicate Result (pCi/L, g, F):	0.471	the space below.
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.524	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	1.044	30209047006
Duplicate RPD:	60.06%	30209047006DUP
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.

2/23/17

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: AAA0862
February 03, 2017
Project: CCR Event
Project #:Plant Hammond

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

February 03, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWC-7	AAA0862-01	Ground Water	01/25/17 15:13	01/26/17 12:05
HGWC-8	AAA0862-02	Ground Water	01/25/17 14:48	01/26/17 12:05

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

February 03, 2017

Report No.: AAA0862
Client ID: HGWC-7
Date/Time Sampled: 1/25/2017 3:13:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0862-01
Date/Time Received: 1/26/2017 12:05:00PM

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	01/30/17 16:05	01/30/17 16:05	7010738	JPT
Inorganic Anions											
Chloride	54	1.2	0.06	mg/L	EPA 300.0		5	01/27/17 16:22	02/01/17 08:15	7010718	RLC
Fluoride	0.24	0.30	0.004	mg/L	EPA 300.0	J	1	01/27/17 16:22	01/27/17 21:12	7010718	RLC
Sulfate	110	5.0	0.46	mg/L	EPA 300.0		5	01/27/17 16:22	02/01/17 08:15	7010718	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 19:59	7010760	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 19:59	7010760	CSW
Barium	0.0747	0.0100	0.0004	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 19:59	7010760	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/31/17 10:00	02/01/17 15:28	7010760	CSW
Boron	0.764	0.0400	0.0064	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 19:59	7010760	CSW
Cadmium	0.0002	0.0010	0.00007	mg/L	EPA 6020B	J	1	01/31/17 10:00	01/31/17 19:59	7010760	CSW
Calcium	94.5	25.0	1.55	mg/L	EPA 6020B		50	01/31/17 10:00	01/31/17 20:05	7010760	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 19:59	7010760	CSW
Cobalt	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/31/17 10:00	01/31/17 19:59	7010760	CSW
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	01/31/17 10:00	01/31/17 19:59	7010760	CSW
Molybdenum	0.0317	0.0100	0.0017	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 19:59	7010760	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 19:59	7010760	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 19:59	7010760	CSW
Lithium	0.0024	0.0500	0.0021	mg/L	EPA 6020B	J	1	01/31/17 10:00	02/01/17 15:28	7010760	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/31/17 11:00	01/31/17 15:30	7010766	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

February 03, 2017

Report No.: AAA0862
Client ID: HGWC-8
Date/Time Sampled: 1/25/2017 2:48:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0862-02
Date/Time Received: 1/26/2017 12:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	744	25	10	mg/L	SM 2540 C		1	01/30/17 16:05	01/30/17 16:05	7010738	JPT
Inorganic Anions											
Chloride	110	2.5	0.13	mg/L	EPA 300.0		10	01/27/17 16:22	02/01/17 08:37	7010718	RLC
Fluoride	1.1	0.30	0.004	mg/L	EPA 300.0		1	01/27/17 16:22	01/27/17 22:14	7010718	RLC
Sulfate	260	10	0.92	mg/L	EPA 300.0		10	01/27/17 16:22	02/01/17 08:37	7010718	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:11	7010760	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:11	7010760	CSW
Barium	0.0780	0.0100	0.0004	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:11	7010760	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/31/17 10:00	02/01/17 15:46	7010760	CSW
Boron	2.01	2.00	0.321	mg/L	EPA 6020B		50	01/31/17 10:00	01/31/17 20:16	7010760	CSW
Cadmium	0.0002	0.0010	0.00007	mg/L	EPA 6020B	J	1	01/31/17 10:00	01/31/17 20:11	7010760	CSW
Calcium	142	25.0	1.55	mg/L	EPA 6020B		50	01/31/17 10:00	01/31/17 20:16	7010760	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:11	7010760	CSW
Cobalt	0.0020	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/31/17 10:00	01/31/17 20:11	7010760	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:11	7010760	CSW
Molybdenum	0.478	0.0100	0.0017	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:11	7010760	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:11	7010760	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:11	7010760	CSW
Lithium	0.0026	0.0500	0.0021	mg/L	EPA 6020B	J	1	01/31/17 10:00	02/01/17 15:46	7010760	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/31/17 11:00	01/31/17 15:33	7010766	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

February 03, 2017

Report No.: AAA0862

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010738 - SM 2540 C											
Blank (7010738-BLK1)						Prepared & Analyzed: 01/30/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7010738-BS1)						Prepared & Analyzed: 01/30/17					
Total Dissolved Solids	406	25	10	mg/L	400.00		102	84-108			
Duplicate (7010738-DUP1)		**Source: AAA0861-02**				Prepared & Analyzed: 01/30/17					
Total Dissolved Solids	131	25	10	mg/L		152			15	10	QR-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

February 03, 2017

Report No.: AAA0862

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010718 - EPA 300.0											
Blank (7010718-BLK1)						Prepared & Analyzed: 01/27/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7010718-BS1)						Prepared & Analyzed: 01/27/17					
Chloride	10.4	0.25	0.01	mg/L	10.010		104	90-110			
Fluoride	10.5	0.30	0.004	mg/L	10.020		105	90-110			
Sulfate	10.6	1.0	0.09	mg/L	10.020		106	90-110			
Matrix Spike (7010718-MS1)		**Source: AAA0862-01**				Prepared & Analyzed: 01/27/17					
Chloride	57.0	0.25	0.01	mg/L	10.010	51.6	55	90-110			QM-02
Fluoride	10.8	0.30	0.004	mg/L	10.020	0.24	105	90-110			
Sulfate	100	1.0	0.09	mg/L	10.020	101	NR	90-110			QM-02
Matrix Spike Dup (7010718-MSD1)		**Source: AAA0862-01**				Prepared & Analyzed: 01/27/17					
Chloride	56.5	0.25	0.01	mg/L	10.010	51.6	50	90-110	0.9	15	QM-02
Fluoride	10.8	0.30	0.004	mg/L	10.020	0.24	105	90-110	0.1	15	
Sulfate	101	1.0	0.09	mg/L	10.020	101	NR	90-110	0.4	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

February 03, 2017

Report No.: AAA0862

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010760 - EPA 3005A											
Blank (7010760-BLK1)						Prepared & Analyzed: 01/31/17					
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 (7010760-BS1)						Prepared & Analyzed: 01/31/17					
Antimony	0.104	0.0030	0.0008	mg/L	0.10000		104	80-120			
Arsenic	0.104	0.0050	0.0016	mg/L	0.10000		104	80-120			
Barium	0.0974	0.0100	0.0004	mg/L	0.10000		97	80-120			
Beryllium	0.104	0.0030	0.00008	mg/L	0.10000		104	80-120			
Boron	1.06	0.0400	0.0064	mg/L	1.0000		106	80-120			
Cadmium	0.0997	0.0010	0.00007	mg/L	0.10000		100	80-120			
Calcium	1.06	0.500	0.0311	mg/L	1.0000		106	80-120			
Chromium	0.102	0.0100	0.0009	mg/L	0.10000		102	80-120			
Cobalt	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			
Copper	0.101	0.0250	0.0005	mg/L	0.10000		101	80-120			
Lead	0.102	0.0050	0.0001	mg/L	0.10000		102	80-120			
Molybdenum	0.103	0.0100	0.0017	mg/L	0.10000		103	80-120			
Nickel	0.103	0.0100	0.0006	mg/L	0.10000		103	80-120			
Selenium	0.100	0.0100	0.0010	mg/L	0.10000		100	80-120			
Silver	0.100	0.0100	0.0005	mg/L	0.10000		100	80-120			
Thallium	0.100	0.0010	0.0002	mg/L	0.10000		100	80-120			
Vanadium	0.101	0.0100	0.0071	mg/L	0.10000		101	80-120			
Zinc	0.107	0.0100	0.0021	mg/L	0.10000		107	80-120			
Lithium	0.0962	0.0500	0.0021	mg/L	0.10000		96	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

February 03, 2017

Report No.: AAA0862

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010760 - EPA 3005A											
Matrix Spike (7010760-MS1)		**Source: AAA0909-08**				Prepared & Analyzed: 01/31/17					
Antimony	0.106	0.0030	0.0008	mg/L	0.10000	ND	106	75-125			
Arsenic	0.109	0.0050	0.0016	mg/L	0.10000	ND	109	75-125			
Barium	0.209	0.0100	0.0004	mg/L	0.10000	0.105	104	75-125			
Beryllium	0.104	0.0030	0.00008	mg/L	0.10000	ND	104	75-125			
Boron	2.78	2.00	0.321	mg/L	1.0000	1.19	159	75-125			QM-02
Cadmium	0.102	0.0010	0.00007	mg/L	0.10000	ND	102	75-125			
Calcium	145	25.0	1.55	mg/L	1.0000	139	618	75-125			QM-02
Chromium	0.106	0.0100	0.0009	mg/L	0.10000	ND	106	75-125			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	ND	102	75-125			
Copper	0.102	0.0250	0.0005	mg/L	0.10000	ND	102	75-125			
Lead	0.0985	0.0050	0.0001	mg/L	0.10000	0.0001	98	75-125			
Molybdenum	0.108	0.0100	0.0017	mg/L	0.10000	ND	108	75-125			
Nickel	0.0994	0.0100	0.0006	mg/L	0.10000	ND	99	75-125			
Selenium	0.103	0.0100	0.0010	mg/L	0.10000	ND	103	75-125			
Silver	0.0976	0.0100	0.0005	mg/L	0.10000	ND	98	75-125			
Thallium	0.0974	0.0010	0.0002	mg/L	0.10000	ND	97	75-125			
Vanadium	0.106	0.0100	0.0071	mg/L	0.10000	ND	106	75-125			
Zinc	0.105	0.0100	0.0021	mg/L	0.10000	0.0025	102	75-125			
Lithium	0.0978	0.0500	0.0021	mg/L	0.10000	0.0028	95	75-125			
Matrix Spike Dup (7010760-MSD1)		**Source: AAA0909-08**				Prepared & Analyzed: 01/31/17					
Antimony	0.103	0.0030	0.0008	mg/L	0.10000	ND	103	75-125	2	20	
Arsenic	0.108	0.0050	0.0016	mg/L	0.10000	ND	108	75-125	1	20	
Barium	0.202	0.0100	0.0004	mg/L	0.10000	0.105	97	75-125	3	20	
Beryllium	0.106	0.0030	0.00008	mg/L	0.10000	ND	106	75-125	2	20	
Boron	2.71	2.00	0.321	mg/L	1.0000	1.19	152	75-125	3	20	QM-02
Cadmium	0.0983	0.0010	0.00007	mg/L	0.10000	ND	98	75-125	3	20	
Calcium	142	25.0	1.55	mg/L	1.0000	139	298	75-125	2	20	QM-02
Chromium	0.0999	0.0100	0.0009	mg/L	0.10000	ND	100	75-125	6	20	
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125	2	20	
Copper	0.0945	0.0250	0.0005	mg/L	0.10000	ND	95	75-125	7	20	
Lead	0.0990	0.0050	0.0001	mg/L	0.10000	0.0001	99	75-125	0.5	20	
Molybdenum	0.107	0.0100	0.0017	mg/L	0.10000	ND	107	75-125	0.6	20	
Nickel	0.0991	0.0100	0.0006	mg/L	0.10000	ND	99	75-125	0.3	20	
Selenium	0.105	0.0100	0.0010	mg/L	0.10000	ND	105	75-125	2	20	
Silver	0.0974	0.0100	0.0005	mg/L	0.10000	ND	97	75-125	0.3	20	
Thallium	0.0973	0.0010	0.0002	mg/L	0.10000	ND	97	75-125	0.1	20	
Vanadium	0.102	0.0100	0.0071	mg/L	0.10000	ND	102	75-125	4	20	
Zinc	0.0996	0.0100	0.0021	mg/L	0.10000	0.0025	97	75-125	5	20	
Lithium	0.100	0.0500	0.0021	mg/L	0.10000	0.0028	97	75-125	2	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

February 03, 2017

Report No.: AAA0862

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010760 - EPA 3005A											
Post Spike (7010760-PS1)			**Source: AAA0909-08**			Prepared & Analyzed: 01/31/17					
Antimony	92.7			ug/L	100.00	0.0220	93	80-120			
Arsenic	107			ug/L	100.00	-0.219	107	80-120			
Barium	196			ug/L	100.00	105	91	80-120			
Beryllium	105			ug/L	100.00	0.0100	105	80-120			
Boron	2660			ug/L	1000.0	1190	148	80-120			QM-02
Cadmium	100			ug/L	100.00	0.0104	100	80-120			
Calcium	143000			ug/L	1000.0	139000	377	80-120			QM-02
Chromium	107			ug/L	100.00	0.148	107	80-120			
Cobalt	102			ug/L	100.00	0.123	102	80-120			
Copper	97.5			ug/L	100.00	0.247	97	80-120			
Lead	94.5			ug/L	100.00	0.122	94	80-120			
Molybdenum	106			ug/L	100.00	0.0875	106	80-120			
Nickel	99.0			ug/L	100.00	0.284	99	80-120			
Selenium	106			ug/L	100.00	0.338	106	80-120			
Silver	93.9			ug/L	100.00	0.0015	94	80-120			
Thallium	93.8			ug/L	100.00	0.0007	94	80-120			
Vanadium	108			ug/L	100.00	-2.17	108	80-120			
Zinc	104			ug/L	100.00	2.53	101	80-120			
Lithium	100			ug/L	100.00	2.80	98	80-120			
Batch 7010766 - EPA 7470A											
Blank (7010766-BLK1)						Prepared & Analyzed: 01/31/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7010766-BS1)						Prepared & Analyzed: 01/31/17					
Mercury	0.00245	0.00050	0.000041	mg/L	2.5000E-3		98	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

February 03, 2017

Report No.: AAA0862

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010766 - EPA 7470A											
Matrix Spike (7010766-MS1)		**Source: AAA0792-01**				Prepared & Analyzed: 01/31/17					
Mercury	0.00236	0.00050	0.000041	mg/L	2.5000E-3	ND	94	75-125			
Matrix Spike Dup (7010766-MSD1)		**Source: AAA0792-01**				Prepared & Analyzed: 01/31/17					
Mercury	0.00246	0.00050	0.000041	mg/L	2.5000E-3	ND	98	75-125	4	20	
Post Spike (7010766-PS1)		**Source: AAA0792-01**				Prepared & Analyzed: 01/31/17					
Mercury	1.66			ug/L	1.6667	0.0236	98	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

February 03, 2017

Legend

Definition of Laboratory Terms

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

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-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).

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:
42 Inverness Center Parkway BIN B426
Birmingham, AL 35242
205-992-5417

REPORT TO: Lauren Petty

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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							
01/25/17	15:13	GW		x	HGWC-7	4		1	1	2						1	
01/25/17	14:48	GW		x	HGWC-8	4		1	1	2						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

SAMPLED BY AND TITLE: M.Burch MB W.Virgo WFV
DATE/TIME: 1/25/2017 / 15:13
RELINQUISHED BY: Will Virgo (FERC)
DATE/TIME: 1/25/17 2000

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

RECEIVED BY LAB: Lanman
DATE/TIME: 01/26/17 1205
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace CLIENT OTHER FS

Cooler: Yes No NA
Ice: Yes No NA
Temperature: 1° Min. 1° 2 °C Max.
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AAA0862
Entered into LIMS: MR
Tracking #:

2017 01 25 Hammond COCs.xlsx

PACE ANALYTICAL SERVICES, LLC.

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

LOG-IN CHECKLIST **Printed: 1/27/2017 2:08:22PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 01/26/17 12:05

Work Order: AAA0862
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 2 **#Containers:** 8

Minimum Temp(C): 1.0 **Maximum Temp(C):** 1.0 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

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

Comments:

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

February 24, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Hammond
Pace Project No.: 30209140

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

Enclosures

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

CERTIFICATIONS

Project: Plant Hammond
Pace Project No.: 30209140

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 Hammond
Pace Project No.: 30209140

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30209140001	**HGWC-7**	Water	01/25/17 15:13	01/27/17 10:00
30209140002	**HGWC-8**	Water	01/25/17 14:48	01/27/17 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: Plant Hammond
Pace Project No.: 30209140

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30209140001	**HGWC-7**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30209140002	**HGWC-8**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30209140

Sample: HGWC-7 **Lab ID: 30209140001** Collected: 01/25/17 15:13 Received: 01/27/17 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	**0.0611 ± 0.100 (0.224) C:93% T:NA**	pCi/L	02/14/17 10:56	13982-63-3	
Radium-228	EPA 9320	**1.00 ± 0.575 (1.07) C:71% T:71%**	pCi/L	02/23/17 11:38	15262-20-1	
Total Radium	Total Radium Calculation	**1.06 ± 0.675 (1.29)**	pCi/L	02/23/17 16:09	7440-14-4	

Sample: HGWC-8 **Lab ID: 30209140002** Collected: 01/25/17 14:48 Received: 01/27/17 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	**0.250 ± 0.163 (0.276) C:97% T:NA**	pCi/L	02/14/17 10:57	13982-63-3	
Radium-228	EPA 9320	**0.609 ± 0.464 (0.911) C:65% T:76%**	pCi/L	02/23/17 11:38	15262-20-1	
Total Radium	Total Radium Calculation	**0.859 ± 0.627 (1.19)**	pCi/L	02/23/17 16:09	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 Hammond
Pace Project No.: 30209140

QC Batch: 248824 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30209140001, 30209140002

METHOD BLANK: 1223623 Matrix: Water
Associated Lab Samples: 30209140001, 30209140002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00454 ± 0.0688 (0.190) C:100% T:NA	pCi/L	02/14/17 10:56	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30209140

QC Batch: 248899 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30209140001, 30209140002

METHOD BLANK: 1224049 Matrix: Water
Associated Lab Samples: 30209140001, 30209140002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.991 ± 0.451 (0.731) C:88% T:66%	pCi/L	02/23/17 12:11	

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

QUALIFIERS

Project: Plant Hammond
Pace Project No.: 30209140

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#:30209140

Chain of Custody

30209140

Pace Analytical

Workorder: AAA0862 Workorder Name: Plant Hammond Owner Received Date: Results Requested By: 2/20/2017

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	HGWC-7	G	1/25/2017 15:13	AAA0862-01	GW	2					X												001
2	HGWC-8	G	1/25/2017 14:48	AAA0862-02	GW	2					X												002
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Ashley Hare/Pace	1-27-17 1600	
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.

30209140

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:
42 Inverness Center Parkway BIN B426
Birmingham, AL 35242
205-992-5417

REPORT TO: Lauren Petty
CC: Maria Padilla, Heath McCorkle

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

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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							
01/25/17	15:13	GW		x	HGWC-7	4		1	1	2							1
01/25/17	14:48	GW		x	HGWC-8	4		1	1	2							2

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: M.Burch MB W.Virgo WV
DATE/TIME: 1/25/2017 / 15:13

RELINQUISHED BY: Will Virgo (FRM) WV
DATE/TIME: 1/25/17 2000

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB: A Rayman
DATE/TIME: 01/26/17 1205

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

Unbroken: Yes No NA
Ice: Yes No NA
Temperature: 1° Min. 1.2 °C Max

FOR LAB USE ONLY
LAB #: AA20862
Entered into LIMS: MR
Tracking #:

2017 01 25 Hammond COCs.xlsx

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace, GA Project # 30209140

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

Tracking #: 6812 5101 9119

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: QNR 1-27-17

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 QNR 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: QNR Date: 1-27-17

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:	2/13/2017
Worklist:	33965
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1224049
MB concentration:	0.991
M/B Counting Uncertainty:	0.414
MB MDC:	0.731
MB Numerical Performance Indicator:	4.69
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS33965	LCSD33965
Count Date:	2/23/2017	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	25.228	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.810	
Target Conc. (pCi/L, g, F):	6.231	
Uncertainty (Calculated):	0.449	
Result (pCi/L, g, F):	8.243	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.828	
Numerical Performance Indicator:	4.19	
Percent Recovery:	132.29%	
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.:	30209600005	
Duplicate Sample I.D.	30209600005DUP	
Sample Result (pCi/L, g, F):	1.345	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.471	
Sample Duplicate Result (pCi/L, g, F):	0.855	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.393	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	1.566	30209600005
Duplicate RPD:	44.56%	30209600005DUP
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:
*The method blank result is below the reporting limit for this analysis and is acceptable.

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

12/24/17

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:	2/10/2017
Worklist:	33939
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1223623
MB concentration:	0.005
M/B Counting Uncertainty:	0.069
MB MDC:	0.190
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
	LCS33939	LCSD33939
Count Date:	2/15/2017	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.669	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.502	
Target Conc. (pCi/L, g, F):	8.890	
Uncertainty (Calculated):	0.418	
Result (pCi/L, g, F):	7.727	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.653	
Numerical Performance Indicator:	-2.94	
Percent Recovery:	86.93%	
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.:	30209600005	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30209600005DUP	
Sample Result (pCi/L, g, F):	0.111	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.096	
Sample Duplicate Result (pCi/L, g, F):	0.064	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.096	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.680	30209600005
Duplicate RPD:	54.03%	30209600005DUP
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.

JMP 2/24/17

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: AAA0909
February 07, 2017
Project: CCR Event
Project #:Plant Hammond

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

February 07, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWC-9	AAA0909-01	Ground Water	01/26/17 09:25	01/27/17 12:25
HGWC-10	AAA0909-02	Ground Water	01/26/17 09:50	01/27/17 12:25
HGWC-11	AAA0909-03	Ground Water	01/26/17 12:15	01/27/17 12:25
HGWC-12	AAA0909-04	Ground Water	01/26/17 09:43	01/27/17 12:25
HGWC-13	AAA0909-05	Ground Water	01/26/17 10:52	01/27/17 12:25
HGWC-14	AAA0909-06	Ground Water	01/26/17 13:15	01/27/17 12:25
HGWC-15	AAA0909-07	Ground Water	01/26/17 14:30	01/27/17 12:25
HGWC-16	AAA0909-08	Ground Water	01/26/17 11:07	01/27/17 12:25
HGWC-17	AAA0909-09	Ground Water	01/26/17 13:20	01/27/17 12:25
HGWC-18	AAA0909-10	Ground Water	01/26/17 15:12	01/27/17 12:25
Dup-1	AAA0909-11	Ground Water	01/26/17 00:00	01/27/17 12:25
Dup-2	AAA0909-12	Ground Water	01/26/17 00:00	01/27/17 12:25
FB-1	AAA0909-13	Water	01/26/17 13:35	01/27/17 12:25
FERB-1	AAA0909-14	Water	01/26/17 13:40	01/27/17 12:25
FB-2	AAA0909-15	Water	01/26/17 14:05	01/27/17 12:25
FERB-2	AAA0909-16	Water	01/26/17 14:10	01/27/17 12:25

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

February 07, 2017

Report No.: AAA0909
Client ID: HGWC-9
Date/Time Sampled: 1/26/2017 9:25:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0909-01
Date/Time Received: 1/27/2017 12:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	869	25	10	mg/L	SM 2540 C		1	01/31/17 17:51	01/31/17 17:51	7010778	JPT
Inorganic Anions											
Chloride	170	12	0.65	mg/L	EPA 300.0		50	01/31/17 09:35	02/02/17 08:17	7010769	RLC
Fluoride	0.004	0.30	0.004	mg/L	EPA 300.0	J	1	01/31/17 09:35	01/31/17 12:31	7010769	RLC
Sulfate	270	50	4.6	mg/L	EPA 300.0		50	01/31/17 09:35	02/02/17 08:17	7010769	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 18:42	7020013	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 18:42	7020013	KLH
Barium	0.142	0.0100	0.0004	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 18:42	7020013	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 18:42	7020013	KLH
Boron	1.87	0.0400	0.0064	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 18:42	7020013	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 18:42	7020013	KLH
Calcium	175	25.0	1.55	mg/L	EPA 6020B	B-01	50	02/01/17 15:35	02/02/17 18:48	7020013	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 18:42	7020013	KLH
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	02/01/17 15:35	02/02/17 18:42	7020013	KLH
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	02/01/17 15:35	02/02/17 18:42	7020013	KLH
Molybdenum	0.0234	0.0100	0.0017	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 18:42	7020013	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 18:42	7020013	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 18:42	7020013	KLH
Lithium	0.0042	0.0500	0.0021	mg/L	EPA 6020B	J	1	02/01/17 15:35	02/02/17 18:42	7020013	KLH
Mercury	0.00004	0.00050	0.000041	mg/L	EPA 7470A	J	1	01/31/17 11:00	01/31/17 15:40	7010766	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

February 07, 2017

Report No.: AAA0909
Client ID: HGWC-10
Date/Time Sampled: 1/26/2017 9:50:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0909-02
Date/Time Received: 1/27/2017 12:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	368	25	10	mg/L	SM 2540 C		1	01/31/17 17:51	01/31/17 17:51	7010778	JPT
Inorganic Anions											
Chloride	7.0	0.25	0.01	mg/L	EPA 300.0		1	01/31/17 09:35	01/31/17 12:52	7010769	RLC
Fluoride	0.29	0.30	0.004	mg/L	EPA 300.0	J	1	01/31/17 09:35	01/31/17 12:52	7010769	RLC
Sulfate	90	10	0.92	mg/L	EPA 300.0		10	01/31/17 09:35	02/02/17 08:39	7010769	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:27	7020013	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:27	7020013	KLH
Barium	0.0538	0.0100	0.0004	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:27	7020013	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/01/17 15:35	02/03/17 13:48	7020013	KLH
Boron	0.108	0.0400	0.0064	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:27	7020013	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:27	7020013	KLH
Calcium	82.6	25.0	1.55	mg/L	EPA 6020B	B-01	50	02/01/17 15:35	02/02/17 19:32	7020013	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:27	7020013	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:27	7020013	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:27	7020013	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:27	7020013	KLH
Selenium	0.0041	0.0100	0.0010	mg/L	EPA 6020B	J	1	02/01/17 15:35	02/02/17 19:27	7020013	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:27	7020013	KLH
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:27	7020013	KLH
Mercury	0.00005	0.00050	0.000041	mg/L	EPA 7470A	J	1	01/31/17 11:00	01/31/17 15:42	7010766	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

February 07, 2017

Report No.: AAA0909
Client ID: HGWC-11
Date/Time Sampled: 1/26/2017 12:15:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0909-03
Date/Time Received: 1/27/2017 12:25:00PM

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	01/31/17 17:51	01/31/17 17:51	7010778	JPT
Inorganic Anions											
Chloride	90	2.5	0.13	mg/L	EPA 300.0		10	01/31/17 09:35	02/02/17 09:01	7010769	RLC
Fluoride	0.27	0.30	0.004	mg/L	EPA 300.0	J	1	01/31/17 09:35	01/31/17 13:56	7010769	RLC
Sulfate	230	10	0.92	mg/L	EPA 300.0		10	01/31/17 09:35	02/02/17 09:01	7010769	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:38	7020013	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:38	7020013	KLH
Barium	0.0696	0.0100	0.0004	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:38	7020013	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/01/17 15:35	02/03/17 13:54	7020013	KLH
Boron	2.23	0.0400	0.0064	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:38	7020013	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:38	7020013	KLH
Calcium	121	25.0	1.55	mg/L	EPA 6020B	B-01	50	02/01/17 15:35	02/02/17 19:44	7020013	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:38	7020013	KLH
Cobalt	0.0014	0.0100	0.0005	mg/L	EPA 6020B	J	1	02/01/17 15:35	02/02/17 19:38	7020013	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:38	7020013	KLH
Molybdenum	0.0277	0.0100	0.0017	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:38	7020013	KLH
Selenium	0.0062	0.0100	0.0010	mg/L	EPA 6020B	J	1	02/01/17 15:35	02/02/17 19:38	7020013	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:38	7020013	KLH
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:38	7020013	KLH
Mercury	0.00005	0.00050	0.000041	mg/L	EPA 7470A	J	1	01/31/17 11:00	01/31/17 15:44	7010766	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

February 07, 2017

Report No.: AAA0909
Client ID: HGWC-12
Date/Time Sampled: 1/26/2017 9:43:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0909-04
Date/Time Received: 1/27/2017 12:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	846	25	10	mg/L	SM 2540 C		1	01/31/17 17:51	01/31/17 17:51	7010778	JPT
Inorganic Anions											
Chloride	160	5.0	0.26	mg/L	EPA 300.0		20	01/31/17 09:35	02/02/17 09:24	7010769	RLC
Fluoride	0.12	0.30	0.004	mg/L	EPA 300.0	J	1	01/31/17 09:35	01/31/17 14:17	7010769	RLC
Sulfate	260	20	1.8	mg/L	EPA 300.0		20	01/31/17 09:35	02/02/17 09:24	7010769	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:50	7020013	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:50	7020013	KLH
Barium	0.127	0.0100	0.0004	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:50	7020013	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/01/17 15:35	02/03/17 14:00	7020013	KLH
Boron	3.07	0.0400	0.0064	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:50	7020013	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:50	7020013	KLH
Calcium	172	25.0	1.55	mg/L	EPA 6020B	B-01	50	02/01/17 15:35	02/02/17 19:55	7020013	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:50	7020013	KLH
Cobalt	0.0016	0.0100	0.0005	mg/L	EPA 6020B	J	1	02/01/17 15:35	02/02/17 19:50	7020013	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:50	7020013	KLH
Molybdenum	0.0484	0.0100	0.0017	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:50	7020013	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:50	7020013	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 19:50	7020013	KLH
Lithium	0.0099	0.0500	0.0021	mg/L	EPA 6020B	J	1	02/01/17 15:35	02/02/17 19:50	7020013	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/31/17 11:00	01/31/17 15:47	7010766	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

February 07, 2017

Report No.: AAA0909
Client ID: HGWC-13
Date/Time Sampled: 1/26/2017 10:52:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0909-05
Date/Time Received: 1/27/2017 12:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	411	25	10	mg/L	SM 2540 C		1	01/31/17 17:51	01/31/17 17:51	7010778	JPT
Inorganic Anions											
Chloride	70	1.2	0.06	mg/L	EPA 300.0		5	01/31/17 09:35	02/02/17 09:46	7010769	RLC
Fluoride	0.68	0.30	0.004	mg/L	EPA 300.0		1	01/31/17 09:35	01/31/17 14:38	7010769	RLC
Sulfate	83	5.0	0.46	mg/L	EPA 300.0		5	01/31/17 09:35	02/02/17 09:46	7010769	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 20:01	7020013	KLH
Arsenic	0.424	0.0050	0.0016	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 20:01	7020013	KLH
Barium	0.0738	0.0100	0.0004	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 20:01	7020013	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	02/01/17 15:35	02/03/17 14:05	7020013	KLH
Boron	2.45	0.0400	0.0064	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 20:01	7020013	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 20:01	7020013	KLH
Calcium	77.9	25.0	1.55	mg/L	EPA 6020B	B-01	50	02/01/17 15:35	02/02/17 20:07	7020013	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 20:01	7020013	KLH
Cobalt	0.0024	0.0100	0.0005	mg/L	EPA 6020B	J	1	02/01/17 15:35	02/02/17 20:01	7020013	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 20:01	7020013	KLH
Molybdenum	0.0410	0.0100	0.0017	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 20:01	7020013	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 20:01	7020013	KLH
Thallium	0.0004	0.0010	0.0002	mg/L	EPA 6020B	J	1	02/01/17 15:35	02/02/17 20:01	7020013	KLH
Lithium	0.0342	0.0500	0.0021	mg/L	EPA 6020B	J	1	02/01/17 15:35	02/02/17 20:01	7020013	KLH
Mercury	0.00004	0.00050	0.000041	mg/L	EPA 7470A	J	1	01/31/17 11:00	01/31/17 15:49	7010766	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

February 07, 2017

Report No.: AAA0909
Client ID: HGWC-14
Date/Time Sampled: 1/26/2017 1:15:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0909-06
Date/Time Received: 1/27/2017 12:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	3080	25	10	mg/L	SM 2540 C		1	01/31/17 17:51	01/31/17 17:51	7010778	JPT
Inorganic Anions											
Chloride	640	25	1.3	mg/L	EPA 300.0		100	01/31/17 09:35	02/04/17 04:18	7010769	RLC
Fluoride	0.13	0.30	0.004	mg/L	EPA 300.0	J	1	01/31/17 09:35	01/31/17 14:59	7010769	RLC
Sulfate	1400	100	9.2	mg/L	EPA 300.0		100	01/31/17 09:35	02/04/17 04:18	7010769	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 20:12	7020013	KLH
Arsenic	0.0089	0.0050	0.0016	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 20:12	7020013	KLH
Barium	0.0238	0.0100	0.0004	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 20:12	7020013	KLH
Beryllium	0.0005	0.0030	0.00008	mg/L	EPA 6020B	J	1	02/01/17 15:35	02/03/17 14:11	7020013	KLH
Boron	19.2	2.00	0.321	mg/L	EPA 6020B		50	02/01/17 15:35	02/02/17 20:37	7020013	KLH
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	02/01/17 15:35	02/02/17 20:12	7020013	KLH
Calcium	558	50.0	3.11	mg/L	EPA 6020B	B-01	100	02/01/17 15:35	02/03/17 14:17	7020013	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 20:12	7020013	KLH
Cobalt	0.0294	0.0100	0.0005	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 20:12	7020013	KLH
Lead	0.0020	0.0050	0.0001	mg/L	EPA 6020B	J	1	02/01/17 15:35	02/02/17 20:12	7020013	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 20:12	7020013	KLH
Selenium	0.0214	0.0100	0.0010	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 20:12	7020013	KLH
Thallium	0.0003	0.0010	0.0002	mg/L	EPA 6020B	J	1	02/01/17 15:35	02/02/17 20:12	7020013	KLH
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	02/01/17 15:35	02/02/17 20:12	7020013	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/02/17 12:05	02/02/17 16:37	7020032	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

February 07, 2017

Report No.: AAA0909
Client ID: HGWC-15
Date/Time Sampled: 1/26/2017 2:30:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0909-07
Date/Time Received: 1/27/2017 12:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1260	25	10	mg/L	SM 2540 C		1	01/31/17 17:51	01/31/17 17:51	7010778	JPT
Inorganic Anions											
Chloride	260	5.0	0.26	mg/L	EPA 300.0		20	01/31/17 09:35	02/04/17 04:39	7010769	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	01/31/17 09:35	01/31/17 15:21	7010769	RLC
Sulfate	490	20	1.8	mg/L	EPA 300.0		20	01/31/17 09:35	02/04/17 04:39	7010769	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:34	7010760	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:34	7010760	CSW
Barium	0.0287	0.0100	0.0004	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:34	7010760	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/31/17 10:00	02/01/17 15:53	7010760	CSW
Boron	2.31	2.00	0.321	mg/L	EPA 6020B		50	01/31/17 10:00	01/31/17 20:39	7010760	CSW
Cadmium	0.0013	0.0010	0.00007	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:34	7010760	CSW
Calcium	212	25.0	1.55	mg/L	EPA 6020B		50	01/31/17 10:00	01/31/17 20:39	7010760	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:34	7010760	CSW
Cobalt	0.0550	0.0100	0.0005	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:34	7010760	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:34	7010760	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:34	7010760	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:34	7010760	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:34	7010760	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/31/17 10:00	02/01/17 15:53	7010760	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/02/17 12:05	02/02/17 16:39	7020032	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

February 07, 2017

Report No.: AAA0909
Client ID: HGWC-16
Date/Time Sampled: 1/26/2017 11:07:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0909-08
Date/Time Received: 1/27/2017 12:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	608	25	10	mg/L	SM 2540 C		1	01/31/17 17:51	01/31/17 17:51	7010778	JPT
Inorganic Anions											
Chloride	41	2.5	0.13	mg/L	EPA 300.0		10	01/31/17 09:35	02/04/17 05:01	7010769	RLC
Fluoride	0.02	0.30	0.004	mg/L	EPA 300.0	J	1	01/31/17 09:35	01/31/17 15:42	7010769	RLC
Sulfate	250	10	0.92	mg/L	EPA 300.0		10	01/31/17 09:35	02/04/17 05:01	7010769	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:45	7010760	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:45	7010760	CSW
Barium	0.105	0.0100	0.0004	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:45	7010760	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/31/17 10:00	02/01/17 15:59	7010760	CSW
Boron	1.19	0.0400	0.0064	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:45	7010760	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:45	7010760	CSW
Calcium	139	25.0	1.55	mg/L	EPA 6020B		50	01/31/17 10:00	01/31/17 20:51	7010760	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:45	7010760	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:45	7010760	CSW
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	01/31/17 10:00	01/31/17 20:45	7010760	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:45	7010760	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:45	7010760	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:45	7010760	CSW
Lithium	0.0028	0.0500	0.0021	mg/L	EPA 6020B	J	1	01/31/17 10:00	02/01/17 15:59	7010760	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/02/17 12:05	02/02/17 16:41	7020032	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

February 07, 2017

Report No.: AAA0909
Client ID: HGWC-17
Date/Time Sampled: 1/26/2017 1:20:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0909-09
Date/Time Received: 1/27/2017 12:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1000	25	10	mg/L	SM 2540 C		1	01/31/17 17:51	01/31/17 17:51	7010778	JPT
Inorganic Anions											
Chloride	99	6.2	0.32	mg/L	EPA 300.0		25	01/31/17 09:35	02/04/17 06:48	7010769	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	01/31/17 09:35	01/31/17 17:28	7010769	RLC
Sulfate	440	25	2.3	mg/L	EPA 300.0		25	01/31/17 09:35	02/04/17 06:48	7010769	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:57	7010760	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:57	7010760	CSW
Barium	0.0229	0.0100	0.0004	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:57	7010760	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/31/17 10:00	02/01/17 16:05	7010760	CSW
Boron	5.78	2.00	0.321	mg/L	EPA 6020B		50	01/31/17 10:00	01/31/17 21:02	7010760	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:57	7010760	CSW
Calcium	198	25.0	1.55	mg/L	EPA 6020B		50	01/31/17 10:00	01/31/17 21:02	7010760	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:57	7010760	CSW
Cobalt	0.0154	0.0100	0.0005	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:57	7010760	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:57	7010760	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:57	7010760	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:57	7010760	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 20:57	7010760	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/31/17 10:00	02/01/17 16:05	7010760	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/02/17 12:05	02/02/17 16:44	7020032	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

February 07, 2017

Report No.: AAA0909
Client ID: HGWC-18
Date/Time Sampled: 1/26/2017 3:12:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0909-10
Date/Time Received: 1/27/2017 12:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1950	25	10	mg/L	SM 2540 C		1	01/31/17 17:51	01/31/17 17:51	7010778	JPT
Inorganic Anions											
Chloride	340	25	1.3	mg/L	EPA 300.0		100	01/31/17 09:35	02/04/17 07:09	7010769	RLC
Fluoride	0.71	0.30	0.004	mg/L	EPA 300.0		1	01/31/17 09:35	01/31/17 17:49	7010769	RLC
Sulfate	970	100	9.2	mg/L	EPA 300.0		100	01/31/17 09:35	02/04/17 07:09	7010769	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:08	7010760	CSW
Arsenic	0.0068	0.0050	0.0016	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:08	7010760	CSW
Barium	0.0293	0.0100	0.0004	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:08	7010760	CSW
Beryllium	0.0034	0.0030	0.00008	mg/L	EPA 6020B		1	01/31/17 10:00	02/01/17 16:11	7010760	CSW
Boron	9.17	2.00	0.321	mg/L	EPA 6020B		50	01/31/17 10:00	01/31/17 21:14	7010760	CSW
Cadmium	0.0025	0.0010	0.00007	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:08	7010760	CSW
Calcium	394	50.0	3.11	mg/L	EPA 6020B		100	01/31/17 10:00	02/02/17 16:07	7010760	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:08	7010760	CSW
Cobalt	0.195	0.0100	0.0005	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:08	7010760	CSW
Lead	0.0013	0.0050	0.0001	mg/L	EPA 6020B	J	1	01/31/17 10:00	01/31/17 21:08	7010760	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:08	7010760	CSW
Selenium	0.0385	0.0100	0.0010	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:08	7010760	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:08	7010760	CSW
Lithium	0.0136	0.0500	0.0021	mg/L	EPA 6020B	J	1	01/31/17 10:00	02/01/17 16:11	7010760	CSW
Mercury	0.00008	0.00050	0.000041	mg/L	EPA 7470A	J	1	02/02/17 12:05	02/02/17 16:51	7020032	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

February 07, 2017

Report No.: AAA0909
Client ID: Dup-1
Date/Time Sampled: 1/26/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0909-11
Date/Time Received: 1/27/2017 12:25:00PM

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	01/31/17 17:51	01/31/17 17:51	7010778	JPT
Inorganic Anions											
Chloride	7.6	0.25	0.01	mg/L	EPA 300.0		1	01/31/17 09:35	01/31/17 18:32	7010769	RLC
Fluoride	0.30	0.30	0.004	mg/L	EPA 300.0		1	01/31/17 09:35	01/31/17 18:32	7010769	RLC
Sulfate	89	5.0	0.46	mg/L	EPA 300.0		5	01/31/17 09:35	02/04/17 07:30	7010769	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:19	7010760	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:19	7010760	CSW
Barium	0.0484	0.0100	0.0004	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:19	7010760	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/31/17 10:00	02/01/17 16:18	7010760	CSW
Boron	0.0976	0.0400	0.0064	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:19	7010760	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:19	7010760	CSW
Calcium	81.8	25.0	1.55	mg/L	EPA 6020B		50	01/31/17 10:00	01/31/17 21:25	7010760	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:19	7010760	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:19	7010760	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:19	7010760	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:19	7010760	CSW
Selenium	0.0029	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/31/17 10:00	01/31/17 21:19	7010760	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:19	7010760	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/31/17 10:00	02/01/17 16:18	7010760	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/02/17 12:05	02/02/17 16:53	7020032	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

February 07, 2017

Report No.: AAA0909
Client ID: Dup-2
Date/Time Sampled: 1/26/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0909-12
Date/Time Received: 1/27/2017 12:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	389	25	10	mg/L	SM 2540 C		1	01/31/17 17:51	01/31/17 17:51	7010778	JPT
Inorganic Anions											
Chloride	71	1.2	0.06	mg/L	EPA 300.0		5	01/31/17 09:35	02/04/17 07:51	7010769	RLC
Fluoride	0.60	0.30	0.004	mg/L	EPA 300.0		1	01/31/17 09:35	01/31/17 18:53	7010769	RLC
Sulfate	84	5.0	0.46	mg/L	EPA 300.0		5	01/31/17 09:35	02/04/17 07:51	7010769	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:42	7010760	CSW
Arsenic	0.408	0.0050	0.0016	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:42	7010760	CSW
Barium	0.0701	0.0100	0.0004	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:42	7010760	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/31/17 10:00	02/01/17 16:24	7010760	CSW
Boron	3.00	2.00	0.321	mg/L	EPA 6020B		50	01/31/17 10:00	01/31/17 21:48	7010760	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:42	7010760	CSW
Calcium	87.8	25.0	1.55	mg/L	EPA 6020B		50	01/31/17 10:00	01/31/17 21:48	7010760	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:42	7010760	CSW
Cobalt	0.0023	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/31/17 10:00	01/31/17 21:42	7010760	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:42	7010760	CSW
Molybdenum	0.0423	0.0100	0.0017	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:42	7010760	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:42	7010760	CSW
Thallium	0.0004	0.0010	0.0002	mg/L	EPA 6020B	J	1	01/31/17 10:00	01/31/17 21:42	7010760	CSW
Lithium	0.0333	0.0500	0.0021	mg/L	EPA 6020B	J	1	01/31/17 10:00	02/01/17 16:24	7010760	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/02/17 12:05	02/02/17 16:56	7020032	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

February 07, 2017

Report No.: AAA0909
Client ID: FB-1
Date/Time Sampled: 1/26/2017 1:35:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAA0909-13
Date/Time Received: 1/27/2017 12:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	17	25	10	mg/L	SM 2540 C	J	1	01/31/17 17:51	01/31/17 17:51	7010778	JPT
Inorganic Anions											
Chloride	0.07	0.25	0.01	mg/L	EPA 300.0	J	1	01/31/17 09:35	01/31/17 19:14	7010769	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	01/31/17 09:35	01/31/17 19:14	7010769	RLC
Sulfate	0.12	1.0	0.09	mg/L	EPA 300.0	J	1	01/31/17 09:35	01/31/17 19:14	7010769	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:54	7010760	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:54	7010760	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:54	7010760	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/31/17 10:00	02/01/17 16:30	7010760	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:54	7010760	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:54	7010760	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:54	7010760	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:54	7010760	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:54	7010760	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:54	7010760	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:54	7010760	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:54	7010760	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 21:54	7010760	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/31/17 10:00	02/01/17 16:30	7010760	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/02/17 12:05	02/02/17 16:58	7020032	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

February 07, 2017

Report No.: AAA0909
Client ID: FERB-1
Date/Time Sampled: 1/26/2017 1:40:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAA0909-14
Date/Time Received: 1/27/2017 12:25:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	28	25	10	mg/L	SM 2540 C		1	01/31/17 17:51	01/31/17 17:51	7010778	JPT
Inorganic Anions											
Chloride	0.04	0.25	0.01	mg/L	EPA 300.0	J	1	01/31/17 09:35	01/31/17 19:35	7010769	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	01/31/17 09:35	01/31/17 19:35	7010769	RLC
Sulfate	0.10	1.0	0.09	mg/L	EPA 300.0	J	1	01/31/17 09:35	01/31/17 19:35	7010769	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:00	7010760	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:00	7010760	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:00	7010760	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/31/17 10:00	02/01/17 16:36	7010760	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:00	7010760	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:00	7010760	CSW
Calcium	0.0401	0.500	0.0311	mg/L	EPA 6020B	J	1	01/31/17 10:00	01/31/17 22:00	7010760	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:00	7010760	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:00	7010760	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:00	7010760	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:00	7010760	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:00	7010760	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:00	7010760	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/31/17 10:00	02/01/17 16:36	7010760	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/02/17 12:05	02/02/17 17:00	7020032	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

February 07, 2017

Report No.: AAA0909
Client ID: FB-2
Date/Time Sampled: 1/26/2017 2:05:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAA0909-15
Date/Time Received: 1/27/2017 12:25:00PM

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	01/31/17 17:51	01/31/17 17:51	7010778	JPT
Inorganic Anions											
Chloride	0.03	0.25	0.01	mg/L	EPA 300.0	J	1	01/31/17 09:35	01/31/17 19:56	7010769	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	01/31/17 09:35	01/31/17 19:56	7010769	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	01/31/17 09:35	01/31/17 19:56	7010769	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:05	7010760	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:05	7010760	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:05	7010760	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/31/17 10:00	02/01/17 16:42	7010760	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:05	7010760	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:05	7010760	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:05	7010760	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:05	7010760	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:05	7010760	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:05	7010760	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:05	7010760	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:05	7010760	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:05	7010760	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/31/17 10:00	02/01/17 16:42	7010760	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/02/17 12:05	02/02/17 17:03	7020032	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

February 07, 2017

Report No.: AAA0909
Client ID: FERB-2
Date/Time Sampled: 1/26/2017 2:10:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAA0909-16
Date/Time Received: 1/27/2017 12:25:00PM

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	01/31/17 17:51	01/31/17 17:51	7010778	JPT
Inorganic Anions											
Chloride	0.04	0.25	0.01	mg/L	EPA 300.0	J	1	01/31/17 09:35	01/31/17 20:18	7010769	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	01/31/17 09:35	01/31/17 20:18	7010769	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	01/31/17 09:35	01/31/17 20:18	7010769	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:11	7010760	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:11	7010760	CSW
Barium	0.0005	0.0100	0.0004	mg/L	EPA 6020B	J	1	01/31/17 10:00	01/31/17 22:11	7010760	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/31/17 10:00	02/02/17 16:12	7010760	KLH
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:11	7010760	CSW
Cadmium	0.00008	0.0010	0.00007	mg/L	EPA 6020B	J	1	01/31/17 10:00	01/31/17 22:11	7010760	CSW
Calcium	0.0351	0.500	0.0311	mg/L	EPA 6020B	J	1	01/31/17 10:00	01/31/17 22:11	7010760	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:11	7010760	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:11	7010760	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:11	7010760	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:11	7010760	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:11	7010760	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/31/17 10:00	01/31/17 22:11	7010760	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/31/17 10:00	02/02/17 16:12	7010760	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	02/02/17 12:05	02/02/17 17:05	7020032	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

February 07, 2017

Report No.: AAA0909

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010778 - SM 2540 C											
Blank (7010778-BLK1)						Prepared & Analyzed: 01/31/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7010778-BS1)						Prepared & Analyzed: 01/31/17					
Total Dissolved Solids	407	25	10	mg/L	400.00		102	84-108			
Duplicate (7010778-DUP1)		**Source: AAA0909-04**				Prepared & Analyzed: 01/31/17					
Total Dissolved Solids	884	25	10	mg/L		846			4	10	
Duplicate (7010778-DUP2)		**Source: AAA0909-14**				Prepared & Analyzed: 01/31/17					
Total Dissolved Solids	21	25	10	mg/L		28			29	10	QR-03, J

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

February 07, 2017

Report No.: AAA0909

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010769 - EPA 300.0											
Blank (7010769-BLK1)						Prepared & Analyzed: 01/31/17					
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 (7010769-BS1)						Prepared & Analyzed: 01/31/17					
Chloride	10.4	0.25	0.01	mg/L	10.010		104	90-110			
Fluoride	10.4	0.30	0.004	mg/L	10.020		104	90-110			
Sulfate	10.3	1.0	0.09	mg/L	10.020		103	90-110			
Matrix Spike (7010769-MS1)		**Source: AAA0909-02**				Prepared & Analyzed: 01/31/17					
Chloride	16.6	0.25	0.01	mg/L	10.010	6.98	96	90-110			
Fluoride	11.1	0.30	0.004	mg/L	10.020	0.29	108	90-110			
Sulfate	82.2	1.0	0.09	mg/L	10.020	80.8	14	90-110			QM-02
Matrix Spike (7010769-MS2)		**Source: AAA0909-10**				Prepared & Analyzed: 01/31/17					
Chloride	147	0.25	0.01	mg/L	10.010	153	NR	90-110			QM-02
Fluoride	14.4	0.30	0.004	mg/L	10.020	0.71	137	90-110			QM-05
Sulfate	413	1.0	0.09	mg/L	10.020	438	NR	90-110			QM-02
Matrix Spike Dup (7010769-MSD1)		**Source: AAA0909-02**				Prepared & Analyzed: 01/31/17					
Chloride	16.7	0.25	0.01	mg/L	10.010	6.98	97	90-110	0.08	15	
Fluoride	11.2	0.30	0.004	mg/L	10.020	0.29	109	90-110	0.3	15	
Sulfate	82.3	1.0	0.09	mg/L	10.020	80.8	15	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

February 07, 2017

Report No.: AAA0909

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010760 - EPA 3005A											
Blank (7010760-BLK1)						Prepared & Analyzed: 01/31/17					
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 (7010760-BS1)						Prepared & Analyzed: 01/31/17					
Antimony	0.104	0.0030	0.0008	mg/L	0.10000		104	80-120			
Arsenic	0.104	0.0050	0.0016	mg/L	0.10000		104	80-120			
Barium	0.0974	0.0100	0.0004	mg/L	0.10000		97	80-120			
Beryllium	0.104	0.0030	0.00008	mg/L	0.10000		104	80-120			
Boron	1.06	0.0400	0.0064	mg/L	1.0000		106	80-120			
Cadmium	0.0997	0.0010	0.00007	mg/L	0.10000		100	80-120			
Calcium	1.06	0.500	0.0311	mg/L	1.0000		106	80-120			
Chromium	0.102	0.0100	0.0009	mg/L	0.10000		102	80-120			
Cobalt	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			
Copper	0.101	0.0250	0.0005	mg/L	0.10000		101	80-120			
Lead	0.102	0.0050	0.0001	mg/L	0.10000		102	80-120			
Molybdenum	0.103	0.0100	0.0017	mg/L	0.10000		103	80-120			
Nickel	0.103	0.0100	0.0006	mg/L	0.10000		103	80-120			
Selenium	0.100	0.0100	0.0010	mg/L	0.10000		100	80-120			
Silver	0.100	0.0100	0.0005	mg/L	0.10000		100	80-120			
Thallium	0.100	0.0010	0.0002	mg/L	0.10000		100	80-120			
Vanadium	0.101	0.0100	0.0071	mg/L	0.10000		101	80-120			
Zinc	0.107	0.0100	0.0021	mg/L	0.10000		107	80-120			
Lithium	0.0962	0.0500	0.0021	mg/L	0.10000		96	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

February 07, 2017

Report No.: AAA0909

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010760 - EPA 3005A											
Matrix Spike (7010760-MS1)		**Source: AAA0909-08**				Prepared & Analyzed: 01/31/17					
Antimony	0.106	0.0030	0.0008	mg/L	0.10000	ND	106	75-125			
Arsenic	0.109	0.0050	0.0016	mg/L	0.10000	ND	109	75-125			
Barium	0.209	0.0100	0.0004	mg/L	0.10000	0.105	104	75-125			
Beryllium	0.104	0.0030	0.00008	mg/L	0.10000	ND	104	75-125			
Boron	2.78	2.00	0.321	mg/L	1.0000	1.19	159	75-125			QM-02
Cadmium	0.102	0.0010	0.00007	mg/L	0.10000	ND	102	75-125			
Calcium	145	25.0	1.55	mg/L	1.0000	139	618	75-125			QM-02
Chromium	0.106	0.0100	0.0009	mg/L	0.10000	ND	106	75-125			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	ND	102	75-125			
Copper	0.102	0.0250	0.0005	mg/L	0.10000	ND	102	75-125			
Lead	0.0985	0.0050	0.0001	mg/L	0.10000	0.0001	98	75-125			
Molybdenum	0.108	0.0100	0.0017	mg/L	0.10000	ND	108	75-125			
Nickel	0.0994	0.0100	0.0006	mg/L	0.10000	ND	99	75-125			
Selenium	0.103	0.0100	0.0010	mg/L	0.10000	ND	103	75-125			
Silver	0.0976	0.0100	0.0005	mg/L	0.10000	ND	98	75-125			
Thallium	0.0974	0.0010	0.0002	mg/L	0.10000	ND	97	75-125			
Vanadium	0.106	0.0100	0.0071	mg/L	0.10000	ND	106	75-125			
Zinc	0.105	0.0100	0.0021	mg/L	0.10000	0.0025	102	75-125			
Lithium	0.0978	0.0500	0.0021	mg/L	0.10000	0.0028	95	75-125			
Matrix Spike Dup (7010760-MSD1)		**Source: AAA0909-08**				Prepared & Analyzed: 01/31/17					
Antimony	0.103	0.0030	0.0008	mg/L	0.10000	ND	103	75-125	2	20	
Arsenic	0.108	0.0050	0.0016	mg/L	0.10000	ND	108	75-125	1	20	
Barium	0.202	0.0100	0.0004	mg/L	0.10000	0.105	97	75-125	3	20	
Beryllium	0.106	0.0030	0.00008	mg/L	0.10000	ND	106	75-125	2	20	
Boron	2.71	2.00	0.321	mg/L	1.0000	1.19	152	75-125	3	20	QM-02
Cadmium	0.0983	0.0010	0.00007	mg/L	0.10000	ND	98	75-125	3	20	
Calcium	142	25.0	1.55	mg/L	1.0000	139	298	75-125	2	20	QM-02
Chromium	0.0999	0.0100	0.0009	mg/L	0.10000	ND	100	75-125	6	20	
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125	2	20	
Copper	0.0945	0.0250	0.0005	mg/L	0.10000	ND	95	75-125	7	20	
Lead	0.0990	0.0050	0.0001	mg/L	0.10000	0.0001	99	75-125	0.5	20	
Molybdenum	0.107	0.0100	0.0017	mg/L	0.10000	ND	107	75-125	0.6	20	
Nickel	0.0991	0.0100	0.0006	mg/L	0.10000	ND	99	75-125	0.3	20	
Selenium	0.105	0.0100	0.0010	mg/L	0.10000	ND	105	75-125	2	20	
Silver	0.0974	0.0100	0.0005	mg/L	0.10000	ND	97	75-125	0.3	20	
Thallium	0.0973	0.0010	0.0002	mg/L	0.10000	ND	97	75-125	0.1	20	
Vanadium	0.102	0.0100	0.0071	mg/L	0.10000	ND	102	75-125	4	20	
Zinc	0.0996	0.0100	0.0021	mg/L	0.10000	0.0025	97	75-125	5	20	
Lithium	0.100	0.0500	0.0021	mg/L	0.10000	0.0028	97	75-125	2	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

February 07, 2017

Report No.: AAA0909

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010760 - EPA 3005A											
Post Spike (7010760-PS1)			**Source: AAA0909-08**			Prepared & Analyzed: 01/31/17					
Antimony	92.7			ug/L	100.00	0.0220	93	80-120			
Arsenic	107			ug/L	100.00	-0.219	107	80-120			
Barium	196			ug/L	100.00	105	91	80-120			
Beryllium	105			ug/L	100.00	0.0100	105	80-120			
Boron	2660			ug/L	1000.0	1190	148	80-120			QM-02
Cadmium	100			ug/L	100.00	0.0104	100	80-120			
Calcium	143000			ug/L	1000.0	139000	377	80-120			QM-02
Chromium	107			ug/L	100.00	0.148	107	80-120			
Cobalt	102			ug/L	100.00	0.123	102	80-120			
Copper	97.5			ug/L	100.00	0.247	97	80-120			
Lead	94.5			ug/L	100.00	0.122	94	80-120			
Molybdenum	106			ug/L	100.00	0.0875	106	80-120			
Nickel	99.0			ug/L	100.00	0.284	99	80-120			
Selenium	106			ug/L	100.00	0.338	106	80-120			
Silver	93.9			ug/L	100.00	0.0015	94	80-120			
Thallium	93.8			ug/L	100.00	0.0007	94	80-120			
Vanadium	108			ug/L	100.00	-2.17	108	80-120			
Zinc	104			ug/L	100.00	2.53	101	80-120			
Lithium	100			ug/L	100.00	2.80	98	80-120			
Batch 7010766 - EPA 7470A											
Blank (7010766-BLK1)						Prepared & Analyzed: 01/31/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7010766-BS1)						Prepared & Analyzed: 01/31/17					
Mercury	0.00245	0.00050	0.000041	mg/L	2.5000E-3		98	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

February 07, 2017

Report No.: AAA0909

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010766 - EPA 7470A											
Matrix Spike (7010766-MS1)			**Source: AAA0792-01**			Prepared & Analyzed: 01/31/17					
Mercury	0.00236	0.00050	0.000041	mg/L	2.5000E-3	ND	94	75-125			
Matrix Spike Dup (7010766-MSD1)			**Source: AAA0792-01**			Prepared & Analyzed: 01/31/17					
Mercury	0.00246	0.00050	0.000041	mg/L	2.5000E-3	ND	98	75-125	4	20	
Post Spike (7010766-PS1)			**Source: AAA0792-01**			Prepared & Analyzed: 01/31/17					
Mercury	1.66			ug/L	1.6667	0.0236	98	80-120			
Batch 7020013 - EPA 3005A											
Blank (7020013-BLK1)						Prepared: 02/01/17 Analyzed: 02/02/17					
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.0400	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	0.125	0.500	0.0311	mg/L							J
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0100	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	0.0044	0.0100	0.0021	mg/L							J
Lithium	ND	0.0500	0.0021	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

February 07, 2017

Report No.: AAA0909

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7020013 - EPA 3005A											
LCS (7020013-BS1)						Prepared: 02/01/17 Analyzed: 02/02/17					
Antimony	0.110	0.0030	0.0008	mg/L	0.10000		110	80-120			
Arsenic	0.107	0.0050	0.0016	mg/L	0.10000		107	80-120			
Barium	0.101	0.0100	0.0004	mg/L	0.10000		101	80-120			
Beryllium	0.106	0.0030	0.00008	mg/L	0.10000		106	80-120			
Boron	1.07	0.0400	0.0064	mg/L	1.0000		107	80-120			
Cadmium	0.103	0.0010	0.00007	mg/L	0.10000		103	80-120			
Calcium	1.12	0.500	0.0311	mg/L	1.0000		112	80-120			
Chromium	0.118	0.0100	0.0009	mg/L	0.10000		118	80-120			
Cobalt	0.109	0.0100	0.0005	mg/L	0.10000		109	80-120			
Copper	0.109	0.0250	0.0005	mg/L	0.10000		109	80-120			
Lead	0.104	0.0050	0.0001	mg/L	0.10000		104	80-120			
Molybdenum	0.106	0.0100	0.0017	mg/L	0.10000		106	80-120			
Nickel	0.112	0.0100	0.0006	mg/L	0.10000		112	80-120			
Selenium	0.113	0.0100	0.0010	mg/L	0.10000		113	80-120			
Silver	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Thallium	0.101	0.0010	0.0002	mg/L	0.10000		101	80-120			
Vanadium	0.115	0.0100	0.0071	mg/L	0.10000		115	80-120			
Zinc	0.114	0.0100	0.0021	mg/L	0.10000		114	80-120			
Lithium	0.104	0.0500	0.0021	mg/L	0.10000		104	80-120			
Matrix Spike (7020013-MS1)		**Source: AAA0909-01**				Prepared: 02/01/17 Analyzed: 02/02/17					
Antimony	0.115	0.0030	0.0008	mg/L	0.10000	ND	115	75-125			
Arsenic	0.116	0.0050	0.0016	mg/L	0.10000	ND	116	75-125			
Barium	0.255	0.0100	0.0004	mg/L	0.10000	0.142	113	75-125			
Beryllium	0.0906	0.0030	0.00008	mg/L	0.10000	ND	91	75-125			
Boron	2.88	0.0400	0.0064	mg/L	1.0000	1.87	102	75-125			
Cadmium	0.100	0.0010	0.00007	mg/L	0.10000	ND	100	75-125			
Calcium	184	25.0	1.55	mg/L	1.0000	175	853	75-125			QM-02
Chromium	0.117	0.0100	0.0009	mg/L	0.10000	ND	117	75-125			
Cobalt	0.111	0.0100	0.0005	mg/L	0.10000	0.0006	110	75-125			
Copper	0.104	0.0250	0.0005	mg/L	0.10000	ND	104	75-125			
Lead	0.0977	0.0050	0.0001	mg/L	0.10000	0.0001	98	75-125			
Molybdenum	0.141	0.0100	0.0017	mg/L	0.10000	0.0234	118	75-125			
Nickel	0.112	0.0100	0.0006	mg/L	0.10000	0.0009	111	75-125			
Selenium	0.112	0.0100	0.0010	mg/L	0.10000	ND	112	75-125			
Silver	0.0985	0.0100	0.0005	mg/L	0.10000	ND	98	75-125			
Thallium	0.0988	0.0010	0.0002	mg/L	0.10000	ND	99	75-125			
Vanadium	0.119	0.0100	0.0071	mg/L	0.10000	ND	119	75-125			
Zinc	0.110	0.0100	0.0021	mg/L	0.10000	0.0055	104	75-125			
Lithium	0.0974	0.0500	0.0021	mg/L	0.10000	0.0042	93	75-125			

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

February 07, 2017

Report No.: AAA0909

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7020013 - EPA 3005A											
Matrix Spike Dup (7020013-MSD1)		**Source: AAA0909-01**			Prepared: 02/01/17 Analyzed: 02/02/17						
Antimony	0.112	0.0030	0.0008	mg/L	0.10000	ND	112	75-125	3	20	
Arsenic	0.116	0.0050	0.0016	mg/L	0.10000	ND	116	75-125	0.5	20	
Barium	0.242	0.0100	0.0004	mg/L	0.10000	0.142	101	75-125	5	20	
Beryllium	0.0921	0.0030	0.00008	mg/L	0.10000	ND	92	75-125	2	20	
Boron	2.91	0.0400	0.0064	mg/L	1.0000	1.87	104	75-125	0.7	20	
Cadmium	0.102	0.0010	0.00007	mg/L	0.10000	ND	102	75-125	1	20	
Calcium	189	25.0	1.55	mg/L	1.0000	175	NR	75-125	3	20	QM-02
Chromium	0.115	0.0100	0.0009	mg/L	0.10000	ND	115	75-125	2	20	
Cobalt	0.110	0.0100	0.0005	mg/L	0.10000	0.0006	109	75-125	1	20	
Copper	0.102	0.0250	0.0005	mg/L	0.10000	ND	102	75-125	1	20	
Lead	0.0986	0.0050	0.0001	mg/L	0.10000	0.0001	98	75-125	0.9	20	
Molybdenum	0.132	0.0100	0.0017	mg/L	0.10000	0.0234	108	75-125	7	20	
Nickel	0.108	0.0100	0.0006	mg/L	0.10000	0.0009	107	75-125	4	20	
Selenium	0.115	0.0100	0.0010	mg/L	0.10000	ND	115	75-125	2	20	
Silver	0.0962	0.0100	0.0005	mg/L	0.10000	ND	96	75-125	2	20	
Thallium	0.0985	0.0010	0.0002	mg/L	0.10000	ND	98	75-125	0.3	20	
Vanadium	0.116	0.0100	0.0071	mg/L	0.10000	ND	116	75-125	2	20	
Zinc	0.111	0.0100	0.0021	mg/L	0.10000	0.0055	105	75-125	0.7	20	
Lithium	0.101	0.0500	0.0021	mg/L	0.10000	0.0042	97	75-125	4	20	
Post Spike (7020013-PS1)		**Source: AAA0909-01**			Prepared: 02/01/17 Analyzed: 02/02/17						
Antimony	104			ug/L	100.00	0.572	103	80-120			
Arsenic	118			ug/L	100.00	0.952	117	80-120			
Barium	249			ug/L	100.00	142	107	80-120			
Beryllium	89.5			ug/L	100.00	0.0129	89	80-120			
Boron	2800			ug/L	1000.0	1870	93	80-120			
Cadmium	101			ug/L	100.00	0.0242	101	80-120			
Calcium	180000			ug/L	1000.0	175000	432	80-120			QM-02
Chromium	119			ug/L	100.00	0.0861	118	80-120			
Cobalt	109			ug/L	100.00	0.595	108	80-120			
Copper	105			ug/L	100.00	0.484	105	80-120			
Lead	98.5			ug/L	100.00	0.122	98	80-120			
Molybdenum	134			ug/L	100.00	23.4	110	80-120			
Nickel	109			ug/L	100.00	0.947	109	80-120			
Selenium	117			ug/L	100.00	0.426	116	80-120			
Silver	94.8			ug/L	100.00	0.0211	95	80-120			
Thallium	100			ug/L	100.00	0.0533	100	80-120			
Vanadium	121			ug/L	100.00	-0.716	121	80-120			
Zinc	111			ug/L	100.00	5.50	105	80-120			
Lithium	98.7			ug/L	100.00	4.24	94	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

February 07, 2017

Report No.: AAA0909

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7020032 - EPA 7470A											
Blank (7020032-BLK1)						Prepared & Analyzed: 02/02/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7020032-BS1)						Prepared & Analyzed: 02/02/17					
Mercury	0.00252	0.00050	0.000041	mg/L	2.5000E-3		101	80-120			
Matrix Spike (7020032-MS1)		**Source: AAA0909-10**				Prepared & Analyzed: 02/02/17					
Mercury	0.00253	0.00050	0.000041	mg/L	2.5000E-3	0.00008	98	75-125			
Matrix Spike Dup (7020032-MSD1)		**Source: AAA0909-10**				Prepared & Analyzed: 02/02/17					
Mercury	0.00249	0.00050	0.000041	mg/L	2.5000E-3	0.00008	96	75-125	2	20	
Post Spike (7020032-PS1)		**Source: AAA0909-10**				Prepared & Analyzed: 02/02/17					
Mercury	1.67			ug/L	1.6667	0.0534	97	80-120			

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

February 07, 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-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:
42 Inverness Center Parkway BIN B426
Birmingham, AL 35242
205-992-5417

REPORT TO: Lauren Petty
CC: Maria Padilla, Heath McCorkle
REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com
PROJECT NAME/STATE: Plant Hammond - AP 1&2
PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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							
01/26/17	9:25	GW		x	HGWC-9	4		1	1	2						1	
01/26/17	9:50	GW		x	HGWC-10	4		1	1	2						2	
01/26/17	12:15	GW		x	HGWC-11	6		1	1	4						3	Extra radium volume collected for Lab QA/QC
01/26/17	9:43	GW		x	HGWC-12	6		1	1	4						4	Extra radium volume collected for Lab QA/QC
01/26/17	10:52	GW		x	HGWC-13	4		1	1	2						5	
01/26/17	13:15	GW		x	HGWC-14	4		1	1	2						6	
01/26/17	14:30	GW		x	HGWC-15	4		1	1	2						7	
01/26/17	11:07	GW		x	HGWC-16	4		1	1	2						8	
01/26/17	13:20	GW		x	HGWC-17	4		1	1	2						9	
01/26/17	15:12	GW		x	HGWC-18	4		1	1	2						10	
01/26/17	--	GW		x	DUP-1	4		1	1	2						11	
01/26/17	--	GW		x	DUP-2	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

SAMPLED BY AND TITLE: M.Thomas MT, M.Burch MB, W.Virgo WFV
DATE/TIME: 1/26/2017 / 15:12
RELINQUISHED BY: W.Virgo (ERM)
DATE/TIME: 1/26/17 2100
RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:
RECEIVED BY LAB:
DATE/TIME: 1/27/17 1225
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
Checked: No NA
Ice: Yes No NA
Temperature: 2°C Min: 2°C Max:
Custody Seal: Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: HAA0909
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:
42 Inverness Center Parkway BIN B426
Birmingham, AL 35242
205-992-5417

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

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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							
01/26/17	13:35	W		x	FB-1	4		1	1	2						13	
01/26/17	13:40	W		x	FERB-1	4		1	1	2						14	
01/26/17	14:05	W		x	FB-2	4		1	1	2						15	
01/26/17	14:10	W		x	FERB-2	4		1	1	2						16	

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: M.Thomas MT, M.Burch MB, W.Virgo WFV
DATE/TIME: 1/26/2017 / 15:12
RELINQUISHED BY: Will Virgo (ERM)
DATE/TIME: 1/26/17 2100

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

RECEIVED BY LAB: Kate Hanks
DATE/TIME: 1/27/17 1225
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
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AR40909
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: 1/30/2017 8:46:08AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 01/27/17 12:25

Work Order: AAA0909
Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 16 **#Containers:** 68

Minimum Temp(C): 2.0 **Maximum Temp(C):** 2.0 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

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

Comments:

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

February 28, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Hammond
Pace Project No.: 30209269

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on January 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: Plant Hammond
Pace Project No.: 30209269

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 Hammond
Pace Project No.: 30209269

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30209269001	**HGWC-9**	Water	01/26/17 09:25	01/30/17 09:05
30209269002	**HGWC-10**	Water	01/26/17 09:50	01/30/17 09:05
30209269003	**HGWC-11**	Water	01/26/17 12:15	01/30/17 09:05
30209269004	**HGWC-12**	Water	01/26/17 09:43	01/30/17 09:05
30209269005	**HGWC-13**	Water	01/26/17 10:52	01/30/17 09:05
30209269006	**HGWC-14**	Water	01/26/17 13:15	01/30/17 09:05
30209269007	**HGWC-15**	Water	01/26/17 14:30	01/30/17 09:05
30209269008	**HGWC-16**	Water	01/26/17 11:07	01/30/17 09:05
30209269009	**HGWC-17**	Water	01/26/17 13:20	01/30/17 09:05
30209269010	**HGWC-18**	Water	01/26/17 15:12	01/30/17 09:05
30209269011	**Dup-1**	Water	01/26/17 00:00	01/30/17 09:05
30209269012	**Dup-2**	Water	01/26/17 00:00	01/30/17 09:05
30209269013	**FB-1**	Water	01/26/17 13:35	01/30/17 09:05
30209269014	**FERB-1**	Water	01/26/17 13:40	01/30/17 09:05
30209269015	**FB-2**	Water	01/26/17 14:05	01/30/17 09:05
30209269016	**FERB-2**	Water	01/26/17 14:10	01/30/17 09:05

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: Plant Hammond
Pace Project No.: 30209269

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30209269001	**HGWC-9**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30209269002	**HGWC-10**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30209269003	**HGWC-11**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30209269004	**HGWC-12**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30209269005	**HGWC-13**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30209269006	**HGWC-14**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30209269007	**HGWC-15**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30209269008	**HGWC-16**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30209269009	**HGWC-17**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30209269010	**HGWC-18**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30209269011	**Dup-1**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30209269012	**Dup-2**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30209269013	**FB-1**	EPA 9315	LAL	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: Plant Hammond
Pace Project No.: 30209269

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30209269014	**FERB-1**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30209269015	**FB-2**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30209269016	**FERB-2**	EPA 9315	LAL	1
		EPA 9320	JLW	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: Plant Hammond
Pace Project No.: 30209269

Sample: HGWC-9 **Lab ID: 30209269001** Collected: 01/26/17 09:25 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.00303 ± 0.0982 (0.285) C:93% T:NA**	pCi/L	02/15/17 11:49	13982-63-3	
Radium-228	EPA 9320	**0.512 ± 0.529 (1.10) C:53% T:87%**	pCi/L	02/23/17 15:53	15262-20-1	
Total Radium	Total Radium Calculation	**0.515 ± 0.627 (1.39)**	pCi/L	02/24/17 16:50	7440-14-4	

Sample: HGWC-10 **Lab ID: 30209269002** Collected: 01/26/17 09:50 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.141 ± 0.153 (0.293) C:87% T:NA**	pCi/L	02/15/17 11:49	13982-63-3	
Radium-228	EPA 9320	**0.781 ± 0.403 (0.714) C:79% T:80%**	pCi/L	02/23/17 15:53	15262-20-1	
Total Radium	Total Radium Calculation	**0.922 ± 0.556 (1.01)**	pCi/L	02/24/17 16:50	7440-14-4	

Sample: HGWC-11 **Lab ID: 30209269003** Collected: 01/26/17 12:15 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0570 ± 0.117 (0.274) C:87% T:NA**	pCi/L	02/15/17 13:24	13982-63-3	
Radium-228	EPA 9320	**0.785 ± 0.485 (0.918) C:63% T:85%**	pCi/L	02/25/17 15:54	15262-20-1	
Total Radium	Total Radium Calculation	**0.842 ± 0.602 (1.19)**	pCi/L	02/27/17 17:03	7440-14-4	

Sample: HGWC-12 **Lab ID: 30209269004** Collected: 01/26/17 09:43 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.136 ± 0.153 (0.300) C:91% T:NA**	pCi/L	02/15/17 13:24	13982-63-3	
Radium-228	EPA 9320	**0.404 ± 0.367 (0.749) C:79% T:82%**	pCi/L	02/25/17 15:54	15262-20-1	
Total Radium	Total Radium Calculation	**0.540 ± 0.520 (1.05)**	pCi/L	02/27/17 17:03	7440-14-4	

Sample: HGWC-13 **Lab ID: 30209269005** Collected: 01/26/17 10:52 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0912 ± 0.138 (0.297) C:90% T:NA**	pCi/L	02/15/17 13:24	13982-63-3	
Radium-228	EPA 9320	**1.13 ± 0.507 (0.847) C:63% T:86%**	pCi/L	02/25/17 15:54	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 Hammond
Pace Project No.: 30209269

Sample: HGWC-13 **Lab ID: 30209269005** Collected: 01/26/17 10:52 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**1.22 ± 0.645 (1.14)**	pCi/L	02/27/17 17:03	7440-14-4	

Sample: HGWC-14 **Lab ID: 30209269006** Collected: 01/26/17 13:15 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.349 ± 0.205 (0.273) C:96% T:NA**	pCi/L	02/15/17 13:24	13982-63-3	
Radium-228	EPA 9320	**1.75 ± 0.602 (0.849) C:71% T:74%**	pCi/L	02/25/17 15:54	15262-20-1	
Total Radium	Total Radium Calculation	**2.10 ± 0.807 (1.12)**	pCi/L	02/27/17 17:03	7440-14-4	

Sample: HGWC-15 **Lab ID: 30209269007** Collected: 01/26/17 14:30 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0214 ± 0.113 (0.301) C:86% T:NA**	pCi/L	02/15/17 13:24	13982-63-3	
Radium-228	EPA 9320	**0.605 ± 0.466 (0.920) C:61% T:80%**	pCi/L	02/25/17 15:54	15262-20-1	
Total Radium	Total Radium Calculation	**0.626 ± 0.579 (1.22)**	pCi/L	02/27/17 17:03	7440-14-4	

Sample: HGWC-16 **Lab ID: 30209269008** Collected: 01/26/17 11:07 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0215 ± 0.159 (0.410) C:94% T:NA**	pCi/L	02/15/17 13:24	13982-63-3	
Radium-228	EPA 9320	**1.27 ± 0.548 (0.896) C:62% T:82%**	pCi/L	02/25/17 15:54	15262-20-1	
Total Radium	Total Radium Calculation	**1.29 ± 0.707 (1.31)**	pCi/L	02/27/17 17:03	7440-14-4	

Sample: HGWC-17 **Lab ID: 30209269009** Collected: 01/26/17 13:20 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0524 ± 0.117 (0.277) C:95% T:NA**	pCi/L	02/15/17 13:24	13982-63-3	
Radium-228	EPA 9320	**0.560 ± 0.487 (0.990) C:62% T:81%**	pCi/L	02/25/17 15:54	15262-20-1	
Total Radium	Total Radium Calculation	**0.612 ± 0.604 (1.27)**	pCi/L	02/27/17 17:03	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 Hammond
Pace Project No.: 30209269

Sample: HGWC-18 **Lab ID: 30209269010** Collected: 01/26/17 15:12 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.541 ± 0.252 (0.286) C:97% T:NA**	pCi/L	02/15/17 13:24	13982-63-3	
Radium-228	EPA 9320	**1.72 ± 0.596 (0.831) C:62% T:84%**	pCi/L	02/25/17 15:54	15262-20-1	
Total Radium	Total Radium Calculation	**2.26 ± 0.848 (1.12)**	pCi/L	02/27/17 17:03	7440-14-4	

Sample: Dup-1 **Lab ID: 30209269011** Collected: 01/26/17 00:00 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0355 ± 0.114 (0.291) C:85% T:NA**	pCi/L	02/15/17 13:24	13982-63-3	
Radium-228	EPA 9320	**0.559 ± 0.390 (0.753) C:72% T:85%**	pCi/L	02/25/17 15:55	15262-20-1	
Total Radium	Total Radium Calculation	**0.595 ± 0.504 (1.04)**	pCi/L	02/27/17 17:03	7440-14-4	

Sample: Dup-2 **Lab ID: 30209269012** Collected: 01/26/17 00:00 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0804 ± 0.139 (0.312) C:93% T:NA**	pCi/L	02/15/17 11:49	13982-63-3	
Radium-228	EPA 9320	**1.41 ± 0.516 (0.728) C:63% T:84%**	pCi/L	02/25/17 15:55	15262-20-1	
Total Radium	Total Radium Calculation	**1.49 ± 0.655 (1.04)**	pCi/L	02/27/17 17:03	7440-14-4	

Sample: FB-1 **Lab ID: 30209269013** Collected: 01/26/17 13:35 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0617 ± 0.136 (0.321) C:92% T:NA**	pCi/L	02/15/17 11:49	13982-63-3	
Radium-228	EPA 9320	**0.735 ± 0.759 (1.59) C:52% T:80%**	pCi/L	02/25/17 15:59	15262-20-1	
Total Radium	Total Radium Calculation	**0.797 ± 0.895 (1.91)**	pCi/L	02/27/17 17:03	7440-14-4	

Sample: FERB-1 **Lab ID: 30209269014** Collected: 01/26/17 13:40 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.00923 ± 0.0949 (0.269) C:92% T:NA**	pCi/L	02/15/17 14:56	13982-63-3	
Radium-228	EPA 9320	**0.543 ± 0.513 (1.06) C:58% T:86%**	pCi/L	02/25/17 15:59	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 Hammond
Pace Project No.: 30209269

Sample: FERB-1 **Lab ID: 30209269014** Collected: 01/26/17 13:40 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.552 ± 0.608 (1.33)**	pCi/L	02/27/17 17:03	7440-14-4	

Sample: FB-2 **Lab ID: 30209269015** Collected: 01/26/17 14:05 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0540 ± 0.111 (0.259) C:95% T:NA**	pCi/L	02/15/17 14:56	13982-63-3	
Radium-228	EPA 9320	**0.341 ± 0.643 (1.41) C:59% T:80%**	pCi/L	02/25/17 15:59	15262-20-1	
Total Radium	Total Radium Calculation	**0.395 ± 0.754 (1.67)**	pCi/L	02/27/17 17:03	7440-14-4	

Sample: FERB-2 **Lab ID: 30209269016** Collected: 01/26/17 14:10 Received: 01/30/17 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0876 ± 0.134 (0.291) C:97% T:NA**	pCi/L	02/15/17 14:56	13982-63-3	
Radium-228	EPA 9320	**0.0183 ± 0.480 (1.10) C:63% T:87%**	pCi/L	02/25/17 15:59	15262-20-1	
Total Radium	Total Radium Calculation	**0.106 ± 0.614 (1.39)**	pCi/L	02/27/17 17:03	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 Hammond
Pace Project No.: 30209269

QC Batch: 248966 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30209269003, 30209269004, 30209269005, 30209269006, 30209269007, 30209269008, 30209269009, 30209269010, 30209269011, 30209269012, 30209269013, 30209269014, 30209269015, 30209269016

METHOD BLANK: 1224568 Matrix: Water
Associated Lab Samples: 30209269003, 30209269004, 30209269005, 30209269006, 30209269007, 30209269008, 30209269009, 30209269010, 30209269011, 30209269012, 30209269013, 30209269014, 30209269015, 30209269016

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.973 ± 0.433 (0.716) C:90% T:70%	pCi/L	02/25/17 15:54	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30209269

QC Batch: 248826 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30209269003, 30209269004, 30209269005, 30209269006, 30209269007, 30209269008, 30209269009, 30209269010, 30209269011, 30209269012, 30209269013, 30209269014, 30209269015, 30209269016

METHOD BLANK: 1223625 Matrix: Water
Associated Lab Samples: 30209269003, 30209269004, 30209269005, 30209269006, 30209269007, 30209269008, 30209269009, 30209269010, 30209269011, 30209269012, 30209269013, 30209269014, 30209269015, 30209269016

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00927 ± 0.0954 (0.270) C:97% T:NA	pCi/L	02/15/17 13:24	

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: Plant Hammond
Pace Project No.: 30209269

QC Batch: 248965 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30209269001, 30209269002

METHOD BLANK: 1224567 Matrix: Water
Associated Lab Samples: 30209269001, 30209269002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0945 ± 0.388 (0.887) C:53% T:83%	pCi/L	02/23/17 11:46	

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: Plant Hammond
Pace Project No.: 30209269

QC Batch: 248825 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30209269001, 30209269002

METHOD BLANK: 1223624 Matrix: Water
Associated Lab Samples: 30209269001, 30209269002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0911 ± 0.153 (0.342) C:91% T:NA	pCi/L	02/15/17 09:03	

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

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

QUALIFIERS

Project: Plant Hammond
Pace Project No.: 30209269

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: AAA0909 Workorder Name: Plant Hammond Owner Received Date: Results Requested By: 2/21/2017

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#:30209269

30209269

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis Radium 226, 228, Total	LAB USE ONLY
1	HGWC-9	G	1/26/2017 9:25	AAA0909-01	GW	2	X	001
2	HGWC-10	G	1/26/2017 9:50	AAA0909-02	GW	2	X	002
3	HGWC-11	G	1/26/2017 12:15	AAA0909-03	GW	4	X	003
4	HGWC-12	G	1/26/2017 9:43	AAA0909-04	GW	4	X	004
5	HGWC-13	G	1/26/2017 10:52	AAA0909-05	GW	2	X	005
6	HGWC-14	G	1/26/2017 13:15	AAA0909-06	GW	2	X	006
7	HGWC-15	G	1/26/2017 14:30	AAA0909-07	GW	2	X	007
8	HGWC-16	G	1/26/2017 11:07	AAA0909-08	GW	2	X	008
9	HGWC-17	G	1/26/2017 13:20	AAA0909-09	GW	2	X	009
10	HGWC-18	G	1/26/2017 15:12	AAA0909-10	GW	2	X	010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Ashleigh Howe Pace	1-30-17/0905	EQuIS deliverable required.
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.

30209269

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAA0909 Workorder Name: Plant Hammond Owner Received Date: Results Requested By: 2/21/2017

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	Dup-1	G	1/26/2017 0:00	AAA0909-11	GW	2	X	011
12	Dup-2	G	1/26/2017 0:00	AAA0909-12	GW	2	X	012
13	FB-1	G	1/26/2017 13:35	AAA0909-13	W	2	X	013
14	FERB-1	G	1/26/2017 13:40	AAA0909-14	W	2	X	014
15	FB-2	G	1/26/2017 14:05	AAA0909-15	W	2	X	015
16	FERB-2	G	1/26/2017 14:10	AAA0909-16	W	2	X	016
17								
18								
19								
20								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Ashleyhaw/Pace	1-30-17/0905	EQuIS deliverable required.
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.

30209269

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 2

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
42 Inverness Center Parkway BIN B426
Birmingham, AL 35242
205-992-5417

REPORT TO: Lauren Petty

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Part 257 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		
01/26/17	9:25	GW		x	HGWC-9	4	1	1	2	1	
01/26/17	9:50	GW		x	HGWC-10	4	1	1	2	2	
01/26/17	12:15	GW		x	HGWC-11	6	1	1	4	3	Extra radium volume collected for Lab QA/QC
01/26/17	9:43	GW		x	HGWC-12	6	1	1	4	4	Extra radium volume collected for Lab QA/QC
01/26/17	10:52	GW		x	HGWC-13	4	1	1	2	5	
01/26/17	13:15	GW		x	HGWC-14	4	1	1	2	6	
01/26/17	14:30	GW		x	HGWC-15	4	1	1	2	7	
01/26/17	11:07	GW		x	HGWC-16	4	1	1	2	8	
01/26/17	13:20	GW		x	HGWC-17	4	1	1	2	9	
01/26/17	15:12	GW		x	HGWC-18	4	1	1	2	10	
01/26/17	–	GW		x	DUP-1	4	1	1	2	11	
01/26/17	–	GW		x	DUP-2	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

SAMPLED BY AND TITLE: M.Burch MB, M.Thomas MT, W.Virgo WFV — DATE/TIME: 1/26/2017 / 15:12

RELINQUISHED BY: Will Virgo (EEM) — DATE/TIME: 1/26/17 2100

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: Charles Hawkins — DATE/TIME: 1/27/17 1225

pH checked: (Yes) No NA — Ice: (Yes) No NA — Temperature: 2° 2°

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

FOR LAB USE ONLY — LAB #: AAA0909

Entered into LIMS: [illegible]

Tracking #:

2017 01 26 Hammond COCs.xlsx

30209269

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.pasi-lab.com

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
42 Inverness Center Parkway BIN B426
Birmingham, AL 35242
205-992-5417

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

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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							
01/26/17	13:35	W		x	FB-1	4		1	1	2							13
01/26/17	13:40	W		x	FERB-1	4		1	1	2							14
01/26/17	14:05	W		x	FB-2	4		1	1	2							15
01/26/17	14:10	W		x	FERB-2	4		1	1	2							16

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: M.Thomas MT, M.Burch MB, W.Virgo WAV
DATE/TIME: 1/26/2017 / 15:12

RELINQUISHED BY: W.Virgo (ERM)
DATE/TIME: 1/26/17 2100

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Travis Hawks
DATE/TIME: 1/27/17 1205

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

pH checked: Yes No NA
Ice: Yes No NA
Temperature: 2°C 2°C

FOR LAB USE ONLY
LAB #: AA40909
Entered Into LIMS: 1/27
Tracking #:

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

30209269

Client Name: Pace, GA Project #

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

Tracking #: 6812 5101 9656

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

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

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

Temp should be above freezing to 6°C

Date and Initials of person examining contents: AGR 1-30-17

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			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 AGR 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: AGR Date: 1-30-17

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:	2/14/2017
Worklist:	33969
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1224568
MB concentration:	0.973
M/B Counting Uncertainty:	0.396
MB MDC:	0.716
MB Numerical Performance Indicator:	4.82
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS33969	LCSD33969
Count Date:	2/25/2017	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	25.210	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.801	
Target Conc. (pCi/L, g, F):	6.295	
Uncertainty (Calculated):	0.453	
Result (pCi/L, g, F):	6.275	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.938	
Numerical Performance Indicator:	-0.04	
Percent Recovery:	99.67%	
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.:	30209269003	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30209269003DUP	
Sample Result (pCi/L, g, F):	0.785	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.464	
Sample Duplicate Result (pCi/L, g, F):	1.618	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.530	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-2.316	30209269003
Duplicate RPD:	69.30%	30209269003DUP
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:

*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

Test: Ra-228
Analyst: JLW
Date: 2/15/2017
Worklist: 33968
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1224567
MB concentration:	0.094
M/B Counting Uncertainty:	0.387
MB MDC:	0.887
MB Numerical Performance Indicator:	0.48
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS33968	LCSD33968
Count Date:	2/23/2017	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	25.228	
Volume Used (mL):	0.30	
Aliquot Volume (L, g, F):	0.802	
Target Conc. (pCi/L, g, F):	9.439	
Uncertainty (Calculated):	0.680	
Result (pCi/L, g, F):	8.775	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.867	
Numerical Performance Indicator:	-1.18	
Percent Recovery:	92.97%	
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		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30209606003	
Duplicate Sample I.D.	30209606003DUP	
Sample Result (pCi/L, g, F):	0.702	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.483	
Sample Duplicate Result (pCi/L, g, F):	1.313	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.568	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-1.606	30209606003
Duplicate RPD:	60.66%	30209606003DUP
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.

2/27/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	2/14/2017
Worklist:	33940
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1223624
MB concentration:	0.091
M/B Counting Uncertainty:	0.153
MB MDC:	0.342
MB Numerical Performance Indicator:	1.17
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS33940	LCSD33940
Count Date:	2/15/2017	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.669	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.506	
Target Conc. (pCi/L, g, F):	8.835	
Uncertainty (Calculated):	0.416	
Result (pCi/L, g, F):	7.810	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.845	
Numerical Performance Indicator:	-2.13	
Percent Recovery:	88.39%	
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.:	30209606003	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30209606003DUP	
Sample Result (pCi/L, g, F):	0.326	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.256	
Sample Duplicate Result (pCi/L, g, F):	0.234	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.182	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.569	30209606003
Duplicate RPD:	32.60%	30209606003DUP
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.

Opm 2/27/17

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:	2/14/2017
Worklist:	33941
Matrix:	DW

Method Blank Assessment

MB Sample ID	1223625
MB concentration:	0.009
M/B Counting Uncertainty:	0.095
MB MDC:	0.270
MB Numerical Performance Indicator:	0.19
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS33941	LCSD33941
Count Date:	2/15/2017	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.669	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.501	
Target Conc. (pCi/L, g, F):	8.916	
Uncertainty (Calculated):	0.419	
Result (pCi/L, g, F):	8.538	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.886	
Numerical Performance Indicator:	-0.76	
Percent Recovery:	95.76%	
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.:	30209269003	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30209269003DUP	
Sample Result (pCi/L, g, F):	0.057	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.117	
Sample Duplicate Result (pCi/L, g, F):	0.129	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.142	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.761	30209269003
Duplicate RPD:	77.11%	30209269003DUP
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, 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: AAC0796
April 03, 2017
Project: CCR Event
Project #:Plant Hammond

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 03, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWA-1	AAC0796-01	Ground Water	03/21/17 10:28	03/22/17 12:30
HGWA-2	AAC0796-02	Ground Water	03/21/17 11:00	03/22/17 12:30
HGWA-3	AAC0796-03	Ground Water	03/21/17 12:17	03/22/17 12:30
HGWA-4	AAC0796-04	Ground Water	03/21/17 12:10	03/22/17 12:30
HGWA-5	AAC0796-05	Ground Water	03/21/17 14:05	03/22/17 12:30
HGWA-6	AAC0796-06	Ground Water	03/21/17 15:05	03/22/17 12:30
HGWC-7	AAC0796-07	Ground Water	03/21/17 14:05	03/22/17 12:30
HGWC-8	AAC0796-08	Ground Water	03/21/17 15:20	03/22/17 12:30

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0796
Client ID: HGWA-1
Date/Time Sampled: 3/21/2017 10:28:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0796-01
Date/Time Received: 3/22/2017 12:30:00PM

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	03/24/17 15:50	03/24/17 15:50	7030771	JPT
Inorganic Anions											
Chloride	4.6	0.25	0.01	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 17:00	7030810	RLC
Fluoride	0.13	0.30	0.004	mg/L	EPA 300.0	J	1	03/27/17 10:16	03/27/17 17:00	7030810	RLC
Sulfate	63	5.0	0.46	mg/L	EPA 300.0		5	03/27/17 10:16	03/28/17 12:39	7030810	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:49	7030669	CSW
Arsenic	0.0005	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/25/17 00:49	7030669	CSW
Barium	0.0275	0.0100	0.0003	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:49	7030669	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:49	7030669	CSW
Boron	0.0187	0.0400	0.0060	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/25/17 00:49	7030669	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:49	7030669	CSW
Calcium	106	25.0	0.522	mg/L	EPA 6020B		50	03/23/17 08:20	03/25/17 00:54	7030669	CSW
Chromium	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/23/17 08:20	03/25/17 00:49	7030669	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:49	7030669	CSW
Lead	ND	0.0050	0.00005	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:49	7030669	CSW
Molybdenum	ND	0.0100	0.0002	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:49	7030669	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:49	7030669	CSW
Thallium	ND	0.0010	0.00003	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:49	7030669	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/23/17 08:20	03/25/17 00:49	7030669	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 13:57	7030754	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0796
Client ID: HGWA-2
Date/Time Sampled: 3/21/2017 11:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0796-02
Date/Time Received: 3/22/2017 12:30:00PM

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	03/24/17 15:50	03/24/17 15:50	7030771	JPT
Inorganic Anions											
Chloride	5.9	0.25	0.01	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 17:21	7030810	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 17:21	7030810	RLC
Sulfate	46	1.0	0.09	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 17:21	7030810	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:03	7030738	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:03	7030738	CSW
Barium	0.0950	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:03	7030738	CSW
Beryllium	0.0001	0.0030	0.00007	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 22:03	7030738	CSW
Boron	0.0349	0.0400	0.0060	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 22:03	7030738	CSW
Cadmium	0.00007	0.0010	0.000060	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 22:03	7030738	CSW
Calcium	18.6	5.00	0.522	mg/L	EPA 6020B		50	03/24/17 06:30	03/27/17 22:09	7030738	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:03	7030738	CSW
Cobalt	0.0251	0.0100	0.0005	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:03	7030738	CSW
Lead	0.00006	0.0050	0.00005	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 22:03	7030738	CSW
Molybdenum	ND	0.0100	0.0002	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:03	7030738	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:03	7030738	CSW
Thallium	0.00003	0.0010	0.00003	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 22:03	7030738	CSW
Lithium	0.0012	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 22:03	7030738	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 14:00	7030754	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0796
Client ID: HGWA-3
Date/Time Sampled: 3/21/2017 12:17:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0796-03
Date/Time Received: 3/22/2017 12:30:00PM

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	03/24/17 15:50	03/24/17 15:50	7030771	JPT
Inorganic Anions											
Chloride	7.5	0.25	0.01	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 17:42	7030810	RLC
Fluoride	0.005	0.30	0.004	mg/L	EPA 300.0	J	1	03/27/17 10:16	03/27/17 17:42	7030810	RLC
Sulfate	45	1.0	0.09	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 17:42	7030810	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:26	7030738	CSW
Arsenic	0.0007	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 22:26	7030738	CSW
Barium	0.120	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:26	7030738	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:26	7030738	CSW
Boron	0.0079	0.0400	0.0060	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 22:26	7030738	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:26	7030738	CSW
Calcium	75.7	25.0	0.522	mg/L	EPA 6020B		50	03/24/17 06:30	03/27/17 22:32	7030738	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:26	7030738	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:26	7030738	CSW
Lead	0.0001	0.0050	0.00005	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 22:26	7030738	CSW
Molybdenum	ND	0.0100	0.0002	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:26	7030738	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:26	7030738	CSW
Thallium	ND	0.0010	0.00003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:26	7030738	CSW
Lithium	0.0034	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 22:26	7030738	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 14:02	7030754	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0796
Client ID: HGWA-4
Date/Time Sampled: 3/21/2017 12:10:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0796-04
Date/Time Received: 3/22/2017 12:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	132	25	10	mg/L	SM 2540 C		1	03/24/17 15:50	03/24/17 15:50	7030771	JPT
Inorganic Anions											
Chloride	4.3	0.25	0.01	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 18:02	7030810	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 18:02	7030810	RLC
Sulfate	1.7	1.0	0.09	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 18:02	7030810	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:37	7030738	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:37	7030738	CSW
Barium	0.0175	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:37	7030738	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:37	7030738	CSW
Boron	0.0101	0.0400	0.0060	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 22:37	7030738	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:37	7030738	CSW
Calcium	34.0	25.0	0.522	mg/L	EPA 6020B		50	03/24/17 06:30	03/27/17 22:43	7030738	CSW
Chromium	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 22:37	7030738	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:37	7030738	CSW
Lead	ND	0.0050	0.00005	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:37	7030738	CSW
Molybdenum	ND	0.0100	0.0002	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:37	7030738	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:37	7030738	CSW
Thallium	ND	0.0010	0.00003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:37	7030738	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:37	7030738	CSW
Mercury	0.00016	0.00050	0.000041	mg/L	EPA 7470A	J	1	03/24/17 09:00	03/24/17 14:04	7030754	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0796
Client ID: HGWA-5
Date/Time Sampled: 3/21/2017 2:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0796-05
Date/Time Received: 3/22/2017 12:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	144	25	10	mg/L	SM 2540 C		1	03/24/17 15:50	03/24/17 15:50	7030771	JPT
Inorganic Anions											
Chloride	2.0	0.25	0.01	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 18:23	7030810	RLC
Fluoride	0.04	0.30	0.004	mg/L	EPA 300.0	J	1	03/27/17 10:16	03/27/17 18:23	7030810	RLC
Sulfate	23	1.0	0.09	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 18:23	7030810	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:49	7030738	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:49	7030738	CSW
Barium	0.0453	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:49	7030738	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:49	7030738	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:49	7030738	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:49	7030738	CSW
Calcium	30.8	25.0	0.522	mg/L	EPA 6020B		50	03/24/17 06:30	03/27/17 22:55	7030738	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:49	7030738	CSW
Cobalt	0.0008	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 22:49	7030738	CSW
Lead	ND	0.0050	0.00005	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:49	7030738	CSW
Molybdenum	ND	0.0100	0.0002	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:49	7030738	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:49	7030738	CSW
Thallium	ND	0.0010	0.00003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 22:49	7030738	CSW
Lithium	0.0037	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 22:49	7030738	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 14:07	7030754	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0796
Client ID: HGWA-6
Date/Time Sampled: 3/21/2017 3:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0796-06
Date/Time Received: 3/22/2017 12:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	222	25	10	mg/L	SM 2540 C		1	03/24/17 15:50	03/24/17 15:50	7030771	JPT
Inorganic Anions											
Chloride	1.3	0.25	0.01	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 20:06	7030810	RLC
Fluoride	0.08	0.30	0.004	mg/L	EPA 300.0	J	1	03/27/17 10:16	03/27/17 20:06	7030810	RLC
Sulfate	37	1.0	0.09	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 20:06	7030810	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:00	7030738	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:00	7030738	CSW
Barium	0.186	0.0500	0.0013	mg/L	EPA 6020B		5	03/24/17 06:30	03/31/17 13:53	7030738	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:00	7030738	CSW
Boron	0.0166	0.0400	0.0060	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 23:00	7030738	CSW
Cadmium	ND	0.0010	0.000060	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:00	7030738	CSW
Calcium	51.3	25.0	0.522	mg/L	EPA 6020B		50	03/24/17 06:30	03/27/17 23:06	7030738	CSW
Chromium	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 23:00	7030738	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:00	7030738	CSW
Lead	ND	0.0050	0.00005	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:00	7030738	CSW
Molybdenum	0.0002	0.0100	0.0002	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 23:00	7030738	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:00	7030738	CSW
Thallium	ND	0.0010	0.00003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:00	7030738	CSW
Lithium	0.0115	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 23:00	7030738	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 14:09	7030754	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0796
Client ID: HGWC-7
Date/Time Sampled: 3/21/2017 2:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0796-07
Date/Time Received: 3/22/2017 12:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	415	25	10	mg/L	SM 2540 C		1	03/24/17 15:50	03/24/17 15:50	7030771	JPT
Inorganic Anions											
Chloride	46	2.5	0.13	mg/L	EPA 300.0		10	03/27/17 10:16	03/28/17 13:21	7030810	RLC
Fluoride	0.13	0.30	0.004	mg/L	EPA 300.0	J	1	03/27/17 10:16	03/27/17 20:27	7030810	RLC
Sulfate	110	10	0.92	mg/L	EPA 300.0		10	03/27/17 10:16	03/28/17 13:21	7030810	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:12	7030738	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:12	7030738	CSW
Barium	0.0722	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:12	7030738	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:12	7030738	CSW
Boron	0.857	0.0400	0.0060	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:12	7030738	CSW
Cadmium	0.0002	0.0010	0.000060	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 23:12	7030738	CSW
Calcium	109	25.0	0.522	mg/L	EPA 6020B		50	03/24/17 06:30	03/27/17 23:18	7030738	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:12	7030738	CSW
Cobalt	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 23:12	7030738	CSW
Lead	0.00009	0.0050	0.00005	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 23:12	7030738	CSW
Molybdenum	0.0346	0.0100	0.0002	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:12	7030738	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:12	7030738	CSW
Thallium	ND	0.0010	0.00003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:12	7030738	CSW
Lithium	0.0026	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 23:12	7030738	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 14:11	7030754	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0796
Client ID: HGWC-8
Date/Time Sampled: 3/21/2017 3:20:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0796-08
Date/Time Received: 3/22/2017 12:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	818	25	10	mg/L	SM 2540 C		1	03/24/17 15:50	03/24/17 15:50	7030771	JPT
Inorganic Anions											
Chloride	110	2.5	0.13	mg/L	EPA 300.0		10	03/27/17 10:16	03/28/17 13:00	7030810	RLC
Fluoride	0.46	0.30	0.004	mg/L	EPA 300.0		1	03/27/17 10:16	03/27/17 20:47	7030810	RLC
Sulfate	240	10	0.92	mg/L	EPA 300.0		10	03/27/17 10:16	03/28/17 13:00	7030810	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:35	7030738	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:35	7030738	CSW
Barium	0.0791	0.0100	0.0003	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:35	7030738	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:35	7030738	CSW
Boron	2.08	0.0400	0.0060	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:35	7030738	CSW
Cadmium	0.0002	0.0010	0.000060	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 23:35	7030738	CSW
Calcium	148	25.0	0.522	mg/L	EPA 6020B		50	03/24/17 06:30	03/27/17 23:40	7030738	CSW
Chromium	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 23:35	7030738	CSW
Cobalt	0.0023	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 23:35	7030738	CSW
Lead	ND	0.0050	0.00005	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:35	7030738	CSW
Molybdenum	0.547	0.0100	0.0002	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:35	7030738	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/24/17 06:30	03/27/17 23:35	7030738	CSW
Thallium	0.00009	0.0010	0.00003	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 23:35	7030738	CSW
Lithium	0.0029	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/24/17 06:30	03/27/17 23:35	7030738	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 14:14	7030754	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0796

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030771 - SM 2540 C											
Blank (7030771-BLK1)						Prepared & Analyzed: 03/24/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7030771-BS1)						Prepared & Analyzed: 03/24/17					
Total Dissolved Solids	399	25	10	mg/L	400.00		100	84-108			
Duplicate (7030771-DUP1)		**Source: AAC0780-02**				Prepared & Analyzed: 03/24/17					
Total Dissolved Solids	254	25	10	mg/L		260			2	10	
Duplicate (7030771-DUP2)		**Source: AAC0796-03**				Prepared & Analyzed: 03/24/17					
Total Dissolved Solids	260	25	10	mg/L		288			10	10	

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0796

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030810 - EPA 300.0											
Blank (7030810-BLK1)						Prepared & Analyzed: 03/27/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7030810-BS1)						Prepared & Analyzed: 03/27/17					
Chloride	9.29	0.25	0.01	mg/L	10.010		93	90-110			
Fluoride	9.77	0.30	0.004	mg/L	10.020		98	90-110			
Sulfate	9.50	1.0	0.09	mg/L	10.020		95	90-110			
Matrix Spike (7030810-MS1)		**Source: AAC0796-08**				Prepared & Analyzed: 03/27/17					
Chloride	99.2	0.25	0.01	mg/L	10.010	99.7	NR	90-110			QM-02
Fluoride	11.0	0.30	0.004	mg/L	10.020	0.46	105	90-110			
Sulfate	186	1.0	0.09	mg/L	10.020	192	NR	90-110			QM-02
Matrix Spike (7030810-MS2)		**Source: AAC0832-03**				Prepared: 03/27/17 Analyzed: 03/28/17					
Chloride	17.2	0.25	0.01	mg/L	10.010	7.20	100	90-110			
Fluoride	10.7	0.30	0.004	mg/L	10.020	0.09	106	90-110			
Sulfate	66.7	1.0	0.09	mg/L	10.020	63.1	36	90-110			QM-02
Matrix Spike Dup (7030810-MSD1)		**Source: AAC0796-08**				Prepared & Analyzed: 03/27/17					
Chloride	99.4	0.25	0.01	mg/L	10.010	99.7	NR	90-110	0.2	15	QM-02
Fluoride	11.0	0.30	0.004	mg/L	10.020	0.46	105	90-110	0.4	15	
Sulfate	186	1.0	0.09	mg/L	10.020	192	NR	90-110	0.2	15	QM-02

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0796

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030669 - EPA 3005A											
Blank (7030669-BLK1)						Prepared & Analyzed: 03/23/17					
Antimony	ND	0.0030	0.0003	mg/L							
Arsenic	ND	0.0050	0.0004	mg/L							
Barium	ND	0.0100	0.0003	mg/L							
Beryllium	ND	0.0030	0.00007	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.000060	mg/L							
Calcium	ND	0.500	0.0104	mg/L							
Chromium	ND	0.0100	0.0003	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0002	mg/L							
Lead	ND	0.0050	0.00005	mg/L							
Molybdenum	ND	0.0100	0.0002	mg/L							
Nickel	ND	0.0100	0.0003	mg/L							
Selenium	ND	0.0100	0.0014	mg/L							
Silver	ND	0.0100	0.0003	mg/L							
Thallium	0.00004	0.0010	0.00003	mg/L							J
Vanadium	ND	0.0100	0.0014	mg/L							
Zinc	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0011	mg/L							
LCS (7030669-BS1)						Prepared & Analyzed: 03/23/17					
Antimony	0.114	0.0030	0.0003	mg/L	0.10000		114	80-120			
Arsenic	0.104	0.0050	0.0004	mg/L	0.10000		104	80-120			
Barium	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Beryllium	0.107	0.0030	0.00007	mg/L	0.10000		107	80-120			
Boron	1.15	0.0400	0.0060	mg/L	1.0000		115	80-120			
Cadmium	0.0998	0.0010	0.000060	mg/L	0.10000		100	80-120			
Calcium	1.03	0.500	0.0104	mg/L	1.0000		103	80-120			
Chromium	0.110	0.0100	0.0003	mg/L	0.10000		110	80-120			
Cobalt	0.106	0.0100	0.0005	mg/L	0.10000		106	80-120			
Copper	0.110	0.0250	0.0002	mg/L	0.10000		110	80-120			
Lead	0.102	0.0050	0.00005	mg/L	0.10000		102	80-120			
Molybdenum	0.106	0.0100	0.0002	mg/L	0.10000		106	80-120			
Nickel	0.112	0.0100	0.0003	mg/L	0.10000		112	80-120			
Selenium	0.111	0.0100	0.0014	mg/L	0.10000		111	80-120			
Silver	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Thallium	0.104	0.0010	0.00003	mg/L	0.10000		104	80-120			
Vanadium	0.113	0.0100	0.0014	mg/L	0.10000		113	80-120			
Zinc	0.108	0.0100	0.0013	mg/L	0.10000		108	80-120			
Lithium	0.112	0.0500	0.0011	mg/L	0.10000		112	80-120			

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0796

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030669 - EPA 3005A											
Matrix Spike (7030669-MS1)		**Source: AAC0741-02**			Prepared: 03/23/17 Analyzed: 03/24/17						
Antimony	0.108	0.0030	0.0003	mg/L	0.10000	ND	108	75-125			
Arsenic	0.109	0.0050	0.0004	mg/L	0.10000	0.0012	108	75-125			
Barium	0.131	0.0100	0.0003	mg/L	0.10000	0.0330	98	75-125			
Beryllium	0.104	0.0030	0.00007	mg/L	0.10000	ND	104	75-125			
Boron	1.02	0.0400	0.0060	mg/L	1.0000	ND	102	75-125			
Cadmium	0.103	0.0010	0.000060	mg/L	0.10000	ND	103	75-125			
Calcium	32.8	25.0	0.522	mg/L	1.0000	32.0	77	75-125			
Chromium	0.115	0.0100	0.0003	mg/L	0.10000	0.0004	114	75-125			
Cobalt	0.111	0.0100	0.0005	mg/L	0.10000	ND	111	75-125			
Copper	0.109	0.0250	0.0002	mg/L	0.10000	0.0012	108	75-125			
Lead	0.0989	0.0050	0.00005	mg/L	0.10000	0.00007	99	75-125			
Molybdenum	0.104	0.0100	0.0002	mg/L	0.10000	0.0019	102	75-125			
Nickel	0.111	0.0100	0.0003	mg/L	0.10000	ND	111	75-125			
Selenium	0.111	0.0100	0.0014	mg/L	0.10000	ND	111	75-125			
Silver	0.102	0.0100	0.0003	mg/L	0.10000	ND	102	75-125			
Thallium	0.102	0.0010	0.00003	mg/L	0.10000	0.0001	101	75-125			
Vanadium	0.115	0.0100	0.0014	mg/L	0.10000	ND	115	75-125			
Zinc	0.116	0.0100	0.0013	mg/L	0.10000	0.0075	108	75-125			
Lithium	0.108	0.0500	0.0011	mg/L	0.10000	ND	108	75-125			
Matrix Spike Dup (7030669-MSD1)		**Source: AAC0741-02**			Prepared: 03/23/17 Analyzed: 03/24/17						
Antimony	0.111	0.0030	0.0003	mg/L	0.10000	ND	111	75-125	2	20	
Arsenic	0.115	0.0050	0.0004	mg/L	0.10000	0.0012	114	75-125	5	20	
Barium	0.134	0.0100	0.0003	mg/L	0.10000	0.0330	101	75-125	2	20	
Beryllium	0.104	0.0030	0.00007	mg/L	0.10000	ND	104	75-125	0.7	20	
Boron	1.07	0.0400	0.0060	mg/L	1.0000	ND	107	75-125	5	20	
Cadmium	0.109	0.0010	0.000060	mg/L	0.10000	ND	109	75-125	5	20	
Calcium	32.9	25.0	0.522	mg/L	1.0000	32.0	83	75-125	0.2	20	
Chromium	0.117	0.0100	0.0003	mg/L	0.10000	0.0004	116	75-125	2	20	
Cobalt	0.117	0.0100	0.0005	mg/L	0.10000	ND	117	75-125	5	20	
Copper	0.112	0.0250	0.0002	mg/L	0.10000	0.0012	111	75-125	3	20	
Lead	0.0999	0.0050	0.00005	mg/L	0.10000	0.00007	100	75-125	1	20	
Molybdenum	0.108	0.0100	0.0002	mg/L	0.10000	0.0019	106	75-125	4	20	
Nickel	0.116	0.0100	0.0003	mg/L	0.10000	ND	116	75-125	5	20	
Selenium	0.117	0.0100	0.0014	mg/L	0.10000	ND	117	75-125	5	20	
Silver	0.108	0.0100	0.0003	mg/L	0.10000	ND	108	75-125	6	20	
Thallium	0.104	0.0010	0.00003	mg/L	0.10000	0.0001	103	75-125	2	20	
Vanadium	0.115	0.0100	0.0014	mg/L	0.10000	ND	115	75-125	0.3	20	
Zinc	0.115	0.0100	0.0013	mg/L	0.10000	0.0075	108	75-125	0.3	20	
Lithium	0.106	0.0500	0.0011	mg/L	0.10000	ND	106	75-125	2	20	

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0796

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030669 - EPA 3005A											
Post Spike (7030669-PS1)			**Source: AAC0741-02**			Prepared: 03/23/17 Analyzed: 03/24/17					
Antimony	104			ug/L	100.00	0.151	104	80-120			
Arsenic	110			ug/L	100.00	1.18	109	80-120			
Barium	133			ug/L	100.00	33.0	100	80-120			
Beryllium	106			ug/L	100.00	0.0034	106	80-120			
Boron	1080			ug/L	1000.0	5.52	108	80-120			
Cadmium	104			ug/L	100.00	0.0167	104	80-120			
Calcium	32900			ug/L	1000.0	32000	84	80-120			
Chromium	113			ug/L	100.00	0.445	113	80-120			
Cobalt	111			ug/L	100.00	0.175	111	80-120			
Copper	110			ug/L	100.00	1.23	109	80-120			
Lead	97.7			ug/L	100.00	0.0685	98	80-120			
Molybdenum	105			ug/L	100.00	1.90	103	80-120			
Nickel	112			ug/L	100.00	0.246	112	80-120			
Selenium	116			ug/L	100.00	0.0886	115	80-120			
Silver	105			ug/L	100.00	0.0117	105	80-120			
Thallium	99.5			ug/L	100.00	0.129	99	80-120			
Vanadium	116			ug/L	100.00	0.724	115	80-120			
Zinc	116			ug/L	100.00	7.48	108	80-120			
Lithium	109			ug/L	100.00	0.514	109	80-120			
Batch 7030738 - EPA 3005A											
Blank (7030738-BLK1)						Prepared: 03/24/17 Analyzed: 03/27/17					
Antimony	ND	0.0030	0.0003	mg/L							
Arsenic	ND	0.0050	0.0004	mg/L							
Barium	ND	0.0100	0.0003	mg/L							
Beryllium	ND	0.0030	0.00007	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.000060	mg/L							
Calcium	ND	0.500	0.0104	mg/L							
Chromium	ND	0.0100	0.0003	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0002	mg/L							
Lead	ND	0.0050	0.00005	mg/L							
Molybdenum	ND	0.0100	0.0002	mg/L							
Nickel	ND	0.0100	0.0003	mg/L							
Selenium	ND	0.0100	0.0014	mg/L							
Silver	ND	0.0100	0.0003	mg/L							
Thallium	ND	0.0010	0.00003	mg/L							
Vanadium	ND	0.0100	0.0014	mg/L							

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0796

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030738 - EPA 3005A											
Blank (7030738-BLK1)						Prepared: 03/24/17 Analyzed: 03/27/17					
Zinc	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0011	mg/L							
LCS (7030738-BS1)						Prepared: 03/24/17 Analyzed: 03/27/17					
Antimony	0.104	0.0030	0.0003	mg/L	0.10000		104	80-120			
Arsenic	0.0980	0.0050	0.0004	mg/L	0.10000		98	80-120			
Barium	0.0966	0.0100	0.0003	mg/L	0.10000		97	80-120			
Beryllium	0.101	0.0030	0.00007	mg/L	0.10000		101	80-120			
Boron	0.985	0.0400	0.0060	mg/L	1.0000		98	80-120			
Cadmium	0.102	0.0010	0.000060	mg/L	0.10000		102	80-120			
Calcium	0.996	0.500	0.0104	mg/L	1.0000		100	80-120			
Chromium	0.107	0.0100	0.0003	mg/L	0.10000		107	80-120			
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Copper	0.105	0.0250	0.0002	mg/L	0.10000		105	80-120			
Lead	0.0974	0.0050	0.00005	mg/L	0.10000		97	80-120			
Molybdenum	0.107	0.0100	0.0002	mg/L	0.10000		107	80-120			
Nickel	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Selenium	0.104	0.0100	0.0014	mg/L	0.10000		104	80-120			
Silver	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Thallium	0.0985	0.0010	0.00003	mg/L	0.10000		98	80-120			
Vanadium	0.108	0.0100	0.0014	mg/L	0.10000		108	80-120			
Zinc	0.101	0.0100	0.0013	mg/L	0.10000		101	80-120			
Lithium	0.110	0.0500	0.0011	mg/L	0.10000		110	80-120			
Matrix Spike (7030738-MS1)			**Source: AAC0796-02**			Prepared: 03/24/17 Analyzed: 03/27/17					
Antimony	0.103	0.0030	0.0003	mg/L	0.10000	ND	103	75-125			
Arsenic	0.101	0.0050	0.0004	mg/L	0.10000	ND	101	75-125			
Barium	0.243	0.0100	0.0003	mg/L	0.10000	0.0950	148	75-125			QM-02
Beryllium	0.101	0.0030	0.00007	mg/L	0.10000	0.0001	101	75-125			
Boron	1.00	0.0400	0.0060	mg/L	1.0000	0.0349	97	75-125			
Cadmium	0.104	0.0010	0.000060	mg/L	0.10000	0.00007	104	75-125			
Calcium	20.1	25.0	0.522	mg/L	1.0000	18.6	157	75-125			QM-02, J
Chromium	0.104	0.0100	0.0003	mg/L	0.10000	ND	104	75-125			
Cobalt	0.127	0.0100	0.0005	mg/L	0.10000	0.0251	102	75-125			
Copper	0.0995	0.0250	0.0002	mg/L	0.10000	0.0004	99	75-125			
Lead	0.0937	0.0050	0.00005	mg/L	0.10000	0.00006	94	75-125			
Molybdenum	0.108	0.0100	0.0002	mg/L	0.10000	ND	108	75-125			
Nickel	0.104	0.0100	0.0003	mg/L	0.10000	0.0035	100	75-125			
Selenium	0.102	0.0100	0.0014	mg/L	0.10000	ND	102	75-125			
Silver	0.106	0.0100	0.0003	mg/L	0.10000	ND	106	75-125			

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0796

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030738 - EPA 3005A											
Matrix Spike (7030738-MS1)		**Source: AAC0796-02**			Prepared: 03/24/17 Analyzed: 03/27/17						
Thallium	0.0969	0.0010	0.00003	mg/L	0.10000	0.00003	97	75-125			
Vanadium	0.108	0.0100	0.0014	mg/L	0.10000	ND	108	75-125			
Zinc	0.103	0.0100	0.0013	mg/L	0.10000	0.0067	96	75-125			
Lithium	0.109	0.0500	0.0011	mg/L	0.10000	0.0012	108	75-125			
Matrix Spike Dup (7030738-MSD1)		**Source: AAC0796-02**			Prepared: 03/24/17 Analyzed: 03/27/17						
Antimony	0.103	0.0030	0.0003	mg/L	0.10000	ND	103	75-125	0.6	20	
Arsenic	0.101	0.0050	0.0004	mg/L	0.10000	ND	101	75-125	0.1	20	
Barium	0.238	0.0100	0.0003	mg/L	0.10000	0.0950	143	75-125	2	20	QM-02
Beryllium	0.104	0.0030	0.00007	mg/L	0.10000	0.0001	104	75-125	3	20	
Boron	0.991	0.0400	0.0060	mg/L	1.0000	0.0349	96	75-125	1	20	
Cadmium	0.104	0.0010	0.000060	mg/L	0.10000	0.00007	104	75-125	0.4	20	
Calcium	19.5	25.0	0.522	mg/L	1.0000	18.6	93	75-125	3	20	J
Chromium	0.105	0.0100	0.0003	mg/L	0.10000	ND	105	75-125	1	20	
Cobalt	0.128	0.0100	0.0005	mg/L	0.10000	0.0251	103	75-125	1	20	
Copper	0.103	0.0250	0.0002	mg/L	0.10000	0.0004	102	75-125	3	20	
Lead	0.0967	0.0050	0.00005	mg/L	0.10000	0.00006	97	75-125	3	20	
Molybdenum	0.110	0.0100	0.0002	mg/L	0.10000	ND	110	75-125	2	20	
Nickel	0.107	0.0100	0.0003	mg/L	0.10000	0.0035	104	75-125	4	20	
Selenium	0.104	0.0100	0.0014	mg/L	0.10000	ND	104	75-125	1	20	
Silver	0.102	0.0100	0.0003	mg/L	0.10000	ND	102	75-125	3	20	
Thallium	0.100	0.0010	0.00003	mg/L	0.10000	0.00003	100	75-125	3	20	
Vanadium	0.110	0.0100	0.0014	mg/L	0.10000	ND	110	75-125	2	20	
Zinc	0.106	0.0100	0.0013	mg/L	0.10000	0.0067	99	75-125	3	20	
Lithium	0.112	0.0500	0.0011	mg/L	0.10000	0.0012	111	75-125	3	20	
Post Spike (7030738-PS1)		**Source: AAC0796-02**			Prepared: 03/24/17 Analyzed: 03/27/17						
Antimony	105			ug/L	100.00	0.0435	105	80-120			
Arsenic	102			ug/L	100.00	0.288	102	80-120			
Barium	244			ug/L	100.00	95.0	149	80-120			QM-02
Beryllium	98.9			ug/L	100.00	0.102	99	80-120			
Boron	973			ug/L	1000.0	34.9	94	80-120			
Cadmium	109			ug/L	100.00	0.0678	109	80-120			
Calcium	19300			ug/L	1000.0	18600	75	80-120			QM-02
Chromium	110			ug/L	100.00	0.166	109	80-120			
Cobalt	133			ug/L	100.00	25.1	108	80-120			
Copper	103			ug/L	100.00	0.372	103	80-120			
Lead	95.8			ug/L	100.00	0.0583	96	80-120			
Molybdenum	110			ug/L	100.00	0.0712	110	80-120			
Nickel	110			ug/L	100.00	3.52	107	80-120			

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0796

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030738 - EPA 3005A											
Post Spike (7030738-PS1)			**Source: AAC0796-02**			Prepared: 03/24/17 Analyzed: 03/27/17					
Selenium	101			ug/L	100.00	-0.0331	101	80-120			
Silver	103			ug/L	100.00	0.0046	103	80-120			
Thallium	97.8			ug/L	100.00	0.0328	98	80-120			
Vanadium	111			ug/L	100.00	-0.185	111	80-120			
Zinc	107			ug/L	100.00	6.73	100	80-120			
Lithium	108			ug/L	100.00	1.18	107	80-120			
Batch 7030754 - EPA 7470A											
Blank (7030754-BLK1)						Prepared & Analyzed: 03/24/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7030754-BS1)						Prepared & Analyzed: 03/24/17					
Mercury	0.00238	0.00050	0.000041	mg/L	2.5000E-3		95	80-120			
Matrix Spike (7030754-MS1)			**Source: AAC0770-01**			Prepared & Analyzed: 03/24/17					
Mercury	0.00232	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125			
Matrix Spike Dup (7030754-MSD1)			**Source: AAC0770-01**			Prepared & Analyzed: 03/24/17					
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125	3	20	
Post Spike (7030754-PS1)			**Source: AAC0770-01**			Prepared & Analyzed: 03/24/17					
Mercury	1.64			ug/L	1.6667	0.00818	98	80-120			

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

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.

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report Notes

There were 2 containers present instead of 1 as listed on the COC for Radium. MMR

Seal IDs: 20170321-01
20170321-02

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: Lauren Petty

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Part 257 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	
03/21/17	10:28	W		X	HGWA-1	3	1	1	1	1
03/21/17	11:00	W		X	HGWA-2	3	1	1	1	2
03/21/17	12:17	W		X	HGWA-3	3	1	1	1	3
03/21/17	12:10	W		X	HGWA-4	3	1	1	1	4
03/21/17	14:05	W		X	HGWA-5	3	1	1	1	5
03/21/17	15:05	W		X	HGWA-6	3	1	1	1	6
03/21/17	14:05	W		X	HGWC-7	3	1	1	1	7
03/21/17	15:20	W		X	HGWC-8	3	1	1	1	8

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: W.Virgo WV, M.Burch MB, T.Thomas TT

DATE/TIME: 3/21/17 1520

RELINQUISHED BY: Will Virgo (EPH)

DATE/TIME: 3/21/17 2030

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY LAB: Laaman

DATE/TIME: 03/22/17 1230

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 #: AAC0796
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: 3/23/2017 9:08:24AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 03/22/17 12:30

Work Order: AAC0796
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 8 **#Containers:** 32

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	NO
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:

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 14, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAC0796 Plant Hammond
Pace Project No.: 30213982

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on March 23, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures

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

CERTIFICATIONS

Project: AAC0796 Plant Hammond
Pace Project No.: 30213982

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: AAC0796 Plant Hammond
Pace Project No.: 30213982

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30213982001	**HGWA-1**	Water	03/21/17 10:28	03/23/17 09:40
30213982002	**HGWA-2**	Water	03/21/17 11:00	03/23/17 09:40
30213982003	**HGWA-3**	Water	03/21/17 12:17	03/23/17 09:40
30213982004	**HGWA-4**	Water	03/21/17 12:10	03/23/17 09:40
30213982005	**HGWA-5**	Water	03/21/17 14:05	03/23/17 09:40
30213982006	**HGWA-6**	Water	03/21/17 15:05	03/23/17 09:40
30213982007	**HGWC-7**	Water	03/21/17 14:05	03/23/17 09:40
30213982008	**HGWC-8**	Water	03/21/17 16:20	03/23/17 09:40

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

SAMPLE ANALYTE COUNT

Project: AAC0796 Plant Hammond
Pace Project No.: 30213982

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30213982001	**HGWA-1**	EPA 9315	LAL	1
		EPA 9320	JLW	1
30213982002	**HGWA-2**	EPA 9315	LAL	1
		EPA 9320	JLW	1
30213982003	**HGWA-3**	EPA 9315	LAL	1
		EPA 9320	JLW	1
30213982004	**HGWA-4**	EPA 9315	LAL	1
		EPA 9320	JLW	1
30213982005	**HGWA-5**	EPA 9315	LAL	1
		EPA 9320	JLW	1
30213982006	**HGWA-6**	EPA 9315	LAL	1
		EPA 9320	JLW	1
30213982007	**HGWC-7**	EPA 9315	LAL	1
		EPA 9320	JLW	1
30213982008	**HGWC-8**	EPA 9315	LAL	1
		EPA 9320	JLW	1

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAC0796 Plant Hammond
Pace Project No.: 30213982

Sample: HGWA-1 **Lab ID: 30213982001** Collected: 03/21/17 10:28 Received: 03/23/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0645 ± 0.111 (0.248) C:76% T:NA**	pCi/L	04/03/17 09:51	13982-63-3	
Radium-228	EPA 9320	**0.751 ± 0.613 (1.25) C:74% T:84%**	pCi/L	04/06/17 13:30	15262-20-1	
Total Radium	Total Radium Calculation	**0.816 ± 0.724 (1.50)**	pCi/L	04/14/17 13:08	7440-14-4	

Sample: HGWA-2 **Lab ID: 30213982002** Collected: 03/21/17 11:00 Received: 03/23/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.174 ± 0.132 (0.215) C:88% T:NA**	pCi/L	04/03/17 12:58	13982-63-3	
Radium-228	EPA 9320	**0.393 ± 0.390 (0.810) C:80% T:98%**	pCi/L	04/06/17 13:30	15262-20-1	
Total Radium	Total Radium Calculation	**0.567 ± 0.522 (1.03)**	pCi/L	04/14/17 13:08	7440-14-4	

Sample: HGWA-3 **Lab ID: 30213982003** Collected: 03/21/17 12:17 Received: 03/23/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0204 ± 0.0887 (0.234) C:76% T:NA**	pCi/L	04/03/17 13:05	13982-63-3	
Radium-228	EPA 9320	**0.338 ± 0.477 (1.03) C:76% T:88%**	pCi/L	04/06/17 13:30	15262-20-1	
Total Radium	Total Radium Calculation	**0.358 ± 0.566 (1.26)**	pCi/L	04/14/17 13:08	7440-14-4	

Sample: HGWA-4 **Lab ID: 30213982004** Collected: 03/21/17 12:10 Received: 03/23/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0347 ± 0.0512 (0.204) C:88% T:NA**	pCi/L	04/03/17 13:05	13982-63-3	
Radium-228	EPA 9320	**0.0740 ± 0.416 (0.945) C:77% T:89%**	pCi/L	04/06/17 13:30	15262-20-1	
Total Radium	Total Radium Calculation	**0.0740 ± 0.467 (1.15)**	pCi/L	04/14/17 13:08	7440-14-4	

Sample: HGWA-5 **Lab ID: 30213982005** Collected: 03/21/17 14:05 Received: 03/23/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0599 ± 0.0977 (0.215) C:87% T:NA**	pCi/L	04/03/17 13:05	13982-63-3	
Radium-228	EPA 9320	**-0.220 ± 0.335 (0.828) C:79% T:83%**	pCi/L	04/06/17 12:29	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: AAC0796 Plant Hammond
Pace Project No.: 30213982

Sample: HGWA-5 **Lab ID: 30213982005** Collected: 03/21/17 14:05 Received: 03/23/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.0599 ± 0.433 (1.04)**	pCi/L	04/14/17 13:08	7440-14-4	

Sample: HGWA-6 **Lab ID: 30213982006** Collected: 03/21/17 15:05 Received: 03/23/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.136 ± 0.117 (0.199) C:88% T:NA**	pCi/L	04/03/17 13:05	13982-63-3	
Radium-228	EPA 9320	**0.00297 ± 0.288 (0.669) C:76% T:101%**	pCi/L	04/06/17 12:29	15262-20-1	
Total Radium	Total Radium Calculation	**0.139 ± 0.405 (0.868)**	pCi/L	04/14/17 13:08	7440-14-4	

Sample: HGWC-7 **Lab ID: 30213982007** Collected: 03/21/17 14:05 Received: 03/23/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.114 ± 0.114 (0.206) C:85% T:NA**	pCi/L	04/03/17 13:05	13982-63-3	
Radium-228	EPA 9320	**0.554 ± 0.355 (0.673) C:81% T:88%**	pCi/L	04/06/17 12:27	15262-20-1	
Total Radium	Total Radium Calculation	**0.668 ± 0.469 (0.879)**	pCi/L	04/14/17 13:08	7440-14-4	

Sample: HGWC-8 **Lab ID: 30213982008** Collected: 03/21/17 16:20 Received: 03/23/17 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.335 ± 0.173 (0.221) C:86% T:NA**	pCi/L	04/03/17 13:05	13982-63-3	
Radium-228	EPA 9320	**0.516 ± 0.360 (0.696) C:79% T:88%**	pCi/L	04/06/17 12:26	15262-20-1	
Total Radium	Total Radium Calculation	**0.851 ± 0.533 (0.917)**	pCi/L	04/14/17 13:08	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: AAC0796 Plant Hammond
Pace Project No.: 30213982

QC Batch: 253453 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30213982001, 30213982002, 30213982003, 30213982004, 30213982005, 30213982006, 30213982007, 30213982008

METHOD BLANK: 1247540 Matrix: Water
Associated Lab Samples: 30213982001, 30213982002, 30213982003, 30213982004, 30213982005, 30213982006, 30213982007, 30213982008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0167 ± 0.0727 (0.192) C:92% T:NA	pCi/L	04/03/17 21:59	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC0796 Plant Hammond
Pace Project No.: 30213982

QC Batch: 253473 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30213982001, 30213982002, 30213982003, 30213982004, 30213982005, 30213982006, 30213982007, 30213982008

METHOD BLANK: 1247572 Matrix: Water
Associated Lab Samples: 30213982001, 30213982002, 30213982003, 30213982004, 30213982005, 30213982006, 30213982007, 30213982008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0392 ± 0.312 (0.719) C:77% T:82%	pCi/L	04/06/17 12:28	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: AAC0796 Plant Hammond
Pace Project No.: 30213982

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#:30213982

Chain of Custody

30213982

Pace Analytical
www.pacelabs.com

Workorder: AAC0796 Workorder Name: Plant Hammond Owner Received Date: Results Requested By: 4/14/2017

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	HGWA-1	G	3/21/2017 10:28	AAC0796-01	GW	2	X	001
2	HGWA-2	G	3/21/2017 11:00	AAC0796-02	GW	2	X	002
3	HGWA-3	G	3/21/2017 12:17	AAC0796-03	GW	2	X	003
4	HGWA-4	G	3/21/2017 12:10	AAC0796-04	GW	2	X	004
5	HGWA-5	G	3/21/2017 14:05	AAC0796-05	GW	2	X	005
6	HGWA-6	G	3/21/2017 15:05	AAC0796-06	GW	2	X	006
7	HGWC-7	G	3/21/2017 14:05	AAC0796-07	GW	2	X	007
8	HGWC-8	G	3/21/2017 16:20	AAC0796-08	GW	2	X	008
9								
10								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Ashley Thore/Pace	3-23-17/0940	EQuIS deliverable required (EDD 7564).
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.

Seal IDs: 20170321-01
20170321-02

30213982

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: Lauren Petty

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	CONTAINER TYPE	PRESERVATION	# of CONTAINERS	Metals Part 257 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
						P	3		P	P	P	
03/21/17	10:28	W		X	HGWA-1			3	1	1	1	1
03/21/17	11:00	W		X	HGWA-2			3	1	1	1	2
03/21/17	12:17	W		X	HGWA-3			3	1	1	1	3
03/21/17	12:10	W		X	HGWA-4			3	1	1	1	4
03/21/17	14:05	W		X	HGWA-5			3	1	1	1	5
03/21/17	15:05	W		X	HGWA-6			3	1	1	1	6
03/21/17	14:05	W		X	HGWC-7			3	1	1	1	7
03/21/17	15:20	W		X	HGWC-8			3	1	1	1	8

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: MB M.Burch, WV W.Virgo, TT T.Thomas

DATE/TIME: 3/21/17 1520

RELINQUISHED BY: Will Virgo (EPM)

DATE/TIME: 3/21/17 2030

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY LAB: Alexander

DATE/TIME: 03/22/17 1230

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 #: AAC0796
Entered into LIMS:
Tracking #:

2017 03 21Hammond COCs.xlsx

ANL

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace, GA Project # 30213982

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

Tracking #: 6812 5103 1874

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

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

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

Temp should be above freezing to 6°C

Date and Initials of person examining contents: AMR 3-23-17

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC: -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			15. pH<2 Initial when completed AMR 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: AMR Date: 3-23-17

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:	3/31/2017
Worklist:	34821
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1247540
MB concentration:	0.017
M/B Counting Uncertainty:	0.073
MB MDC:	0.192
MB Numerical Performance Indicator:	0.45
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS34821	LCSD34821
Count Date:	4/3/2017	
Spike I.D.:	17-003	
Spike Concentration (pCi/mL):	38.230	
Volume Used (mL):	0.25	
Aliquot Volume (L, g, F):	0.501	
Target Conc. (pCi/L, g, F):	19.060	
Uncertainty (Calculated):	0.897	
Result (pCi/L, g, F):	14.690	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.075	
Numerical Performance Indicator:	-6.12	
Percent Recovery:	77.07%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

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.:	30213978004	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30213978004DUP	
Sample Result (pCi/L, g, F):	0.032	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.082	
Sample Duplicate Result (pCi/L, g, F):	0.106	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.108	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-1.064	30213978004
Duplicate RPD:	106.36%	30213978004DUP
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:

* Numerical Indicator is acceptable.

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

4/14/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	4/4/2017
Worklist:	34835
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1247572
MB concentration:	0.039
M/B Counting Uncertainty:	0.312
MB MDC:	0.719
MB Numerical Performance Indicator:	0.25
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS34835	LCSD34835
Count Date:	4/6/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	24.852	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.800	
Target Conc. (pCi/L, g, F):	6.211	
Uncertainty (Calculated):	0.447	
Result (pCi/L, g, F):	6.553	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.838	
Numerical Performance Indicator:	0.71	
Percent Recovery:	105.52%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

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.:	30213981001	
Duplicate Sample I.D.	30213981001DUP	
Sample Result (pCi/L, g, F):	0.483	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.346	
Sample Duplicate Result (pCi/L, g, F):	0.187	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.277	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	*1.308	30213981001
Duplicate RPD:	88.28%	30213981001DUP
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: * Numerical Indicator is acceptable.

4/14/17

***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: AAC0858
March 31, 2017
Project: CCR Event
Project #:Plant Hammond

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

March 31, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWC-9	AAC0858-01	Ground Water	03/22/17 09:28	03/23/17 14:30
HGWC-10	AAC0858-02	Ground Water	03/22/17 10:50	03/23/17 14:30
HGWC-11	AAC0858-03	Ground Water	03/22/17 12:25	03/23/17 14:30
HGWC-12	AAC0858-04	Ground Water	03/22/17 10:35	03/23/17 14:30
HGWC-13	AAC0858-05	Ground Water	03/22/17 14:30	03/23/17 14:30
HGWC-16	AAC0858-06	Ground Water	03/22/17 12:10	03/23/17 14:30
HGWC-17	AAC0858-07	Ground Water	03/22/17 14:54	03/23/17 14:30
Dup-1	AAC0858-08	Ground Water	03/22/17 00:00	03/23/17 14:30
Dup-2	AAC0858-09	Ground Water	03/22/17 00:00	03/23/17 14:30

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0858
Client ID: HGWC-9
Date/Time Sampled: 3/22/2017 9:28:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0858-01
Date/Time Received: 3/23/2017 2:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	936	25	10	mg/L	SM 2540 C		1	03/27/17 15:10	03/27/17 15:10	7030811	JPT
Inorganic Anions											
Chloride	160	2.5	0.13	mg/L	EPA 300.0		10	03/28/17 09:48	03/29/17 14:40	7030839	RLC
Fluoride	0.28	0.30	0.004	mg/L	EPA 300.0	J	1	03/28/17 09:48	03/28/17 19:53	7030839	RLC
Sulfate	240	10	0.92	mg/L	EPA 300.0		10	03/28/17 09:48	03/29/17 14:40	7030839	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:25	7030796	CSW
Arsenic	0.0008	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 19:25	7030796	CSW
Barium	0.122	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:25	7030796	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:25	7030796	CSW
Boron	1.99	0.0400	0.0060	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:25	7030796	CSW
Cadmium	0.00007	0.0010	0.00006	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 19:25	7030796	CSW
Calcium	183	25.0	0.522	mg/L	EPA 6020B		50	03/27/17 10:30	03/28/17 19:30	7030796	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:25	7030796	CSW
Cobalt	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 19:25	7030796	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:25	7030796	CSW
Molybdenum	0.0219	0.0100	0.0006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:25	7030796	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:25	7030796	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:25	7030796	CSW
Lithium	0.0043	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 19:25	7030796	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 16:13	7030756	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0858
Client ID: HGWC-10
Date/Time Sampled: 3/22/2017 10:50:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0858-02
Date/Time Received: 3/23/2017 2:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	683	25	10	mg/L	SM 2540 C		1	03/27/17 15:10	03/27/17 15:10	7030811	JPT
Inorganic Anions											
Chloride	82	2.5	0.13	mg/L	EPA 300.0		10	03/28/17 09:48	03/29/17 15:01	7030839	RLC
Fluoride	0.34	0.30	0.004	mg/L	EPA 300.0		1	03/28/17 09:48	03/28/17 20:14	7030839	RLC
Sulfate	170	10	0.92	mg/L	EPA 300.0		10	03/28/17 09:48	03/29/17 15:01	7030839	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:48	7030796	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:48	7030796	CSW
Barium	0.0962	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:48	7030796	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:48	7030796	CSW
Boron	0.788	0.0400	0.0060	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:48	7030796	CSW
Cadmium	0.0001	0.0010	0.00006	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 19:48	7030796	CSW
Calcium	154	25.0	0.522	mg/L	EPA 6020B		50	03/27/17 10:30	03/28/17 19:53	7030796	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:48	7030796	CSW
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 19:48	7030796	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:48	7030796	CSW
Molybdenum	0.0013	0.0100	0.0006	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 19:48	7030796	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:48	7030796	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:48	7030796	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:48	7030796	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 16:16	7030756	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0858
Client ID: HGWC-11
Date/Time Sampled: 3/22/2017 12:25:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0858-03
Date/Time Received: 3/23/2017 2:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	597	25	10	mg/L	SM 2540 C		1	03/27/17 15:10	03/27/17 15:10	7030811	JPT
Inorganic Anions											
Chloride	37	0.25	0.01	mg/L	EPA 300.0		1	03/28/17 09:48	03/28/17 21:16	7030839	RLC
Fluoride	0.66	0.30	0.004	mg/L	EPA 300.0		1	03/28/17 09:48	03/28/17 21:16	7030839	RLC
Sulfate	330	20	1.8	mg/L	EPA 300.0		20	03/28/17 09:48	03/29/17 15:21	7030839	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:59	7030796	CSW
Arsenic	0.0053	0.0050	0.0004	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:59	7030796	CSW
Barium	0.0346	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:59	7030796	CSW
Beryllium	0.00009	0.0030	0.00007	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 19:59	7030796	CSW
Boron	0.840	0.0400	0.0060	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:59	7030796	CSW
Cadmium	0.0001	0.0010	0.00006	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 19:59	7030796	CSW
Calcium	130	25.0	0.522	mg/L	EPA 6020B		50	03/27/17 10:30	03/28/17 20:05	7030796	CSW
Chromium	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 19:59	7030796	CSW
Cobalt	0.0014	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 19:59	7030796	CSW
Lead	0.0003	0.0050	0.00007	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 19:59	7030796	CSW
Molybdenum	0.0110	0.0100	0.0006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:59	7030796	CSW
Selenium	0.0263	0.0100	0.0014	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:59	7030796	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:59	7030796	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 19:59	7030796	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 16:19	7030756	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0858
Client ID: HGWC-12
Date/Time Sampled: 3/22/2017 10:35:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0858-04
Date/Time Received: 3/23/2017 2:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	804	25	10	mg/L	SM 2540 C		1	03/27/17 15:10	03/27/17 15:10	7030811	JPT
Inorganic Anions											
Chloride	130	2.5	0.13	mg/L	EPA 300.0		10	03/28/17 09:48	03/29/17 15:42	7030839	RLC
Fluoride	0.44	0.30	0.004	mg/L	EPA 300.0		1	03/28/17 09:48	03/28/17 21:36	7030839	RLC
Sulfate	220	10	0.92	mg/L	EPA 300.0		10	03/28/17 09:48	03/29/17 15:42	7030839	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:10	7030796	CSW
Arsenic	0.0019	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:10	7030796	CSW
Barium	0.112	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:10	7030796	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:10	7030796	CSW
Boron	3.04	0.0400	0.0060	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:10	7030796	CSW
Cadmium	0.0003	0.0010	0.00006	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:10	7030796	CSW
Calcium	162	25.0	0.522	mg/L	EPA 6020B		50	03/27/17 10:30	03/28/17 20:16	7030796	CSW
Chromium	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:10	7030796	CSW
Cobalt	0.0018	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:10	7030796	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:10	7030796	CSW
Molybdenum	0.0494	0.0100	0.0006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:10	7030796	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:10	7030796	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:10	7030796	CSW
Lithium	0.0098	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:10	7030796	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 16:21	7030756	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0858
Client ID: HGWC-13
Date/Time Sampled: 3/22/2017 2:30:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0858-05
Date/Time Received: 3/23/2017 2:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	427	25	10	mg/L	SM 2540 C		1	03/27/17 15:10	03/27/17 15:10	7030811	JPT
Inorganic Anions											
Chloride	59	2.5	0.13	mg/L	EPA 300.0		10	03/28/17 09:48	03/29/17 16:03	7030839	RLC
Fluoride	0.76	0.30	0.004	mg/L	EPA 300.0		1	03/28/17 09:48	03/28/17 21:57	7030839	RLC
Sulfate	100	10	0.92	mg/L	EPA 300.0		10	03/28/17 09:48	03/29/17 16:03	7030839	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:22	7030796	CSW
Arsenic	0.419	0.0050	0.0004	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:22	7030796	CSW
Barium	0.0755	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:22	7030796	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:22	7030796	CSW
Boron	1.99	0.0400	0.0060	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:22	7030796	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:22	7030796	CSW
Calcium	85.1	25.0	0.522	mg/L	EPA 6020B		50	03/27/17 10:30	03/28/17 20:28	7030796	CSW
Chromium	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:22	7030796	CSW
Cobalt	0.0026	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:22	7030796	CSW
Lead	0.00007	0.0050	0.00007	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:22	7030796	CSW
Molybdenum	0.0426	0.0100	0.0006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:22	7030796	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:22	7030796	CSW
Thallium	0.0004	0.0010	0.00005	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:22	7030796	CSW
Lithium	0.0353	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:22	7030796	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 16:23	7030756	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0858
Client ID: HGWC-16
Date/Time Sampled: 3/22/2017 12:10:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0858-06
Date/Time Received: 3/23/2017 2:30:00PM

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	03/27/17 15:10	03/27/17 15:10	7030811	JPT
Inorganic Anions											
Chloride	41	0.25	0.01	mg/L	EPA 300.0		1	03/28/17 09:48	03/28/17 22:18	7030839	RLC
Fluoride	0.30	0.30	0.004	mg/L	EPA 300.0		1	03/28/17 09:48	03/28/17 22:18	7030839	RLC
Sulfate	240	10	0.92	mg/L	EPA 300.0		10	03/28/17 09:48	03/29/17 16:23	7030839	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:33	7030796	CSW
Arsenic	0.0005	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:33	7030796	CSW
Barium	0.110	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:33	7030796	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:33	7030796	CSW
Boron	1.32	0.0400	0.0060	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:33	7030796	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:33	7030796	CSW
Calcium	150	25.0	0.522	mg/L	EPA 6020B		50	03/27/17 10:30	03/28/17 20:39	7030796	CSW
Chromium	0.0021	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:33	7030796	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:33	7030796	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:33	7030796	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:33	7030796	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:33	7030796	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:33	7030796	CSW
Lithium	0.0025	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:33	7030796	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 16:26	7030756	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0858
Client ID: HGWC-17
Date/Time Sampled: 3/22/2017 2:54:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0858-07
Date/Time Received: 3/23/2017 2:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1080	25	10	mg/L	SM 2540 C		1	03/27/17 15:10	03/27/17 15:10	7030811	JPT
Inorganic Anions											
Chloride	100	5.0	0.26	mg/L	EPA 300.0		20	03/28/17 09:48	03/29/17 16:44	7030839	RLC
Fluoride	0.07	0.30	0.004	mg/L	EPA 300.0	J	1	03/28/17 09:48	03/28/17 22:38	7030839	RLC
Sulfate	460	20	1.8	mg/L	EPA 300.0		20	03/28/17 09:48	03/29/17 16:44	7030839	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:56	7030796	CSW
Arsenic	0.0007	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:56	7030796	CSW
Barium	0.0248	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:56	7030796	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:56	7030796	CSW
Boron	5.52	0.0400	0.0060	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:56	7030796	CSW
Cadmium	0.00007	0.0010	0.00006	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:56	7030796	CSW
Calcium	239	25.0	0.522	mg/L	EPA 6020B		50	03/27/17 10:30	03/28/17 21:02	7030796	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:56	7030796	CSW
Cobalt	0.0169	0.0100	0.0005	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:56	7030796	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:56	7030796	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:56	7030796	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:56	7030796	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 20:56	7030796	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 20:56	7030796	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 16:28	7030756	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0858
Client ID: Dup-1
Date/Time Sampled: 3/22/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0858-08
Date/Time Received: 3/23/2017 2:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	941	25	10	mg/L	SM 2540 C		1	03/27/17 15:10	03/27/17 15:10	7030811	JPT
Inorganic Anions											
Chloride	140	5.0	0.26	mg/L	EPA 300.0		20	03/28/17 09:48	03/29/17 18:07	7030839	RLC
Fluoride	0.42	0.30	0.004	mg/L	EPA 300.0		1	03/28/17 09:48	03/28/17 22:59	7030839	RLC
Sulfate	230	20	1.8	mg/L	EPA 300.0		20	03/28/17 09:48	03/29/17 18:07	7030839	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:08	7030796	CSW
Arsenic	0.0006	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 21:08	7030796	CSW
Barium	0.128	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:08	7030796	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:08	7030796	CSW
Boron	1.97	0.0400	0.0060	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:08	7030796	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:08	7030796	CSW
Calcium	188	25.0	0.522	mg/L	EPA 6020B		50	03/27/17 10:30	03/28/17 21:13	7030796	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:08	7030796	CSW
Cobalt	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 21:08	7030796	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:08	7030796	CSW
Molybdenum	0.0227	0.0100	0.0006	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:08	7030796	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:08	7030796	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:08	7030796	CSW
Lithium	0.0043	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 21:08	7030796	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 16:30	7030756	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0858
Client ID: Dup-2
Date/Time Sampled: 3/22/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAC0858-09
Date/Time Received: 3/23/2017 2:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	734	25	10	mg/L	SM 2540 C		1	03/27/17 15:10	03/27/17 15:10	7030811	JPT
Inorganic Anions											
Chloride	84	2.5	0.13	mg/L	EPA 300.0		10	03/28/17 09:48	03/29/17 18:27	7030839	RLC
Fluoride	0.35	0.30	0.004	mg/L	EPA 300.0		1	03/28/17 09:48	03/29/17 01:03	7030839	RLC
Sulfate	170	10	0.92	mg/L	EPA 300.0		10	03/28/17 09:48	03/29/17 18:27	7030839	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:19	7030796	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:19	7030796	CSW
Barium	0.0973	0.0100	0.0003	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:19	7030796	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:19	7030796	CSW
Boron	0.822	0.0400	0.0060	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:19	7030796	CSW
Cadmium	0.0002	0.0010	0.00006	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 21:19	7030796	CSW
Calcium	155	25.0	0.522	mg/L	EPA 6020B		50	03/27/17 10:30	03/28/17 21:25	7030796	CSW
Chromium	0.0006	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 21:19	7030796	CSW
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 21:19	7030796	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:19	7030796	CSW
Molybdenum	0.0013	0.0100	0.0006	mg/L	EPA 6020B	J	1	03/27/17 10:30	03/28/17 21:19	7030796	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:19	7030796	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:19	7030796	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/27/17 10:30	03/28/17 21:19	7030796	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/24/17 09:00	03/24/17 16:33	7030756	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0858

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030811 - SM 2540 C											
Blank (7030811-BLK1)						Prepared & Analyzed: 03/27/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7030811-BS1)						Prepared & Analyzed: 03/27/17					
Total Dissolved Solids	399	25	10	mg/L	400.00		100	84-108			
Duplicate (7030811-DUP1)		**Source: AAC0828-01**				Prepared & Analyzed: 03/27/17					
Total Dissolved Solids	150	25	10	mg/L		137			9	10	
Duplicate (7030811-DUP2)		**Source: AAC0858-06**				Prepared & Analyzed: 03/27/17					
Total Dissolved Solids	621	25	10	mg/L		599			4	10	

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0858

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030839 - EPA 300.0											
Blank (7030839-BLK1)						Prepared & Analyzed: 03/28/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7030839-BS1)						Prepared & Analyzed: 03/28/17					
Chloride	9.99	0.25	0.01	mg/L	10.010		100	90-110			
Fluoride	10.3	0.30	0.004	mg/L	10.020		103	90-110			
Sulfate	10.1	1.0	0.09	mg/L	10.020		101	90-110			
Matrix Spike (7030839-MS1)		**Source: AAC0858-02**				Prepared & Analyzed: 03/28/17					
Chloride	83.2	0.25	0.01	mg/L	10.010	81.8	14	90-110			QM-02
Fluoride	10.7	0.30	0.004	mg/L	10.020	0.34	104	90-110			
Sulfate	145	1.0	0.09	mg/L	10.020	150	NR	90-110			QM-02
Matrix Spike (7030839-MS2)		**Source: AAC0858-08**				Prepared: 03/28/17 Analyzed: 03/29/17					
Chloride	125	0.25	0.01	mg/L	10.010	128	NR	90-110			QM-02
Fluoride	10.9	0.30	0.004	mg/L	10.020	0.42	104	90-110			
Sulfate	181	1.0	0.09	mg/L	10.020	189	NR	90-110			QM-02
Matrix Spike Dup (7030839-MSD1)		**Source: AAC0858-02**				Prepared & Analyzed: 03/28/17					
Chloride	82.8	0.25	0.01	mg/L	10.010	81.8	10	90-110	0.5	15	QM-02
Fluoride	10.8	0.30	0.004	mg/L	10.020	0.34	105	90-110	0.8	15	
Sulfate	145	1.0	0.09	mg/L	10.020	150	NR	90-110	0.04	15	QM-02

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0858

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030756 - EPA 7470A											
Blank (7030756-BLK1)						Prepared & Analyzed: 03/24/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7030756-BS1)						Prepared & Analyzed: 03/24/17					
Mercury	0.00242	0.00050	0.000041	mg/L	2.5000E-3		97	80-120			
Matrix Spike (7030756-MS1)		**Source: AAC0831-03**				Prepared & Analyzed: 03/24/17					
Mercury	0.00222	0.00050	0.000041	mg/L	2.5000E-3	ND	89	75-125			
Matrix Spike Dup (7030756-MSD1)		**Source: AAC0831-03**				Prepared & Analyzed: 03/24/17					
Mercury	0.00233	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125	5	20	
Post Spike (7030756-PS1)		**Source: AAC0831-03**				Prepared & Analyzed: 03/24/17					
Mercury	1.68			ug/L	1.6667	0.0112	100	80-120			
Batch 7030796 - EPA 3005A											
Blank (7030796-BLK1)						Prepared: 03/27/17 Analyzed: 03/28/17					
Antimony	ND	0.0030	0.0003	mg/L							
Arsenic	ND	0.0050	0.0004	mg/L							
Barium	ND	0.0100	0.0003	mg/L							
Beryllium	ND	0.0030	0.00007	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.00006	mg/L							
Calcium	ND	0.500	0.0104	mg/L							
Chromium	ND	0.0100	0.0003	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	0.0003	0.0250	0.0003	mg/L							J
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0006	mg/L							
Nickel	ND	0.0100	0.0003	mg/L							
Selenium	ND	0.0100	0.0014	mg/L							
Silver	ND	0.0100	0.0003	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0014	mg/L							
Zinc	0.0014	0.0100	0.0013	mg/L							J
Lithium	ND	0.0500	0.0011	mg/L							

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0858

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030796 - EPA 3005A											
LCS (7030796-BS1)						Prepared: 03/27/17 Analyzed: 03/28/17					
Antimony	0.102	0.0030	0.0003	mg/L	0.10000		102	80-120			
Arsenic	0.0993	0.0050	0.0004	mg/L	0.10000		99	80-120			
Barium	0.0993	0.0100	0.0003	mg/L	0.10000		99	80-120			
Beryllium	0.103	0.0030	0.00007	mg/L	0.10000		103	80-120			
Boron	1.00	0.0400	0.0060	mg/L	1.0000		100	80-120			
Cadmium	0.103	0.0010	0.00006	mg/L	0.10000		103	80-120			
Calcium	1.00	0.500	0.0104	mg/L	1.0000		100	80-120			
Chromium	0.101	0.0100	0.0003	mg/L	0.10000		101	80-120			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000		102	80-120			
Copper	0.104	0.0250	0.0003	mg/L	0.10000		104	80-120			
Lead	0.0994	0.0050	0.00007	mg/L	0.10000		99	80-120			
Molybdenum	0.102	0.0100	0.0006	mg/L	0.10000		102	80-120			
Nickel	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Selenium	0.101	0.0100	0.0014	mg/L	0.10000		101	80-120			
Silver	0.0993	0.0100	0.0003	mg/L	0.10000		99	80-120			
Thallium	0.102	0.0010	0.00005	mg/L	0.10000		102	80-120			
Vanadium	0.0967	0.0100	0.0014	mg/L	0.10000		97	80-120			
Zinc	0.101	0.0100	0.0013	mg/L	0.10000		101	80-120			
Lithium	0.102	0.0500	0.0011	mg/L	0.10000		102	80-120			
Matrix Spike (7030796-MS1)		**Source: AAC0858-01**				Prepared: 03/27/17 Analyzed: 03/28/17					
Antimony	0.106	0.0030	0.0003	mg/L	0.10000	ND	106	75-125			
Arsenic	0.106	0.0050	0.0004	mg/L	0.10000	0.0008	106	75-125			
Barium	0.290	0.0100	0.0003	mg/L	0.10000	0.122	168	75-125			QM-02
Beryllium	0.0915	0.0030	0.00007	mg/L	0.10000	ND	91	75-125			
Boron	2.79	0.0400	0.0060	mg/L	1.0000	1.99	80	75-125			
Cadmium	0.0987	0.0010	0.00006	mg/L	0.10000	0.00007	99	75-125			
Calcium	185	25.0	0.522	mg/L	1.0000	183	185	75-125			QM-02
Chromium	0.103	0.0100	0.0003	mg/L	0.10000	ND	103	75-125			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	0.0005	101	75-125			
Copper	0.0976	0.0250	0.0003	mg/L	0.10000	ND	98	75-125			
Lead	0.0960	0.0050	0.00007	mg/L	0.10000	ND	96	75-125			
Molybdenum	0.129	0.0100	0.0006	mg/L	0.10000	0.0219	107	75-125			
Nickel	0.101	0.0100	0.0003	mg/L	0.10000	0.0008	100	75-125			
Selenium	0.107	0.0100	0.0014	mg/L	0.10000	ND	107	75-125			
Silver	0.0958	0.0100	0.0003	mg/L	0.10000	ND	96	75-125			
Thallium	0.0999	0.0010	0.00005	mg/L	0.10000	ND	100	75-125			
Vanadium	0.103	0.0100	0.0014	mg/L	0.10000	ND	103	75-125			
Zinc	0.0979	0.0100	0.0013	mg/L	0.10000	ND	98	75-125			
Lithium	0.0984	0.0500	0.0011	mg/L	0.10000	0.0043	94	75-125			

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report No.: AAC0858

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030796 - EPA 3005A											
Matrix Spike Dup (7030796-MSD1)		**Source: AAC0858-01**			Prepared: 03/27/17 Analyzed: 03/28/17						
Antimony	0.103	0.0030	0.0003	mg/L	0.10000	ND	103	75-125	4	20	
Arsenic	0.104	0.0050	0.0004	mg/L	0.10000	0.0008	103	75-125	2	20	
Barium	0.290	0.0100	0.0003	mg/L	0.10000	0.122	168	75-125	0.002	20	QM-02
Beryllium	0.0968	0.0030	0.00007	mg/L	0.10000	ND	97	75-125	6	20	
Boron	2.89	0.0400	0.0060	mg/L	1.0000	1.99	90	75-125	3	20	
Cadmium	0.102	0.0010	0.00006	mg/L	0.10000	0.00007	102	75-125	3	20	
Calcium	185	25.0	0.522	mg/L	1.0000	183	164	75-125	0.1	20	QM-02
Chromium	0.105	0.0100	0.0003	mg/L	0.10000	ND	105	75-125	2	20	
Cobalt	0.107	0.0100	0.0005	mg/L	0.10000	0.0005	106	75-125	5	20	
Copper	0.101	0.0250	0.0003	mg/L	0.10000	ND	101	75-125	3	20	
Lead	0.0950	0.0050	0.00007	mg/L	0.10000	ND	95	75-125	1	20	
Molybdenum	0.131	0.0100	0.0006	mg/L	0.10000	0.0219	109	75-125	1	20	
Nickel	0.104	0.0100	0.0003	mg/L	0.10000	0.0008	103	75-125	3	20	
Selenium	0.106	0.0100	0.0014	mg/L	0.10000	ND	106	75-125	1	20	
Silver	0.0939	0.0100	0.0003	mg/L	0.10000	ND	94	75-125	2	20	
Thallium	0.0987	0.0010	0.00005	mg/L	0.10000	ND	99	75-125	1	20	
Vanadium	0.107	0.0100	0.0014	mg/L	0.10000	ND	107	75-125	3	20	
Zinc	0.105	0.0100	0.0013	mg/L	0.10000	ND	105	75-125	7	20	
Lithium	0.0993	0.0500	0.0011	mg/L	0.10000	0.0043	95	75-125	0.9	20	
Post Spike (7030796-PS1)		**Source: AAC0858-01**			Prepared: 03/27/17 Analyzed: 03/28/17						
Antimony	101			ug/L	100.00	0.118	101	80-120			
Arsenic	106			ug/L	100.00	0.759	105	80-120			
Barium	288			ug/L	100.00	122	167	80-120			QM-02
Beryllium	90.9			ug/L	100.00	0.0019	91	80-120			
Boron	2820			ug/L	1000.0	1990	82	80-120			
Cadmium	102			ug/L	100.00	0.0663	102	80-120			
Calcium	180000			ug/L	1000.0	183000	NR	80-120			QM-02
Chromium	109			ug/L	100.00	0.212	109	80-120			
Cobalt	104			ug/L	100.00	0.542	103	80-120			
Copper	98.6			ug/L	100.00	0.225	98	80-120			
Lead	95.8			ug/L	100.00	0.0463	96	80-120			
Molybdenum	128			ug/L	100.00	21.9	106	80-120			
Nickel	102			ug/L	100.00	0.829	101	80-120			
Selenium	108			ug/L	100.00	0.530	107	80-120			
Silver	94.0			ug/L	100.00	0.0035	94	80-120			
Thallium	99.4			ug/L	100.00	0.0423	99	80-120			
Vanadium	106			ug/L	100.00	0.223	105	80-120			
Zinc	98.9			ug/L	100.00	1.11	98	80-120			
Lithium	97.5			ug/L	100.00	4.32	93	80-120			

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

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.

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

March 31, 2017

Report Notes

There were 2 containers present instead of 1 as listed on the COC for Radium. MMR

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: Lauren Petty
CC: Maria Padilla, Heath McCorkle
REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	CONTAINER TYPE:	PRESERVATION:	# of CONTAINERS	Metals Part 257 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
						P	3		P	P	P	
03/22/17	9:28	W		X	HGWC-9			3	1	1	1	1
03/22/17	10:50	W		X	HGWC-10			3	1	1	1	2
03/22/17	12:25	W		X	HGWC-11			3	1	1	1	3
03/22/17	10:35	W		X	HGWC-12			4	1	1	2	4
03/22/17	14:30	W		X	HGWC-13			4	1	1	2	5
03/22/17	12:10	W		X	HGWC-16			3	1	1	1	6
03/22/17	14:54	W		X	HGWC-17			3	1	1	1	7
03/22/17	–	W		X	DUP-1			3	1	1	1	8
03/22/17	–	W		X	DUP-2			3	1	1	1	9

REMARKS/ADDITIONAL INFORMATION
4: Extra radium volume collected for Lab QA/QC
5: Extra radium volume collected for Lab QA/QC

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: MB M.Burch, WV W.Virgo, TT T.Thomas
DATE/TIME: 3/22/17 1500
RELINQUISHED BY: W.Virgo (FEM)
DATE/TIME: 3/22/17 0800

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

RECEIVED BY/LAB: R Graham
DATE/TIME: 03/23/17 1430
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Pace 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 #: AAC0858
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: 3/27/2017 11:04:42AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 03/23/17 14:30

Work Order: AAC0858
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 9 **#Containers:** 40

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	NO
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:

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 17, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAC0858 Plant Hammond
Pace Project No.: 30214099

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on March 24, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures

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

CERTIFICATIONS

Project: AAC0858 Plant Hammond
Pace Project No.: 30214099

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: AAC0858 Plant Hammond
Pace Project No.: 30214099

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30214099001	**HGWC-9**	Water	03/22/17 09:28	03/24/17 09:50
30214099002	**HGWC-10**	Water	03/22/17 10:50	03/24/17 09:50
30214099003	**HGWC-11**	Water	03/22/17 12:25	03/24/17 09:50
30214099004	**HGWC-12**	Water	03/22/17 10:35	03/24/17 09:50
30214099005	**HGWC-13**	Water	03/22/17 14:30	03/24/17 09:50
30214099006	**HGWC-16**	Water	03/22/17 12:10	03/24/17 09:50
30214099007	**HGWC-17**	Water	03/22/17 14:54	03/24/17 09:50
30214099008	**DUP-1**	Water	03/22/17 00:01	03/24/17 09:50
30214099009	**DUP-2**	Water	03/22/17 00:01	03/24/17 09:50

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

SAMPLE ANALYTE COUNT

Project: AAC0858 Plant Hammond
Pace Project No.: 30214099

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30214099001	**HGWC-9**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214099002	**HGWC-10**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214099003	**HGWC-11**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214099004	**HGWC-12**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214099005	**HGWC-13**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214099006	**HGWC-16**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214099007	**HGWC-17**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214099008	**DUP-1**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30214099009	**DUP-2**	EPA 9315	JC2	1
		EPA 9320	JLW	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: AAC0858 Plant Hammond
Pace Project No.: 30214099

Sample: HGWC-9 **Lab ID: 30214099001** Collected: 03/22/17 09:28 Received: 03/24/17 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0874 ± 0.0976 (0.187) C:92% T:NA**	pCi/L	04/03/17 14:41	13982-63-3	
Radium-228	EPA 9320	**0.364 ± 0.325 (0.657) C:82% T:91%**	pCi/L	04/11/17 17:17	15262-20-1	
Total Radium	Total Radium Calculation	**0.451 ± 0.423 (0.844)**	pCi/L	04/17/17 10:51	7440-14-4	

Sample: HGWC-10 **Lab ID: 30214099002** Collected: 03/22/17 10:50 Received: 03/24/17 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0470 ± 0.0907 (0.209) C:93% T:NA**	pCi/L	04/03/17 14:41	13982-63-3	
Radium-228	EPA 9320	**0.704 ± 0.380 (0.673) C:81% T:86%**	pCi/L	04/11/17 17:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.751 ± 0.471 (0.882)**	pCi/L	04/17/17 10:51	7440-14-4	

Sample: HGWC-11 **Lab ID: 30214099003** Collected: 03/22/17 12:25 Received: 03/24/17 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.202 ± 0.148 (0.259) C:96% T:NA**	pCi/L	04/03/17 14:41	13982-63-3	
Radium-228	EPA 9320	**0.116 ± 0.304 (0.680) C:76% T:88%**	pCi/L	04/11/17 17:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.318 ± 0.452 (0.939)**	pCi/L	04/17/17 10:51	7440-14-4	

Sample: HGWC-12 **Lab ID: 30214099004** Collected: 03/22/17 10:35 Received: 03/24/17 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.399 ± 0.178 (0.195) C:97% T:NA**	pCi/L	04/03/17 14:41	13982-63-3	
Radium-228	EPA 9320	**0.236 ± 0.310 (0.659) C:78% T:82%**	pCi/L	04/11/17 17:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.635 ± 0.488 (0.854)**	pCi/L	04/17/17 10:51	7440-14-4	

Sample: HGWC-13 **Lab ID: 30214099005** Collected: 03/22/17 14:30 Received: 03/24/17 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.166 ± 0.134 (0.220) C:81% T:NA**	pCi/L	04/03/17 14:41	13982-63-3	
Radium-228	EPA 9320	**0.119 ± 0.313 (0.702) C:81% T:83%**	pCi/L	04/11/17 17:18	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: AAC0858 Plant Hammond
Pace Project No.: 30214099

Sample: HGWC-13 **Lab ID: 30214099005** Collected: 03/22/17 14:30 Received: 03/24/17 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.285 ± 0.447 (0.922)**	pCi/L	04/17/17 10:51	7440-14-4	

Sample: HGWC-16 **Lab ID: 30214099006** Collected: 03/22/17 12:10 Received: 03/24/17 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0594 ± 0.102 (0.229) C:80% T:NA**	pCi/L	04/03/17 14:38	13982-63-3	
Radium-228	EPA 9320	**0.394 ± 0.294 (0.565) C:79% T:94%**	pCi/L	04/11/17 17:18	15262-20-1	
Total Radium	Total Radium Calculation	**0.453 ± 0.396 (0.794)**	pCi/L	04/17/17 10:51	7440-14-4	

Sample: HGWC-17 **Lab ID: 30214099007** Collected: 03/22/17 14:54 Received: 03/24/17 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0766 ± 0.0946 (0.193) C:93% T:NA**	pCi/L	04/04/17 08:21	13982-63-3	
Radium-228	EPA 9320	**0.360 ± 0.354 (0.724) C:71% T:92%**	pCi/L	04/11/17 17:19	15262-20-1	
Total Radium	Total Radium Calculation	**0.437 ± 0.449 (0.917)**	pCi/L	04/17/17 10:51	7440-14-4	

Sample: DUP-1 **Lab ID: 30214099008** Collected: 03/22/17 00:01 Received: 03/24/17 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0908 ± 0.0960 (0.183) C:95% T:NA**	pCi/L	04/04/17 08:21	13982-63-3	
Radium-228	EPA 9320	**0.159 ± 0.326 (0.719) C:80% T:88%**	pCi/L	04/11/17 17:19	15262-20-1	
Total Radium	Total Radium Calculation	**0.250 ± 0.422 (0.902)**	pCi/L	04/17/17 10:51	7440-14-4	

Sample: DUP-2 **Lab ID: 30214099009** Collected: 03/22/17 00:01 Received: 03/24/17 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0467 ± 0.0819 (0.184) C:89% T:NA**	pCi/L	04/04/17 08:55	13982-63-3	
Radium-228	EPA 9320	**0.502 ± 0.339 (0.638) C:79% T:87%**	pCi/L	04/11/17 17:19	15262-20-1	
Total Radium	Total Radium Calculation	**0.549 ± 0.421 (0.822)**	pCi/L	04/17/17 10:51	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: AAC0858 Plant Hammond
Pace Project No.: 30214099

QC Batch: 254541 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30214099001, 30214099002, 30214099003, 30214099004, 30214099005, 30214099006, 30214099007, 30214099008, 30214099009

METHOD BLANK: 1253314 Matrix: Water
Associated Lab Samples: 30214099001, 30214099002, 30214099003, 30214099004, 30214099005, 30214099006, 30214099007, 30214099008, 30214099009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.455 ± 0.376 (0.747) C:80% T:76%	pCi/L	04/11/17 17:17	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC0858 Plant Hammond
Pace Project No.: 30214099

QC Batch: 253625 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30214099001, 30214099002, 30214099003, 30214099004, 30214099005, 30214099006, 30214099007, 30214099008, 30214099009

METHOD BLANK: 1248390 Matrix: Water
Associated Lab Samples: 30214099001, 30214099002, 30214099003, 30214099004, 30214099005, 30214099006, 30214099007, 30214099008, 30214099009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00202 ± 0.0654 (0.190) C:94% T:NA	pCi/L	04/03/17 14:41	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: AAC0858 Plant Hammond
Pace Project No.: 30214099

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.

30214099

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAC0858 Workorder Name: Plant Hammond Owner Received Date: Results Requested By: 4/17/2017

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

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3					Requested Analysis Radium 226, 228, Total													LAB USE ONLY
1	HGWC-9	G	3/22/2017 9:28	AAC0858-01	GW	2					X													
2	HGWC-10	G	3/22/2017 10:50	AAC0858-02	GW	2					X													
3	HGWC-11	G	3/22/2017 12:25	AAC0858-03	GW	2					X													
4	HGWC-12	G	3/22/2017 10:35	AAC0858-04	GW	4					X													
5	HGWC-13	G	3/22/2017 14:30	AAC0858-05	GW	4					X													
6	HGWC-16	G	3/22/2017 12:10	AAC0858-06	GW	2					X													
7	HGWC-17	G	3/22/2017 14:54	AAC0858-07	GW	2					X													
8	Dup-1	G	3/22/2017 0:00	AAC0858-08	GW	2					X													
9	Dup-2	G	3/22/2017 0:00	AAC0858-09	GW	2					X													
10																								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Ashley Bozzelle	3-24-17/0950	EQuIS deliverable required (EDD 7564).
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.

WO#:30214099

CHAIN OF CUSTODY RECORD

Pace Analytical

Pace Analytical Services, In
110 TECHNOLOGY PARKV
(770) 734-4200 : FAX (770)

30214099

CLIENT NAME: Georgia Power

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

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

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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						
03/22/17	9:28	W		X	HGWC-9	3		1	1	1						1
03/22/17	10:50	W		X	HGWC-10	3		1	1	1						2
03/22/17	12:25	W		X	HGWC-11	3		1	1	1						3
03/22/17	10:35	W		X	HGWC-12	4		1	1	2						4
03/22/17	14:30	W		X	HGWC-13	4		1	1	2						5
03/22/17	12:10	W		X	HGWC-16	3		1	1	1						6
03/22/17	14:54	W		X	HGWC-17	3		1	1	1						7
03/22/17	–	W		X	DUP-1	3		1	1	1						8
03/22/17	–	W		X	DUP-2	3		1	1	1						9

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

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

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

REMARKS/ADDITIONAL INFORMATION

1 CC1
2 CC2
3 CC3
4 Extra radium volume collected for Lab QA/QC CC4
5 Extra radium volume collected for Lab QA/QC CC5
6 CC6
7 CC7
8 CC8
9 CC9

SAMPLED BY AND TITLE: MB M.Burch, W.Virgo WV, T.Thomas TT
DATE/TIME: 3/22/17 1500

RELINQUISHED BY: W.Virgo (EPM)
DATE/TIME: 3/22/17 0800

RECEIVED BY: Pace
DATE/TIME: 3-29-17 0950

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB: M Rahman
DATE/TIME: 03/23/17 1430

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

pH checked: Yes No NA
pH: Yes No NA
Temperature: 1.0 Min 1.0 Max
Custody Seal Intact: Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AAC0858
Entered into LIMS: MR
Tracking #:

2017 03 22 Hammond COCs.xlsx

ANL

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace, GA Project # 30214099

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

Tracking #: 6812 5103 2208

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

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

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

Temp should be above freezing to 6°C

Date and Initials of person examining contents: AMH 3-24-17

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC: -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.	X			15. 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 AMH 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: AMH Date: 3-24-17

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™
www.pacelabs.com

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JLW
Date:	4/8/2017
Worklist:	34997
Matrix:	DW

Method Blank Assessment

MB Sample ID	1253314
MB concentration:	0.455
M/B Counting Uncertainty:	0.368
MB MDC:	0.747
MB Numerical Performance Indicator:	2.42
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS34997	LCSD34997
Count Date:	4/11/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	24.810	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.802	
Target Conc. (pCi/L, g, F):	6.188	
Uncertainty (Calculated):	0.446	
Result (pCi/L, g, F):	6.656	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.812	
Numerical Performance Indicator:	0.99	
Percent Recovery:	107.55%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Duplicate Sample Assessment

Sample I.D.:	30214099004	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30214099004DUP	
Sample Result (pCi/L, g, F):	0.236	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.307	
Sample Duplicate Result (pCi/L, g, F):	0.434	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.294	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.912	30214099004
Duplicate RPD:	59.04%	30214099004DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	

Sample Matrix Spike Control Assessment

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

AMDL
[illegible] 4/17/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	JC2
Date:	3/31/2017
Worklist:	34857
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1248390
MB concentration:	0.002
M/B Counting Uncertainty:	0.065
MB MDC:	0.190
MB Numerical Performance Indicator:	0.06
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS34857	LCSD34857
Count Date:	4/4/2017	
Spike I.D.:	17-003	
Spike Concentration (pCi/mL):	38.230	
Volume Used (mL):	0.25	
Aliquot Volume (L, g, F):	0.504	
Target Conc. (pCi/L, g, F):	18.949	
Uncertainty (Calculated):	0.891	
Result (pCi/L, g, F):	15.378	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.910	
Numerical Performance Indicator:	-5.49	
Percent Recovery:	81.16%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

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.:	30214099001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30214099001DUP	
Sample Result (pCi/L, g, F):	0.087	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.097	
Sample Duplicate Result (pCi/L, g, F):	0.074	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.086	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.207	30214099001
Duplicate RPD:	16.96%	30214099001DUP
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:

4/17/17

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: AAC0910
April 03, 2017
Project: CCR Event
Project #:Plant Hammond

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 03, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWC-14	AAC0910-01	Water	03/23/17 09:35	03/24/17 14:20
HGWC-15	AAC0910-02	Water	03/23/17 11:25	03/24/17 14:20
HGWC-18	AAC0910-03	Water	03/23/17 10:25	03/24/17 14:20
FB-1	AAC0910-04	Water	03/23/17 09:25	03/24/17 14:20
FERB-1	AAC0910-05	Water	03/23/17 09:30	03/24/17 14:20
FB-2	AAC0910-06	Water	03/23/17 09:55	03/24/17 14:20
FERB-2	AAC0910-07	Water	03/23/17 10:00	03/24/17 14:20

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0910
Client ID: HGWC-14
Date/Time Sampled: 3/23/2017 9:35:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAC0910-01
Date/Time Received: 3/24/2017 2:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	3060	25	10	mg/L	SM 2540 C		1	03/29/17 16:28	03/29/17 16:28	7030887	JPT
Inorganic Anions											
Chloride	600	25	1.3	mg/L	EPA 300.0		100	03/29/17 10:17	03/31/17 00:17	7030885	RLC
Fluoride	0.28	0.30	0.004	mg/L	EPA 300.0	J	1	03/29/17 10:17	03/30/17 01:20	7030885	RLC
Sulfate	1500	100	9.2	mg/L	EPA 300.0		100	03/29/17 10:17	03/31/17 00:17	7030885	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 03:49	7030831	CSW
Arsenic	0.0069	0.0050	0.0004	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 03:49	7030831	CSW
Barium	0.0244	0.0100	0.0003	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 03:49	7030831	CSW
Beryllium	0.0006	0.0030	0.00007	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 03:49	7030831	CSW
Boron	23.1	4.00	0.604	mg/L	EPA 6020B		100	03/29/17 06:30	03/31/17 16:20	7030831	CSW
Cadmium	0.0002	0.0010	0.00006	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 03:49	7030831	CSW
Calcium	652	50.0	1.04	mg/L	EPA 6020B	B-01	100	03/29/17 06:30	03/31/17 16:20	7030831	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 03:49	7030831	CSW
Cobalt	0.0311	0.0100	0.0005	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 03:49	7030831	CSW
Lead	0.0019	0.0050	0.00007	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 03:49	7030831	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 03:49	7030831	CSW
Selenium	0.0167	0.0100	0.0014	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 03:49	7030831	CSW
Thallium	0.0003	0.0010	0.00005	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 03:49	7030831	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 03:49	7030831	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/29/17 13:10	03/30/17 15:02	7030865	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 03, 2017

Report No.: AAC0910
Client ID: HGWC-15
Date/Time Sampled: 3/23/2017 11:25:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAC0910-02
Date/Time Received: 3/24/2017 2:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1360	25	10	mg/L	SM 2540 C		1	03/29/17 16:28	03/29/17 16:28	7030887	JPT
Inorganic Anions											
Chloride	280	5.0	0.26	mg/L	EPA 300.0		20	03/29/17 10:17	03/30/17 11:30	7030885	RLC
Fluoride	0.12	0.30	0.004	mg/L	EPA 300.0	J	1	03/29/17 10:17	03/30/17 01:41	7030885	RLC
Sulfate	530	20	1.8	mg/L	EPA 300.0		20	03/29/17 10:17	03/30/17 11:30	7030885	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:11	7030831	CSW
Arsenic	0.0008	0.0050	0.0004	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:11	7030831	CSW
Barium	0.0329	0.0100	0.0003	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:11	7030831	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:11	7030831	CSW
Boron	2.72	2.00	0.302	mg/L	EPA 6020B		50	03/29/17 06:30	03/31/17 16:26	7030831	CSW
Cadmium	0.0020	0.0010	0.00006	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:11	7030831	CSW
Calcium	229	25.0	0.522	mg/L	EPA 6020B	B-01	50	03/29/17 06:30	03/31/17 16:26	7030831	CSW
Chromium	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:11	7030831	CSW
Cobalt	0.0715	0.0100	0.0005	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:11	7030831	CSW
Lead	0.0010	0.0050	0.00007	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:11	7030831	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:11	7030831	CSW
Selenium	0.0016	0.0100	0.0014	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:11	7030831	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:11	7030831	CSW
Lithium	0.0016	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:11	7030831	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/29/17 13:10	03/30/17 15:04	7030865	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 03, 2017

Report No.: AAC0910
Client ID: HGWC-18
Date/Time Sampled: 3/23/2017 10:25:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAC0910-03
Date/Time Received: 3/24/2017 2:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	2080	25	10	mg/L	SM 2540 C		1	03/29/17 16:28	03/29/17 16:28	7030887	JPT
Inorganic Anions											
Chloride	350	5.0	0.26	mg/L	EPA 300.0		20	03/29/17 10:17	03/30/17 11:52	7030885	RLC
Fluoride	0.57	0.30	0.004	mg/L	EPA 300.0		1	03/29/17 10:17	03/30/17 02:02	7030885	RLC
Sulfate	980	20	1.8	mg/L	EPA 300.0		20	03/29/17 10:17	03/30/17 11:52	7030885	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:23	7030831	CSW
Arsenic	0.0082	0.0050	0.0004	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:23	7030831	CSW
Barium	0.0313	0.0100	0.0003	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:23	7030831	CSW
Beryllium	0.0036	0.0030	0.00007	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:23	7030831	CSW
Boron	10.6	2.00	0.302	mg/L	EPA 6020B		50	03/29/17 06:30	03/31/17 16:32	7030831	CSW
Cadmium	0.0025	0.0010	0.00006	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:23	7030831	CSW
Calcium	440	25.0	0.522	mg/L	EPA 6020B	B-01	50	03/29/17 06:30	03/31/17 16:32	7030831	CSW
Chromium	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:23	7030831	CSW
Cobalt	0.223	0.0100	0.0005	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:23	7030831	CSW
Lead	0.0010	0.0050	0.00007	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:23	7030831	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:23	7030831	CSW
Selenium	0.0414	0.0100	0.0014	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:23	7030831	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:23	7030831	CSW
Lithium	0.0151	0.0500	0.0011	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:23	7030831	CSW
Mercury	0.00009	0.00050	0.000041	mg/L	EPA 7470A	J	1	03/29/17 13:10	03/30/17 15:06	7030865	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 03, 2017

Report No.: AAC0910
Client ID: FB-1
Date/Time Sampled: 3/23/2017 9:25:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAC0910-04
Date/Time Received: 3/24/2017 2:20:00PM

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	03/29/17 16:28	03/29/17 16:28	7030887	JPT
Inorganic Anions											
Chloride	0.08	0.25	0.01	mg/L	EPA 300.0	J	1	03/29/17 10:17	03/30/17 03:45	7030885	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	03/29/17 10:17	03/30/17 03:45	7030885	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	03/29/17 10:17	03/30/17 03:45	7030885	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:34	7030831	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:34	7030831	CSW
Barium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:34	7030831	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:34	7030831	CSW
Boron	0.0135	0.0400	0.0060	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:34	7030831	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:34	7030831	CSW
Calcium	0.0580	0.500	0.0104	mg/L	EPA 6020B	B-01, J	1	03/29/17 06:30	03/30/17 04:34	7030831	CSW
Chromium	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:34	7030831	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:34	7030831	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:34	7030831	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:34	7030831	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:34	7030831	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:34	7030831	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:34	7030831	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/29/17 13:10	03/30/17 15:13	7030865	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 03, 2017

Report No.: AAC0910
Client ID: FERB-1
Date/Time Sampled: 3/23/2017 9:30:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAC0910-05
Date/Time Received: 3/24/2017 2:20:00PM

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	03/29/17 16:28	03/29/17 16:28	7030887	JPT
Inorganic Anions											
Chloride	0.07	0.25	0.01	mg/L	EPA 300.0	J	1	03/29/17 10:17	03/30/17 04:26	7030885	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	03/29/17 10:17	03/30/17 04:26	7030885	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	03/29/17 10:17	03/30/17 04:26	7030885	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:40	7030831	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:40	7030831	CSW
Barium	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:40	7030831	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:40	7030831	CSW
Boron	0.0087	0.0400	0.0060	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:40	7030831	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:40	7030831	CSW
Calcium	0.0730	0.500	0.0104	mg/L	EPA 6020B	B-01, J	1	03/29/17 06:30	03/30/17 04:40	7030831	CSW
Chromium	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:40	7030831	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:40	7030831	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:40	7030831	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:40	7030831	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:40	7030831	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:40	7030831	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:40	7030831	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/29/17 13:10	03/30/17 15:16	7030865	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 03, 2017

Report No.: AAC0910
Client ID: FB-2
Date/Time Sampled: 3/23/2017 9:55:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAC0910-06
Date/Time Received: 3/24/2017 2:20:00PM

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	03/29/17 16:28	03/29/17 16:28	7030887	JPT
Inorganic Anions											
Chloride	0.07	0.25	0.01	mg/L	EPA 300.0	J	1	03/29/17 10:17	03/30/17 04:47	7030885	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	03/29/17 10:17	03/30/17 04:47	7030885	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	03/29/17 10:17	03/30/17 04:47	7030885	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:46	7030831	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:46	7030831	CSW
Barium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:46	7030831	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:46	7030831	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:46	7030831	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:46	7030831	CSW
Calcium	0.0486	0.500	0.0104	mg/L	EPA 6020B	B-01, J	1	03/29/17 06:30	03/30/17 04:46	7030831	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:46	7030831	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:46	7030831	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:46	7030831	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:46	7030831	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:46	7030831	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:46	7030831	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:46	7030831	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/29/17 13:10	03/30/17 15:18	7030865	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 03, 2017

Report No.: AAC0910
Client ID: FERB-2
Date/Time Sampled: 3/23/2017 10:00:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAC0910-07
Date/Time Received: 3/24/2017 2:20:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	10	25	10	mg/L	SM 2540 C	J	1	03/29/17 16:28	03/29/17 16:28	7030887	JPT
Inorganic Anions											
Chloride	0.09	0.25	0.01	mg/L	EPA 300.0	J	1	03/29/17 10:17	03/30/17 05:09	7030885	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	03/29/17 10:17	03/30/17 05:09	7030885	RLC
Sulfate	0.11	1.0	0.09	mg/L	EPA 300.0	J	1	03/29/17 10:17	03/30/17 05:09	7030885	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:52	7030831	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:52	7030831	CSW
Barium	0.0008	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:52	7030831	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:52	7030831	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:52	7030831	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:52	7030831	CSW
Calcium	0.159	0.500	0.0104	mg/L	EPA 6020B	B-01, J	1	03/29/17 06:30	03/30/17 04:52	7030831	CSW
Chromium	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:52	7030831	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:52	7030831	CSW
Lead	0.0004	0.0050	0.00007	mg/L	EPA 6020B	J	1	03/29/17 06:30	03/30/17 04:52	7030831	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:52	7030831	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:52	7030831	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:52	7030831	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	03/29/17 06:30	03/30/17 04:52	7030831	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	03/29/17 13:10	03/30/17 15:21	7030865	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 03, 2017

Report No.: AAC0910

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030887 - SM 2540 C											
Blank (7030887-BLK1)						Prepared & Analyzed: 03/29/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7030887-BS1)						Prepared & Analyzed: 03/29/17					
Total Dissolved Solids	411	25	10	mg/L	400.00		103	84-108			
Duplicate (7030887-DUP1)		**Source: AAC0909-05**				Prepared & Analyzed: 03/29/17					
Total Dissolved Solids	302	25	10	mg/L		302			0	10	
Duplicate (7030887-DUP2)		**Source: AAC0910-07**				Prepared & Analyzed: 03/29/17					
Total Dissolved Solids	ND	25	10	mg/L		10				10	

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0910

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030885 - EPA 300.0											
Blank (7030885-BLK1)						Prepared & Analyzed: 03/29/17					
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 (7030885-BS1)						Prepared & Analyzed: 03/29/17					
Chloride	10.1	0.25	0.01	mg/L	10.010		101	90-110			
Fluoride	10.4	0.30	0.004	mg/L	10.020		104	90-110			
Sulfate	10.2	1.0	0.09	mg/L	10.020		102	90-110			
Matrix Spike (7030885-MS1)		**Source: AAC0905-01**				Prepared & Analyzed: 03/29/17					
Chloride	17.1	0.25	0.01	mg/L	10.010	7.05	100	90-110			
Fluoride	10.7	0.30	0.004	mg/L	10.020	0.12	105	90-110			
Sulfate	168	1.0	0.09	mg/L	10.020	175	NR	90-110			QM-02
Matrix Spike (7030885-MS2)		**Source: AAC0910-04**				Prepared: 03/29/17 Analyzed: 03/30/17					
Chloride	10.2	0.25	0.01	mg/L	10.010	0.08	101	90-110			
Fluoride	10.6	0.30	0.004	mg/L	10.020	ND	106	90-110			
Sulfate	10.3	1.0	0.09	mg/L	10.020	ND	103	90-110			
Matrix Spike Dup (7030885-MSD1)		**Source: AAC0905-01**				Prepared & Analyzed: 03/29/17					
Chloride	17.0	0.25	0.01	mg/L	10.010	7.05	99	90-110	0.7	15	
Fluoride	10.7	0.30	0.004	mg/L	10.020	0.12	106	90-110	0.4	15	
Sulfate	168	1.0	0.09	mg/L	10.020	175	NR	90-110	0.005	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

April 03, 2017

Report No.: AAC0910

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030831 - EPA 3005A											
Blank (7030831-BLK1)						Prepared: 03/29/17 Analyzed: 03/30/17					
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	0.0136	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 (7030831-BS1)						Prepared: 03/29/17 Analyzed: 03/30/17					
Antimony	0.109	0.0030	0.0003	mg/L	0.10000		109	80-120			
Arsenic	0.102	0.0050	0.0004	mg/L	0.10000		102	80-120			
Barium	0.104	0.0100	0.0003	mg/L	0.10000		104	80-120			
Beryllium	0.106	0.0030	0.00007	mg/L	0.10000		106	80-120			
Boron	1.14	0.0400	0.0060	mg/L	1.0000		114	80-120			
Cadmium	0.106	0.0010	0.00006	mg/L	0.10000		106	80-120			
Calcium	1.03	0.500	0.0104	mg/L	1.0000		103	80-120			
Chromium	0.107	0.0100	0.0003	mg/L	0.10000		107	80-120			
Cobalt	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Copper	0.107	0.0250	0.0003	mg/L	0.10000		107	80-120			
Lead	0.0980	0.0050	0.00007	mg/L	0.10000		98	80-120			
Molybdenum	0.110	0.0100	0.0006	mg/L	0.10000		110	80-120			
Nickel	0.105	0.0100	0.0003	mg/L	0.10000		105	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	0.101	0.0010	0.00005	mg/L	0.10000		101	80-120			
Vanadium	0.108	0.0100	0.0014	mg/L	0.10000		108	80-120			
Zinc	0.107	0.0100	0.0013	mg/L	0.10000		107	80-120			
Lithium	0.110	0.0500	0.0011	mg/L	0.10000		110	80-120			

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0910

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030831 - EPA 3005A											
Matrix Spike (7030831-MS1)		**Source: AAC0909-01**			Prepared: 03/29/17 Analyzed: 03/30/17						
Antimony	0.104	0.0030	0.0003	mg/L	0.10000	ND	104	75-125			
Arsenic	0.101	0.0050	0.0004	mg/L	0.10000	ND	101	75-125			
Barium	0.134	0.0100	0.0003	mg/L	0.10000	0.0380	96	75-125			
Beryllium	0.105	0.0030	0.00007	mg/L	0.10000	ND	105	75-125			
Boron	1.14	0.0400	0.0060	mg/L	1.0000	0.0192	112	75-125			
Cadmium	0.106	0.0010	0.00006	mg/L	0.10000	ND	106	75-125			
Calcium	15.9	25.0	0.522	mg/L	1.0000	13.9	200	75-125			QM-02, J
Chromium	0.110	0.0100	0.0003	mg/L	0.10000	ND	110	75-125			
Cobalt	0.106	0.0100	0.0005	mg/L	0.10000	0.0007	106	75-125			
Copper	0.105	0.0250	0.0003	mg/L	0.10000	ND	105	75-125			
Lead	0.0969	0.0050	0.00007	mg/L	0.10000	ND	97	75-125			
Molybdenum	0.101	0.0100	0.0006	mg/L	0.10000	ND	101	75-125			
Nickel	0.107	0.0100	0.0003	mg/L	0.10000	0.0007	106	75-125			
Selenium	0.105	0.0100	0.0014	mg/L	0.10000	ND	105	75-125			
Silver	0.104	0.0100	0.0003	mg/L	0.10000	ND	104	75-125			
Thallium	0.0989	0.0010	0.00005	mg/L	0.10000	ND	99	75-125			
Vanadium	0.109	0.0100	0.0014	mg/L	0.10000	ND	109	75-125			
Zinc	0.106	0.0100	0.0013	mg/L	0.10000	ND	106	75-125			
Lithium	0.118	0.0500	0.0011	mg/L	0.10000	0.0115	106	75-125			
Matrix Spike Dup (7030831-MSD1)		**Source: AAC0909-01**			Prepared: 03/29/17 Analyzed: 03/30/17						
Antimony	0.107	0.0030	0.0003	mg/L	0.10000	ND	107	75-125	3	20	
Arsenic	0.101	0.0050	0.0004	mg/L	0.10000	ND	101	75-125	0.1	20	
Barium	0.136	0.0100	0.0003	mg/L	0.10000	0.0380	98	75-125	2	20	
Beryllium	0.103	0.0030	0.00007	mg/L	0.10000	ND	103	75-125	2	20	
Boron	1.16	0.0400	0.0060	mg/L	1.0000	0.0192	114	75-125	1	20	
Cadmium	0.105	0.0010	0.00006	mg/L	0.10000	ND	105	75-125	0.5	20	
Calcium	15.4	25.0	0.522	mg/L	1.0000	13.9	149	75-125	3	20	QM-02, J
Chromium	0.110	0.0100	0.0003	mg/L	0.10000	ND	110	75-125	0.6	20	
Cobalt	0.108	0.0100	0.0005	mg/L	0.10000	0.0007	107	75-125	1	20	
Copper	0.108	0.0250	0.0003	mg/L	0.10000	ND	108	75-125	3	20	
Lead	0.0972	0.0050	0.00007	mg/L	0.10000	ND	97	75-125	0.4	20	
Molybdenum	0.105	0.0100	0.0006	mg/L	0.10000	ND	105	75-125	3	20	
Nickel	0.107	0.0100	0.0003	mg/L	0.10000	0.0007	107	75-125	0.4	20	
Selenium	0.101	0.0100	0.0014	mg/L	0.10000	ND	101	75-125	5	20	
Silver	0.103	0.0100	0.0003	mg/L	0.10000	ND	103	75-125	0.9	20	
Thallium	0.0984	0.0010	0.00005	mg/L	0.10000	ND	98	75-125	0.6	20	
Vanadium	0.109	0.0100	0.0014	mg/L	0.10000	ND	109	75-125	0.8	20	
Zinc	0.104	0.0100	0.0013	mg/L	0.10000	ND	104	75-125	2	20	
Lithium	0.112	0.0500	0.0011	mg/L	0.10000	0.0115	100	75-125	5	20	

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0910

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030831 - EPA 3005A											
Post Spike (7030831-PS1)			**Source: AAC0909-01**			Prepared: 03/29/17 Analyzed: 03/30/17					
Antimony	100			ug/L	100.00	0.0193	100	80-120			
Arsenic	100			ug/L	100.00	0.251	100	80-120			
Barium	138			ug/L	100.00	38.0	100	80-120			
Beryllium	103			ug/L	100.00	0.0067	103	80-120			
Boron	1120			ug/L	1000.0	19.2	111	80-120			
Cadmium	106			ug/L	100.00	-0.0195	106	80-120			
Calcium	14700			ug/L	1000.0	13900	86	80-120			
Chromium	110			ug/L	100.00	0.0294	110	80-120			
Cobalt	107			ug/L	100.00	0.672	106	80-120			
Copper	106			ug/L	100.00	-0.150	106	80-120			
Lead	97.2			ug/L	100.00	0.0077	97	80-120			
Molybdenum	107			ug/L	100.00	0.0307	107	80-120			
Nickel	104			ug/L	100.00	0.658	104	80-120			
Selenium	101			ug/L	100.00	0.229	100	80-120			
Silver	104			ug/L	100.00	0.0044	104	80-120			
Thallium	99.6			ug/L	100.00	0.0015	100	80-120			
Vanadium	110			ug/L	100.00	0.0259	110	80-120			
Zinc	106			ug/L	100.00	0.432	106	80-120			
Lithium	123			ug/L	100.00	11.5	111	80-120			
Batch 7030865 - EPA 7470A											
Blank (7030865-BLK1)						Prepared: 03/29/17 Analyzed: 03/30/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7030865-BS1)						Prepared: 03/29/17 Analyzed: 03/30/17					
Mercury	0.00238	0.00050	0.000041	mg/L	2.5000E-3		95	80-120			

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report No.: AAC0910

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030865 - EPA 7470A											
Matrix Spike (7030865-MS1)			**Source: AAC0909-05**			Prepared: 03/29/17 Analyzed: 03/30/17					
Mercury	0.00235	0.00050	0.000041	mg/L	2.5000E-3	ND	94	75-125			
Matrix Spike Dup (7030865-MSD1)			**Source: AAC0909-05**			Prepared: 03/29/17 Analyzed: 03/30/17					
Mercury	0.00231	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125	1	20	
Post Spike (7030865-PS1)			**Source: AAC0909-05**			Prepared: 03/29/17 Analyzed: 03/30/17					
Mercury	1.72			ug/L	1.6667	-0.00556	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

April 03, 2017

Legend

Definition of Laboratory Terms

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

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-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.

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 03, 2017

Report 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 : 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: Lauren Petty

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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						
03/23/17	9:35	W		X	HGWC-14	3		1	1	1						1
03/23/17	11:25	W		X	HGWC-15	3		1	1	1						2
03/23/17	10:25	W		X	HGWC-18	3		1	1	1						3
03/23/17	9:25	W		X	FB-1	3		1	1	1						4
03/23/17	9:30	W		X	FERB-1	3		1	1	1						5
03/23/17	9:55	W		X	FB-2	3		1	1	1						6
03/23/17	10:00	W		X	FERB-2	3		1	1	1						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: W.Virgo WV, M.Burch MB, T.Thomas TT — DATE/TIME: 3/23/17 1130

RELINQUISHED BY: W.Virgo WV (ERM) — DATE/TIME: 3/23/17 0830

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: Lalman — DATE/TIME: 03/24/17 1420

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

Packed: No NA — Ice: Yes No NA — Temperature: 1.0°C Min. 1.0°C Max.

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

FOR LAB USE ONLY
LAB #: AAC0910
Entered into LIMS: MR
Tracking #:

2017 03 23 Hammond COCs.xlsx

PACE ANALYTICAL SERVICES, LLC.

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

LOG-IN CHECKLIST **Printed: 3/27/2017 12:05:30PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 03/24/17 14:20

Work Order: AAC0910
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 7 **#Containers:** 28

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	NO
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:

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 19, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAC0910 Plant Hammond
Pace Project No.: 30214375

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on March 28, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures

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

CERTIFICATIONS

Project: AAC0910 Plant Hammond
Pace Project No.: 30214375

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: AAC0910 Plant Hammond
Pace Project No.: 30214375

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30214375001	**HGWC-14**	Water	03/23/17 09:35	03/28/17 10:10
30214375002	**HGWC-15**	Water	03/23/17 11:25	03/28/17 10:10
30214375003	**HGWC-18**	Water	03/23/17 10:25	03/28/17 10:10
30214375004	**FB-1**	Water	03/23/17 09:25	03/28/17 10:10
30214375005	**FERB-1**	Water	03/23/17 09:30	03/28/17 10:10
30214375006	**FB-2**	Water	03/23/17 09:55	03/28/17 10:10
30214375007	**FERB-2**	Water	03/23/17 10:00	03/28/17 10:10

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

SAMPLE ANALYTE COUNT

Project: AAC0910 Plant Hammond
Pace Project No.: 30214375

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30214375001	**HGWC-14**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214375002	**HGWC-15**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214375003	**HGWC-18**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214375004	**FB-1**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214375005	**FERB-1**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214375006	**FB-2**	EPA 9315	JC2	1
		EPA 9320	JJY	1
		Total Radium Calculation	RMK	1
30214375007	**FERB-2**	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: AAC0910 Plant Hammond
Pace Project No.: 30214375

Sample: HGWC-14 **Lab ID: 30214375001** Collected: 03/23/17 09:35 Received: 03/28/17 10:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.228 ± 0.165 (0.289) C:99% T:NA**	pCi/L	04/07/17 08:31	13982-63-3	
Radium-228	EPA 9320	**0.938 ± 0.444 (0.725) C:73% T:77%**	pCi/L	04/13/17 12:29	15262-20-1	
Total Radium	Total Radium Calculation	**1.17 ± 0.609 (1.01)**	pCi/L	04/19/17 06:35	7440-14-4	

Sample: HGWC-15 **Lab ID: 30214375002** Collected: 03/23/17 11:25 Received: 03/28/17 10:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.154 ± 0.131 (0.224) C:86% T:NA**	pCi/L	04/07/17 08:31	13982-63-3	
Radium-228	EPA 9320	**0.508 ± 0.339 (0.635) C:72% T:90%**	pCi/L	04/13/17 12:30	15262-20-1	
Total Radium	Total Radium Calculation	**0.662 ± 0.470 (0.859)**	pCi/L	04/19/17 06:35	7440-14-4	

Sample: HGWC-18 **Lab ID: 30214375003** Collected: 03/23/17 10:25 Received: 03/28/17 10:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.694 ± 0.243 (0.209) C:96% T:NA**	pCi/L	04/07/17 08:31	13982-63-3	
Radium-228	EPA 9320	**1.12 ± 0.490 (0.798) C:72% T:81%**	pCi/L	04/13/17 12:30	15262-20-1	
Total Radium	Total Radium Calculation	**1.81 ± 0.733 (1.01)**	pCi/L	04/19/17 06:35	7440-14-4	

Sample: FB-1 **Lab ID: 30214375004** Collected: 03/23/17 09:25 Received: 03/28/17 10:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0310 ± 0.110 (0.275) C:89% T:NA**	pCi/L	04/07/17 08:32	13982-63-3	
Radium-228	EPA 9320	**0.640 ± 0.487 (0.958) C:71% T:72%**	pCi/L	04/13/17 12:30	15262-20-1	
Total Radium	Total Radium Calculation	**0.671 ± 0.597 (1.23)**	pCi/L	04/19/17 06:35	7440-14-4	

Sample: FERB-1 **Lab ID: 30214375005** Collected: 03/23/17 09:30 Received: 03/28/17 10:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0905 ± 0.122 (0.391) C:81% T:NA**	pCi/L	04/07/17 08:33	13982-63-3	
Radium-228	EPA 9320	**0.353 ± 0.412 (0.866) C:74% T:77%**	pCi/L	04/13/17 12:30	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: AAC0910 Plant Hammond
Pace Project No.: 30214375

Sample: FERB-1 **Lab ID: 30214375005** Collected: 03/23/17 09:30 Received: 03/28/17 10:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.353 ± 0.534 (1.26)**	pCi/L	04/19/17 06:35	7440-14-4	

Sample: FB-2 **Lab ID: 30214375006** Collected: 03/23/17 09:55 Received: 03/28/17 10:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0566 ± 0.123 (0.375) C:78% T:NA**	pCi/L	04/07/17 08:33	13982-63-3	
Radium-228	EPA 9320	**-0.139 ± 0.370 (0.895) C:74% T:76%**	pCi/L	04/13/17 12:30	15262-20-1	
Total Radium	Total Radium Calculation	**0.000 ± 0.493 (1.27)**	pCi/L	04/19/17 06:35	7440-14-4	

Sample: FERB-2 **Lab ID: 30214375007** Collected: 03/23/17 10:00 Received: 03/28/17 10:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0372 ± 0.0573 (0.227) C:86% T:NA**	pCi/L	04/07/17 08:32	13982-63-3	
Radium-228	EPA 9320	**0.427 ± 0.430 (0.890) C:79% T:73%**	pCi/L	04/13/17 12:27	15262-20-1	
Total Radium	Total Radium Calculation	**0.427 ± 0.487 (1.12)**	pCi/L	04/19/17 06:35	7440-14-4	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC0910 Plant Hammond
Pace Project No.: 30214375

QC Batch: 253967 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30214375001, 30214375002, 30214375003, 30214375004, 30214375005, 30214375006, 30214375007

METHOD BLANK: 1250173 Matrix: Water
Associated Lab Samples: 30214375001, 30214375002, 30214375003, 30214375004, 30214375005, 30214375006, 30214375007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0394 ± 0.0986 (0.239) C:91% T:NA	pCi/L	04/07/17 08:29	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAC0910 Plant Hammond
Pace Project No.: 30214375

QC Batch: 254543 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30214375001, 30214375002, 30214375003, 30214375004, 30214375005, 30214375006, 30214375007

METHOD BLANK: 1253320 Matrix: Water
Associated Lab Samples: 30214375001, 30214375002, 30214375003, 30214375004, 30214375005, 30214375006, 30214375007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.123 ± 0.298 (0.731) C:79% T:79%	pCi/L	04/13/17 12:29	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: AAC0910 Plant Hammond
Pace Project No.: 30214375

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

WO#:30214375

30214375

Pace Analytical
www.pacelabs.com

Workorder: AAC0910 Workorder Name: Plant Hammond Owner Received Date: Results Requested By: 4/19/2017

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	HGWC-14	G	3/23/2017 9:35	AAC0910-01	GW	2	X	001
2	HGWC-15	G	3/23/2017 11:25	AAC0910-02	GW	2	X	002
3	HGWC-18	G	3/23/2017 10:25	AAC0910-03	GW	2	X	003
4	FB-1	G	3/23/2017 9:25	AAC0910-04	W	2	X	004
5	FERB-1	G	3/23/2017 9:30	AAC0910-05	W	2	X	005
6	FB-2	G	3/23/2017 9:55	AAC0910-06	W	2	X	006
7	FERB-2	G	3/23/2017 10:00	AAC0910-07	W	2	X	007
8								
9								
10								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	MLaliman	3/27/17	DBG Pace	3/28/17 1010	EQuIS deliverable required (EDD 7564).
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.

30214375

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: Lauren Petty
CC: Maria Padilla, Heath McCorkle

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

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	CONTAINER TYPE	PRESERVATION	# of CONTAINERS	Metals Part 257 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
						P	3		P	P	P	
03/23/17	9:35	W		X	HGWC-14			3	1	1	1	1
03/23/17	11:25	W		X	HGWC-15			3	1	1	1	2
03/23/17	10:25	W		X	HGWC-18			3	1	1	1	3
03/23/17	9:25	W		X	FB-1			3	1	1	1	4
03/23/17	9:30	W		X	FERB-1			3	1	1	1	5
03/23/17	9:55	W		X	FB-2			3	1	1	1	6
~~03/23/17~~	~~10:00~~	~~W~~		~~X~~	~~FERB-2~~			3	1	1	1	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: M.Burch MB, W.Virgo WV, T.Thomas TT
DATE/TIME: 3/23/17 1130

RELINQUISHED BY: Will V. (ERM)
DATE/TIME: 3/23/17 0830

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: M Lanman
DATE/TIME: 03/24/17 1420

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 #: AAC0910
Entered into LIMS: MR
Tracking #:

2017 03 23 Hammond COCs.xlsx

Sample Condition Upon Receipt Pittsburgh

RTB

Pace Analytical

Client Name: Pace GA Project # 30214375

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

Tracking #: 6812 5103 2675

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

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

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

Temp should be above freezing to 6°C

Date and Initials of person examining contents: RTB 3/28/17

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC: -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.	X			15. pHC2
All containers needing preservation are found to be in compliance with EPA recommendation.	X			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed 3/28/17 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: 3/28/17

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: 4/4/2017
Worklist: 34920
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1250173
MB concentration:	0.039
M/B Counting Uncertainty:	0.098
MB MDC:	0.239
MB Numerical Performance Indicator:	0.78
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	Y
	LCS34920	LCSD34920
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):	0.504	0.501
Target Conc. (pCi/L, g, F):	18.964	19.059
Uncertainty (Calculated):	0.892	0.897
Result (pCi/L, g, F):	15.009	15.339
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.096	1.055
Numerical Performance Indicator:	-5.49	-5.27
Percent Recovery:	79.15%	80.48%
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.:	LCS34920
Duplicate Sample I.D.	LCSD34920
Sample Result (pCi/L, g, F):	15.009
Sample Result Counting Uncertainty (pCi/L, g, F):	1.096
Sample Duplicate Result (pCi/L, g, F):	15.339
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.055
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	-0.425
Duplicate RPD:	2.17%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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:

4/18/17

Quality Control Sample Performance Assessment

Test:	Ra-228
Analyst:	JJY
Date:	4/8/2017
Worklist:	34998
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1253320
MB concentration:	-0.123
M/B Counting Uncertainty:	0.297
MB MDC:	0.731
MB Numerical Performance Indicator:	-0.81
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	Y
	LCS34998	LCSD34998
Count Date:	4/13/2017	4/13/2017
Spike I.D.:	17-005	17-005
Spike Concentration (pCi/mL):	24.795	24.795
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.812	0.815
Target Conc. (pCi/L, g, F):	6.108	6.085
Uncertainty (Calculated):	0.440	0.438
Result (pCi/L, g, F):	5.638	6.026
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.731	0.847
Numerical Performance Indicator:	-1.08	-0.12
Percent Recovery:	92.30%	99.03%
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.:	LCS34998	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD34998	
Sample Result (pCi/L, g, F):	5.638	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.731	
Sample Duplicate Result (pCi/L, g, F):	6.026	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.847	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-0.680	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	7.03%	
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:

4/18/17

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: AAE0736
June 01, 2017
Project: CCR Event
Project #:Plant Hammond

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 01, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWA-1	AAE0736-01	Ground Water	05/22/17 13:15	05/23/17 13:40
HGWA-2	AAE0736-02	Ground Water	05/22/17 14:20	05/23/17 13:40
HGWA-3	AAE0736-03	Ground Water	05/22/17 15:10	05/23/17 13:40

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 01, 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

June 01, 2017

Report No.: AAE0736
Client ID: HGWA-1
Date/Time Sampled: 5/22/2017 1:15:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAE0736-01
Date/Time Received: 5/23/2017 1:40:00PM

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	05/24/17 14:43	05/24/17 14:43	7050783	JPT
Inorganic Anions											
Chloride	4.6	0.25	0.01	mg/L	EPA 300.0		1	05/24/17 09:27	05/24/17 12:09	7050774	SLH
Fluoride	0.12	0.30	0.004	mg/L	EPA 300.0	J	1	05/24/17 09:27	05/24/17 12:09	7050774	SLH
Sulfate	77	5.0	0.46	mg/L	EPA 300.0		5	05/24/17 09:27	05/26/17 18:05	7050774	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 19:49	7050763	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 19:49	7050763	CSW
Barium	0.0281	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 19:49	7050763	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 19:49	7050763	CSW
Boron	0.0782	0.0400	0.0060	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 19:49	7050763	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 19:49	7050763	CSW
Calcium	107	25.0	0.522	mg/L	EPA 6020B		50	05/24/17 08:30	05/25/17 19:55	7050763	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 19:49	7050763	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 19:49	7050763	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 19:49	7050763	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 19:49	7050763	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 19:49	7050763	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 19:49	7050763	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 19:49	7050763	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 09:25	05/30/17 14:06	7050854	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

June 01, 2017

Report No.: AAE0736
Client ID: HGWA-2
Date/Time Sampled: 5/22/2017 2:20:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAE0736-02
Date/Time Received: 5/23/2017 1:40:00PM

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	05/24/17 14:43	05/24/17 14:43	7050783	JPT
Inorganic Anions											
Chloride	5.9	0.25	0.01	mg/L	EPA 300.0		1	05/24/17 09:27	05/24/17 13:11	7050774	SLH
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	05/24/17 09:27	05/24/17 13:11	7050774	SLH
Sulfate	48	1.0	0.09	mg/L	EPA 300.0		1	05/24/17 09:27	05/24/17 13:11	7050774	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 20:12	7050763	CSW
Arsenic	0.0006	0.0050	0.0004	mg/L	EPA 6020B	J	1	05/24/17 08:30	05/25/17 20:12	7050763	CSW
Barium	0.103	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 20:12	7050763	CSW
Beryllium	0.0001	0.0030	0.00007	mg/L	EPA 6020B	J	1	05/24/17 08:30	05/25/17 20:12	7050763	CSW
Boron	0.0475	0.0400	0.0060	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 20:12	7050763	CSW
Cadmium	0.0001	0.0010	0.00006	mg/L	EPA 6020B	J	1	05/24/17 08:30	05/25/17 20:12	7050763	CSW
Calcium	17.8	5.00	0.522	mg/L	EPA 6020B		50	05/24/17 08:30	05/25/17 20:18	7050763	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 20:12	7050763	CSW
Cobalt	0.0263	0.0100	0.0005	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 20:12	7050763	CSW
Lead	0.00009	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/24/17 08:30	05/25/17 20:12	7050763	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 20:12	7050763	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 20:12	7050763	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 20:12	7050763	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 20:12	7050763	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 09:25	05/30/17 14:08	7050854	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

June 01, 2017

Report No.: AAE0736
Client ID: HGWA-3
Date/Time Sampled: 5/22/2017 3:10:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAE0736-03
Date/Time Received: 5/23/2017 1:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	263	25	10	mg/L	SM 2540 C		1	05/24/17 14:43	05/24/17 14:43	7050783	JPT
Inorganic Anions											
Chloride	6.5	0.25	0.01	mg/L	EPA 300.0		1	05/24/17 09:27	05/24/17 13:32	7050774	SLH
Fluoride	0.05	0.30	0.004	mg/L	EPA 300.0	J	1	05/24/17 09:27	05/24/17 13:32	7050774	SLH
Sulfate	46	1.0	0.09	mg/L	EPA 300.0		1	05/24/17 09:27	05/24/17 13:32	7050774	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 20:23	7050763	CSW
Arsenic	0.0006	0.0050	0.0004	mg/L	EPA 6020B	J	1	05/24/17 08:30	05/25/17 20:23	7050763	CSW
Barium	0.117	0.0500	0.0013	mg/L	EPA 6020B		5	05/24/17 08:30	05/30/17 14:59	7050763	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 20:23	7050763	CSW
Boron	0.0131	0.0400	0.0060	mg/L	EPA 6020B	J	1	05/24/17 08:30	05/25/17 20:23	7050763	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 20:23	7050763	CSW
Calcium	71.5	25.0	0.522	mg/L	EPA 6020B		50	05/24/17 08:30	05/25/17 20:29	7050763	CSW
Chromium	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	05/24/17 08:30	05/25/17 20:23	7050763	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 20:23	7050763	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 20:23	7050763	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 20:23	7050763	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 20:23	7050763	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/24/17 08:30	05/25/17 20:23	7050763	CSW
Lithium	0.0030	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/24/17 08:30	05/25/17 20:23	7050763	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 09:25	05/30/17 14:11	7050854	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

June 01, 2017

Report No.: AAE0736

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050783 - SM 2540 C											
Blank (7050783-BLK1)						Prepared & Analyzed: 05/24/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7050783-BS1)						Prepared & Analyzed: 05/24/17					
Total Dissolved Solids	372	25	10	mg/L	400.00		93	84-108			
Duplicate (7050783-DUP1)		**Source: AAE0736-03**				Prepared & Analyzed: 05/24/17					
Total Dissolved Solids	253	25	10	mg/L		263			4	10	

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 01, 2017

Report No.: AAE0736

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050774 - EPA 300.0											
Blank (7050774-BLK1)						Prepared & Analyzed: 05/24/17					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7050774-BS1)						Prepared & Analyzed: 05/24/17					
Chloride	9.92	0.25	0.01	mg/L	10.020		99	90-110			
Fluoride	9.74	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 (7050774-MS1)		**Source: AAE0736-01**				Prepared & Analyzed: 05/24/17					
Chloride	15.0	0.25	0.01	mg/L	10.020	4.57	104	90-110			
Fluoride	10.4	0.30	0.004	mg/L	10.020	0.12	103	90-110			
Sulfate	75.4	1.0	0.09	mg/L	10.050	72.9	24	90-110			QM-02
Matrix Spike (7050774-MS2)		**Source: AAE0738-03**				Prepared & Analyzed: 05/24/17					
Chloride	11.6	0.25	0.01	mg/L	10.020	1.95	97	90-110			
Fluoride	9.96	0.30	0.004	mg/L	10.020	0.02	99	90-110			
Sulfate	11.6	1.0	0.09	mg/L	10.050	1.52	100	90-110			
Matrix Spike Dup (7050774-MSD1)		**Source: AAE0736-01**				Prepared & Analyzed: 05/24/17					
Chloride	15.0	0.25	0.01	mg/L	10.020	4.57	104	90-110	0.2	15	
Fluoride	10.4	0.30	0.004	mg/L	10.020	0.12	103	90-110	0.3	15	
Sulfate	75.4	1.0	0.09	mg/L	10.050	72.9	25	90-110	0.04	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

June 01, 2017

Report No.: AAE0736

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050763 - EPA 3005A											
Blank (7050763-BLK1)						Prepared: 05/24/17 Analyzed: 05/25/17					
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 (7050763-BS1)						Prepared: 05/24/17 Analyzed: 05/25/17					
Antimony	0.110	0.0030	0.0003	mg/L	0.10000		110	80-120			
Arsenic	0.103	0.0050	0.0004	mg/L	0.10000		103	80-120			
Barium	0.107	0.0100	0.0003	mg/L	0.10000		107	80-120			
Beryllium	0.102	0.0030	0.00007	mg/L	0.10000		102	80-120			
Boron	1.01	0.0400	0.0060	mg/L	1.0000		101	80-120			
Cadmium	0.103	0.0010	0.00006	mg/L	0.10000		103	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	0.101	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	0.104	0.0050	0.00007	mg/L	0.10000		104	80-120			
Molybdenum	0.111	0.0100	0.0006	mg/L	0.10000		111	80-120			
Nickel	0.102	0.0100	0.0003	mg/L	0.10000		102	80-120			
Selenium	0.105	0.0100	0.0014	mg/L	0.10000		105	80-120			
Silver	0.106	0.0100	0.0003	mg/L	0.10000		106	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	0.103	0.0100	0.0013	mg/L	0.10000		103	80-120			
Lithium	0.102	0.0500	0.0011	mg/L	0.10000		102	80-120			

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 01, 2017

Report No.: AAE0736

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050763 - EPA 3005A											
Matrix Spike (7050763-MS1)		**Source: AAE0737-01**			Prepared: 05/24/17 Analyzed: 05/25/17						
Antimony	0.112	0.0030	0.0003	mg/L	0.10000	ND	112	75-125			
Arsenic	0.112	0.0050	0.0004	mg/L	0.10000	0.0034	108	75-125			
Barium	0.287	0.100	0.0027	mg/L	0.10000	0.197	90	75-125			
Beryllium	0.0923	0.0030	0.00007	mg/L	0.10000	ND	92	75-125			
Boron	26.8	2.00	0.302	mg/L	1.0000	26.0	79	75-125			
Cadmium	0.104	0.0010	0.00006	mg/L	0.10000	0.0003	103	75-125			
Calcium	909	250	5.22	mg/L	1.0000	885	NR	75-125			QM-02
Chromium	0.107	0.0100	0.0003	mg/L	0.10000	0.0004	107	75-125			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	0.0008	101	75-125			
Copper	0.0949	0.0250	0.0003	mg/L	0.10000	0.0003	95	75-125			
Lead	0.0977	0.0050	0.00007	mg/L	0.10000	ND	98	75-125			
Molybdenum	0.133	0.0100	0.0006	mg/L	0.10000	0.0208	112	75-125			
Nickel	0.102	0.0100	0.0003	mg/L	0.10000	0.0027	99	75-125			
Selenium	0.118	0.0100	0.0014	mg/L	0.10000	0.0094	109	75-125			
Silver	0.0960	0.0100	0.0003	mg/L	0.10000	ND	96	75-125			
Thallium	0.105	0.0010	0.00005	mg/L	0.10000	0.0008	105	75-125			
Vanadium	0.110	0.0100	0.0014	mg/L	0.10000	ND	110	75-125			
Zinc	0.0985	0.0100	0.0013	mg/L	0.10000	0.0018	97	75-125			
Lithium	0.109	0.0500	0.0011	mg/L	0.10000	0.0167	92	75-125			
Matrix Spike Dup (7050763-MSD1)		**Source: AAE0737-01**			Prepared: 05/24/17 Analyzed: 05/25/17						
Antimony	0.111	0.0030	0.0003	mg/L	0.10000	ND	111	75-125	0.6	20	
Arsenic	0.111	0.0050	0.0004	mg/L	0.10000	0.0034	108	75-125	0.8	20	
Barium	0.290	0.100	0.0027	mg/L	0.10000	0.197	93	75-125	1	20	
Beryllium	0.0951	0.0030	0.00007	mg/L	0.10000	ND	95	75-125	3	20	
Boron	27.1	2.00	0.302	mg/L	1.0000	26.0	114	75-125	1	20	
Cadmium	0.103	0.0010	0.00006	mg/L	0.10000	0.0003	103	75-125	0.9	20	
Calcium	926	250	5.22	mg/L	1.0000	885	NR	75-125	2	20	QM-02
Chromium	0.107	0.0100	0.0003	mg/L	0.10000	0.0004	107	75-125	0.008	20	
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	0.0008	101	75-125	0.4	20	
Copper	0.0961	0.0250	0.0003	mg/L	0.10000	0.0003	96	75-125	1	20	
Lead	0.0977	0.0050	0.00007	mg/L	0.10000	ND	98	75-125	0.09	20	
Molybdenum	0.133	0.0100	0.0006	mg/L	0.10000	0.0208	112	75-125	0.03	20	
Nickel	0.101	0.0100	0.0003	mg/L	0.10000	0.0027	99	75-125	0.2	20	
Selenium	0.119	0.0100	0.0014	mg/L	0.10000	0.0094	110	75-125	0.9	20	
Silver	0.0960	0.0100	0.0003	mg/L	0.10000	ND	96	75-125	0.04	20	
Thallium	0.103	0.0010	0.00005	mg/L	0.10000	0.0008	103	75-125	2	20	
Vanadium	0.110	0.0100	0.0014	mg/L	0.10000	ND	110	75-125	0.005	20	
Zinc	0.0991	0.0100	0.0013	mg/L	0.10000	0.0018	97	75-125	0.6	20	
Lithium	0.111	0.0500	0.0011	mg/L	0.10000	0.0167	94	75-125	2	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 01, 2017

Report No.: AAE0736

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050763 - EPA 3005A											
Post Spike (7050763-PS1)			**Source: AAE0737-01**			Prepared: 05/24/17 Analyzed: 05/25/17					
Antimony	111			ug/L	100.00	0.177	111	80-120			
Arsenic	109			ug/L	100.00	3.44	105	80-120			
Barium	285			ug/L	100.00	197	88	80-120			
Beryllium	93.0			ug/L	100.00	0.0211	93	80-120			
Boron	28300			ug/L	1000.0	26000	228	80-120			QM-02
Cadmium	102			ug/L	100.00	0.299	101	80-120			
Calcium	900000			ug/L	1000.0	885000	NR	80-120			QM-02
Chromium	108			ug/L	100.00	0.358	108	80-120			
Cobalt	102			ug/L	100.00	0.799	101	80-120			
Copper	94.0			ug/L	100.00	0.315	94	80-120			
Lead	97.3			ug/L	100.00	0.0385	97	80-120			
Molybdenum	133			ug/L	100.00	20.8	112	80-120			
Nickel	101			ug/L	100.00	2.67	98	80-120			
Selenium	118			ug/L	100.00	9.41	108	80-120			
Silver	96.1			ug/L	100.00	0.0111	96	80-120			
Thallium	102			ug/L	100.00	0.778	101	80-120			
Vanadium	110			ug/L	100.00	0.754	110	80-120			
Zinc	96.5			ug/L	100.00	1.80	95	80-120			
Lithium	111			ug/L	100.00	16.7	95	80-120			
Batch 7050854 - EPA 7470A											
Blank (7050854-BLK1)						Prepared & Analyzed: 05/30/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7050854-BS1)						Prepared & Analyzed: 05/30/17					
Mercury	0.00236	0.00050	0.000041	mg/L	2.5000E-3		94	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 01, 2017

Report No.: AAE0736

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050854 - EPA 7470A											
Matrix Spike (7050854-MS1)			**Source: AAE0770-02**			Prepared & Analyzed: 05/30/17					
Mercury	0.00240	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125			
Matrix Spike Dup (7050854-MSD1)			**Source: AAE0770-02**			Prepared & Analyzed: 05/30/17					
Mercury	0.00235	0.00050	0.000041	mg/L	2.5000E-3	ND	94	75-125	2	20	
Post Spike (7050854-PS1)			**Source: AAE0770-02**			Prepared & Analyzed: 05/30/17					
Mercury	1.72			ug/L	1.6667	-0.00163	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 01, 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: Lauren Petty
CC: ~~Maria Padilla~~ Heath McCorkle

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

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 Appendix 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							
05/22/17	13:15	W		X	HGWA-1	4		1	1	2							1
05/22/17	14:20	W		X	HGWA-2	4		1	1	2							2
05/22/17	15:10	W		X	HGWA-3	4		1	1	2							3

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: Markevious Thomas MT
DATE/TIME: 5/22/2017 - 1530

RELINQUISHED BY: [illegible] Will Vigo
DATE/TIME: 5/22/17 1900

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: [illegible]
DATE/TIME: 05/23/17 1340

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

Packed: No NA | Ice: Yes No NA | Temperature: 2.5 °C min 2.5 °C Max | Custody Seal: Intact Broken Not Present | # of Coolers | Cooler ID:

FOR LAB USE ONLY
LAB #: AAE07536
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: 5/24/2017 9:15:51AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 05/23/17 13:40

Work Order: AAE0736
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 3 **#Containers:** 12

Minimum Temp(C): 2.5 **Maximum Temp(C):** 2.5 **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.

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: AAE0812
June 02, 2017
Project: CCR Event
Project #:Plant Hammond

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 02, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWA-4	AAE0812-01	Water	05/23/17 09:40	05/24/17 13:05
HGWA-5	AAE0812-02	Water	05/23/17 09:52	05/24/17 13:05
HGWA-6	AAE0812-03	Water	05/23/17 10:55	05/24/17 13:05
HGWC-7	AAE0812-04	Water	05/23/17 11:00	05/24/17 13:05
HGWC-8	AAE0812-05	Water	05/23/17 12:25	05/24/17 13:05
HGWC-9	AAE0812-06	Water	05/23/17 13:55	05/24/17 13:05
Dup-1	AAE0812-07	Water	05/23/17 00:00	05/24/17 13:05
FB-1	AAE0812-08	Water	05/23/17 12:40	05/24/17 13:05

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 02, 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

June 02, 2017

Report No.: AAE0812
Client ID: HGWA-4
Date/Time Sampled: 5/23/2017 9:40:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0812-01
Date/Time Received: 5/24/2017 1:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	183	25	10	mg/L	SM 2540 C		1	05/26/17 16:10	05/26/17 16:10	7050870	JPT
Inorganic Anions											
Chloride	4.5	0.25	0.01	mg/L	EPA 300.0		1	05/27/17 11:47	05/30/17 14:59	7050892	SLH
Fluoride	0.01	0.30	0.004	mg/L	EPA 300.0	J	1	05/27/17 11:47	05/30/17 14:59	7050892	SLH
Sulfate	1.5	1.0	0.09	mg/L	EPA 300.0		1	05/27/17 11:47	05/30/17 14:59	7050892	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:43	7050802	KLH
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:43	7050802	KLH
Barium	0.0227	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:43	7050802	KLH
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:43	7050802	KLH
Boron	0.0159	0.0400	0.0060	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 01:43	7050802	KLH
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:43	7050802	KLH
Calcium	43.0	25.0	0.522	mg/L	EPA 6020B		50	05/24/17 17:50	05/31/17 17:19	7050802	KLH
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:43	7050802	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:43	7050802	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:43	7050802	KLH
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:43	7050802	KLH
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:43	7050802	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:43	7050802	KLH
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:43	7050802	KLH
Mercury	0.00005	0.00050	0.000041	mg/L	EPA 7470A	J	1	05/30/17 11:45	05/30/17 15:26	7050855	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

June 02, 2017

Report No.: AAE0812
Client ID: HGWA-5
Date/Time Sampled: 5/23/2017 9:52:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0812-02
Date/Time Received: 5/24/2017 1:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	134	25	10	mg/L	SM 2540 C		1	05/26/17 16:10	05/26/17 16:10	7050870	JPT
Inorganic Anions											
Chloride	1.7	0.25	0.01	mg/L	EPA 300.0		1	05/27/17 11:47	05/30/17 16:42	7050892	SLH
Fluoride	0.04	0.30	0.004	mg/L	EPA 300.0	J	1	05/27/17 11:47	05/30/17 16:42	7050892	SLH
Sulfate	21	1.0	0.09	mg/L	EPA 300.0		1	05/27/17 11:47	05/30/17 16:42	7050892	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:55	7050802	KLH
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:55	7050802	KLH
Barium	0.0496	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:55	7050802	KLH
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:55	7050802	KLH
Boron	0.0095	0.0400	0.0060	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 01:55	7050802	KLH
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:55	7050802	KLH
Calcium	24.2	5.00	0.522	mg/L	EPA 6020B		50	05/24/17 17:50	05/31/17 17:25	7050802	KLH
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:55	7050802	KLH
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 01:55	7050802	KLH
Lead	0.00009	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 01:55	7050802	KLH
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:55	7050802	KLH
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:55	7050802	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 01:55	7050802	KLH
Lithium	0.0033	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 01:55	7050802	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 11:45	05/30/17 15:29	7050855	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

June 02, 2017

Report No.: AAE0812
Client ID: HGWA-6
Date/Time Sampled: 5/23/2017 10:55:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0812-03
Date/Time Received: 5/24/2017 1:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	231	25	10	mg/L	SM 2540 C		1	05/26/17 16:10	05/26/17 16:10	7050870	JPT
Inorganic Anions											
Chloride	1.2	0.25	0.01	mg/L	EPA 300.0		1	05/27/17 11:47	05/30/17 17:03	7050892	SLH
Fluoride	0.006	0.30	0.004	mg/L	EPA 300.0	J	1	05/27/17 11:47	05/30/17 17:03	7050892	SLH
Sulfate	38	1.0	0.09	mg/L	EPA 300.0		1	05/27/17 11:47	05/30/17 17:03	7050892	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:06	7050802	KLH
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:06	7050802	KLH
Barium	0.187	0.0500	0.0013	mg/L	EPA 6020B		5	05/24/17 17:50	06/01/17 12:06	7050802	KLH
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:06	7050802	KLH
Boron	0.0167	0.0400	0.0060	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 02:06	7050802	KLH
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:06	7050802	KLH
Calcium	49.1	25.0	0.522	mg/L	EPA 6020B		50	05/24/17 17:50	05/31/17 17:30	7050802	KLH
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:06	7050802	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:06	7050802	KLH
Lead	0.0003	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 02:06	7050802	KLH
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:06	7050802	KLH
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:06	7050802	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:06	7050802	KLH
Lithium	0.0110	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 02:06	7050802	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 11:45	05/30/17 15:36	7050855	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

June 02, 2017

Report No.: AAE0812
Client ID: HGWC-7
Date/Time Sampled: 5/23/2017 11:00:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0812-04
Date/Time Received: 5/24/2017 1:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	450	25	10	mg/L	SM 2540 C		1	05/26/17 16:10	05/26/17 16:10	7050870	JPT
Inorganic Anions											
Chloride	49	2.5	0.13	mg/L	EPA 300.0		10	05/27/17 11:47	05/31/17 20:28	7050892	SLH
Fluoride	0.11	0.30	0.004	mg/L	EPA 300.0	J	1	05/27/17 11:47	05/30/17 17:44	7050892	SLH
Sulfate	110	10	0.92	mg/L	EPA 300.0		10	05/27/17 11:47	05/31/17 20:28	7050892	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:29	7050802	KLH
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:29	7050802	KLH
Barium	0.0794	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:29	7050802	KLH
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:29	7050802	KLH
Boron	0.910	0.0400	0.0060	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:29	7050802	KLH
Cadmium	0.0001	0.0010	0.00006	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 02:29	7050802	KLH
Calcium	93.3	25.0	0.522	mg/L	EPA 6020B		50	05/24/17 17:50	05/31/17 17:56	7050802	KLH
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:29	7050802	KLH
Cobalt	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 02:29	7050802	KLH
Lead	0.00008	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 02:29	7050802	KLH
Molybdenum	0.0336	0.0100	0.0006	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:29	7050802	KLH
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:29	7050802	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:29	7050802	KLH
Lithium	0.0026	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 02:29	7050802	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 11:45	05/30/17 15:38	7050855	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

June 02, 2017

Report No.: AAE0812
Client ID: HGWC-8
Date/Time Sampled: 5/23/2017 12:25:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0812-05
Date/Time Received: 5/24/2017 1:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	765	25	10	mg/L	SM 2540 C		1	05/26/17 16:10	05/26/17 16:10	7050870	JPT
Inorganic Anions											
Chloride	130	2.5	0.13	mg/L	EPA 300.0		10	05/27/17 11:47	05/31/17 20:48	7050892	SLH
Fluoride	0.65	0.30	0.004	mg/L	EPA 300.0		1	05/27/17 11:47	05/30/17 18:05	7050892	SLH
Sulfate	270	10	0.92	mg/L	EPA 300.0		10	05/27/17 11:47	05/31/17 20:48	7050892	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:40	7050802	KLH
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:40	7050802	KLH
Barium	0.0846	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:40	7050802	KLH
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:40	7050802	KLH
Boron	2.32	0.0400	0.0060	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:40	7050802	KLH
Cadmium	0.0003	0.0010	0.00006	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 02:40	7050802	KLH
Calcium	140	25.0	0.522	mg/L	EPA 6020B		50	05/24/17 17:50	05/31/17 18:02	7050802	KLH
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:40	7050802	KLH
Cobalt	0.0023	0.0100	0.0005	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 02:40	7050802	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:40	7050802	KLH
Molybdenum	0.482	0.0100	0.0006	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:40	7050802	KLH
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:40	7050802	KLH
Thallium	0.00008	0.0010	0.00005	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 02:40	7050802	KLH
Lithium	0.0029	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 02:40	7050802	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 11:45	05/30/17 15:41	7050855	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

June 02, 2017

Report No.: AAE0812
Client ID: HGWC-9
Date/Time Sampled: 5/23/2017 1:55:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0812-06
Date/Time Received: 5/24/2017 1:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	939	25	10	mg/L	SM 2540 C		1	05/26/17 16:10	05/26/17 16:10	7050870	JPT
Inorganic Anions											
Chloride	150	5.0	0.26	mg/L	EPA 300.0		20	05/27/17 11:47	05/31/17 21:09	7050892	SLH
Fluoride	0.29	0.30	0.004	mg/L	EPA 300.0	J	1	05/27/17 11:47	05/30/17 18:26	7050892	SLH
Sulfate	240	20	1.8	mg/L	EPA 300.0		20	05/27/17 11:47	05/31/17 21:09	7050892	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:52	7050802	KLH
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:52	7050802	KLH
Barium	0.127	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:52	7050802	KLH
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:52	7050802	KLH
Boron	2.29	0.0400	0.0060	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:52	7050802	KLH
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:52	7050802	KLH
Calcium	181	25.0	0.522	mg/L	EPA 6020B		50	05/24/17 17:50	05/31/17 18:08	7050802	KLH
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:52	7050802	KLH
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 02:52	7050802	KLH
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 02:52	7050802	KLH
Molybdenum	0.0242	0.0100	0.0006	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:52	7050802	KLH
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:52	7050802	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 02:52	7050802	KLH
Lithium	0.0048	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 02:52	7050802	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 11:45	05/30/17 15:43	7050855	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

June 02, 2017

Report No.: AAE0812
Client ID: Dup-1
Date/Time Sampled: 5/23/2017 12:00:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0812-07
Date/Time Received: 5/24/2017 1:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	451	25	10	mg/L	SM 2540 C		1	05/26/17 16:10	05/26/17 16:10	7050870	JPT
Inorganic Anions											
Chloride	50	2.5	0.13	mg/L	EPA 300.0		10	05/27/17 11:47	05/31/17 21:30	7050892	SLH
Fluoride	0.11	0.30	0.004	mg/L	EPA 300.0	J	1	05/27/17 11:47	05/30/17 18:46	7050892	SLH
Sulfate	110	10	0.92	mg/L	EPA 300.0		10	05/27/17 11:47	05/31/17 21:30	7050892	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 03:03	7050802	KLH
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 03:03	7050802	KLH
Barium	0.0787	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 03:03	7050802	KLH
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 03:03	7050802	KLH
Boron	0.966	0.0400	0.0060	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 03:03	7050802	KLH
Cadmium	0.0002	0.0010	0.00006	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 03:03	7050802	KLH
Calcium	98.5	25.0	0.522	mg/L	EPA 6020B		50	05/24/17 17:50	05/31/17 18:13	7050802	KLH
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 03:03	7050802	KLH
Cobalt	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 03:03	7050802	KLH
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 03:03	7050802	KLH
Molybdenum	0.0342	0.0100	0.0006	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 03:03	7050802	KLH
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 03:03	7050802	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/24/17 17:50	05/27/17 03:03	7050802	KLH
Lithium	0.0027	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/27/17 03:03	7050802	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 11:45	05/30/17 15:45	7050855	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

June 02, 2017

Report No.: AAE0812
Client ID: FB-1
Date/Time Sampled: 5/23/2017 12:40:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0812-08
Date/Time Received: 5/24/2017 1:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	18	25	10	mg/L	SM 2540 C	J	1	05/26/17 16:10	05/26/17 16:10	7050870	JPT
Inorganic Anions											
Chloride	ND	0.25	0.01	mg/L	EPA 300.0		1	05/27/17 11:47	05/30/17 19:07	7050892	SLH
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	05/27/17 11:47	05/30/17 19:07	7050892	SLH
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	05/27/17 11:47	05/30/17 19:07	7050892	SLH
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/26/17 20:23	7050803	KLH
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/24/17 17:50	05/26/17 20:23	7050803	KLH
Barium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/24/17 17:50	05/26/17 20:23	7050803	KLH
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/24/17 17:50	05/26/17 20:23	7050803	KLH
Boron	0.0158	0.0400	0.0060	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/26/17 20:23	7050803	KLH
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/24/17 17:50	05/26/17 20:23	7050803	KLH
Calcium	0.0219	0.500	0.0104	mg/L	EPA 6020B	B-01, J	1	05/24/17 17:50	05/26/17 20:23	7050803	KLH
Chromium	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	05/24/17 17:50	05/26/17 20:23	7050803	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	05/24/17 17:50	05/26/17 20:23	7050803	KLH
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	05/24/17 17:50	05/26/17 20:23	7050803	KLH
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/24/17 17:50	05/26/17 20:23	7050803	KLH
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/24/17 17:50	05/26/17 20:23	7050803	KLH
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/24/17 17:50	05/26/17 20:23	7050803	KLH
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	05/24/17 17:50	05/26/17 20:23	7050803	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 11:45	05/30/17 15:48	7050855	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

June 02, 2017

Report No.: AAE0812

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050870 - SM 2540 C											
Blank (7050870-BLK1)						Prepared & Analyzed: 05/26/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7050870-BS1)						Prepared & Analyzed: 05/26/17					
Total Dissolved Solids	399	25	10	mg/L	400.00		100	84-108			
Duplicate (7050870-DUP1)		**Source: AAE0812-02**				Prepared & Analyzed: 05/26/17					
Total Dissolved Solids	168	25	10	mg/L		134			23	10	QR-03
Duplicate (7050870-DUP2)		**Source: AAE0826-03**				Prepared & Analyzed: 05/26/17					
Total Dissolved Solids	75	25	10	mg/L		27			94	10	QR-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

June 02, 2017

Report No.: AAE0812

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050892 - EPA 300.0											
Blank (7050892-BLK1)						Prepared: 05/27/17 Analyzed: 05/30/17					
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 (7050892-BS1)						Prepared: 05/27/17 Analyzed: 05/30/17					
Chloride	10.8	0.25	0.01	mg/L	10.020		108	90-110			
Fluoride	10.6	0.30	0.004	mg/L	10.020		106	90-110			
Sulfate	11.0	1.0	0.09	mg/L	10.050		109	90-110			
Matrix Spike (7050892-MS1)		**Source: AAE0811-06**				Prepared: 05/27/17 Analyzed: 05/30/17					
Chloride	15.8	0.25	0.01	mg/L	10.020	5.70	101	90-110			
Fluoride	10.4	0.30	0.004	mg/L	10.020	0.15	102	90-110			
Sulfate	224	1.0	0.09	mg/L	10.050	235	NR	90-110			QM-02
Matrix Spike (7050892-MS2)		**Source: AAE0812-03**				Prepared: 05/27/17 Analyzed: 05/30/17					
Chloride	11.6	0.25	0.01	mg/L	10.020	1.21	104	90-110			
Fluoride	10.1	0.30	0.004	mg/L	10.020	0.006	101	90-110			
Sulfate	44.2	1.0	0.09	mg/L	10.050	37.5	66	90-110			QM-02
Matrix Spike Dup (7050892-MSD1)		**Source: AAE0811-06**				Prepared: 05/27/17 Analyzed: 05/30/17					
Chloride	15.8	0.25	0.01	mg/L	10.020	5.70	101	90-110	0.2	15	
Fluoride	10.4	0.30	0.004	mg/L	10.020	0.15	102	90-110	0.1	15	
Sulfate	224	1.0	0.09	mg/L	10.050	235	NR	90-110	0.07	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

June 02, 2017

Report No.: AAE0812

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050802 - EPA 3005A											
Blank (7050802-BLK1)						Prepared: 05/24/17 Analyzed: 05/26/17					
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	0.0019	0.0100	0.0013	mg/L							J
Lithium	ND	0.0500	0.0011	mg/L							
LCS (7050802-BS1)						Prepared: 05/24/17 Analyzed: 05/26/17					
Antimony	0.108	0.0030	0.0003	mg/L	0.10000		108	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	0.112	0.0030	0.00007	mg/L	0.10000		112	80-120			
Boron	1.09	0.0400	0.0060	mg/L	1.0000		109	80-120			
Cadmium	0.113	0.0010	0.00006	mg/L	0.10000		113	80-120			
Calcium	1.07	0.500	0.0104	mg/L	1.0000		107	80-120			
Chromium	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000		105	80-120			
Copper	0.106	0.0250	0.0003	mg/L	0.10000		106	80-120			
Lead	0.104	0.0050	0.00007	mg/L	0.10000		104	80-120			
Molybdenum	0.111	0.0100	0.0006	mg/L	0.10000		111	80-120			
Nickel	0.106	0.0100	0.0003	mg/L	0.10000		106	80-120			
Selenium	0.103	0.0100	0.0014	mg/L	0.10000		103	80-120			
Silver	0.106	0.0100	0.0003	mg/L	0.10000		106	80-120			
Thallium	0.105	0.0010	0.00005	mg/L	0.10000		105	80-120			
Vanadium	0.109	0.0100	0.0014	mg/L	0.10000		109	80-120			
Zinc	0.105	0.0100	0.0013	mg/L	0.10000		105	80-120			
Lithium	0.113	0.0500	0.0011	mg/L	0.10000		113	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 02, 2017

Report No.: AAE0812

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050802 - EPA 3005A											
Matrix Spike (7050802-MS1)		**Source: AAE0770-01**			Prepared: 05/24/17 Analyzed: 05/26/17						
Antimony	0.118	0.0030	0.0003	mg/L	0.10000	0.0097	109	75-125			
Arsenic	0.104	0.0050	0.0004	mg/L	0.10000	ND	104	75-125			
Barium	0.139	0.0100	0.0003	mg/L	0.10000	0.0376	101	75-125			
Beryllium	0.108	0.0030	0.00007	mg/L	0.10000	ND	108	75-125			
Boron	1.07	0.0400	0.0060	mg/L	1.0000	0.0084	106	75-125			
Cadmium	0.109	0.0010	0.00006	mg/L	0.10000	ND	109	75-125			
Calcium	58.2	25.0	0.522	mg/L	1.0000	58.7	NR	75-125			QM-02
Chromium	0.105	0.0100	0.0003	mg/L	0.10000	0.0007	104	75-125			
Cobalt	0.104	0.0100	0.0005	mg/L	0.10000	0.0010	103	75-125			
Copper	0.103	0.0250	0.0003	mg/L	0.10000	0.0018	101	75-125			
Lead	0.101	0.0050	0.00007	mg/L	0.10000	0.00008	101	75-125			
Molybdenum	0.113	0.0100	0.0006	mg/L	0.10000	0.0027	111	75-125			
Nickel	0.117	0.0100	0.0003	mg/L	0.10000	0.0133	104	75-125			
Selenium	0.105	0.0100	0.0014	mg/L	0.10000	ND	105	75-125			
Silver	0.104	0.0100	0.0003	mg/L	0.10000	ND	104	75-125			
Thallium	0.103	0.0010	0.00005	mg/L	0.10000	0.0003	103	75-125			
Vanadium	0.108	0.0100	0.0014	mg/L	0.10000	ND	108	75-125			
Zinc	0.144	0.0100	0.0013	mg/L	0.10000	0.0420	102	75-125			
Lithium	0.113	0.0500	0.0011	mg/L	0.10000	0.0026	110	75-125			
Matrix Spike Dup (7050802-MSD1)		**Source: AAE0770-01**			Prepared: 05/24/17 Analyzed: 05/26/17						
Antimony	0.119	0.0030	0.0003	mg/L	0.10000	0.0097	109	75-125	0.6	20	
Arsenic	0.107	0.0050	0.0004	mg/L	0.10000	ND	107	75-125	2	20	
Barium	0.140	0.0100	0.0003	mg/L	0.10000	0.0376	102	75-125	0.5	20	
Beryllium	0.105	0.0030	0.00007	mg/L	0.10000	ND	105	75-125	3	20	
Boron	1.08	0.0400	0.0060	mg/L	1.0000	0.0084	107	75-125	1	20	
Cadmium	0.108	0.0010	0.00006	mg/L	0.10000	ND	108	75-125	0.6	20	
Calcium	58.6	25.0	0.522	mg/L	1.0000	58.7	NR	75-125	0.7	20	QM-02
Chromium	0.107	0.0100	0.0003	mg/L	0.10000	0.0007	107	75-125	2	20	
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000	0.0010	103	75-125	0.3	20	
Copper	0.104	0.0250	0.0003	mg/L	0.10000	0.0018	102	75-125	1	20	
Lead	0.0991	0.0050	0.00007	mg/L	0.10000	0.00008	99	75-125	2	20	
Molybdenum	0.113	0.0100	0.0006	mg/L	0.10000	0.0027	111	75-125	0.05	20	
Nickel	0.118	0.0100	0.0003	mg/L	0.10000	0.0133	104	75-125	0.5	20	
Selenium	0.107	0.0100	0.0014	mg/L	0.10000	ND	107	75-125	2	20	
Silver	0.105	0.0100	0.0003	mg/L	0.10000	ND	105	75-125	1	20	
Thallium	0.101	0.0010	0.00005	mg/L	0.10000	0.0003	101	75-125	2	20	
Vanadium	0.112	0.0100	0.0014	mg/L	0.10000	ND	112	75-125	4	20	
Zinc	0.144	0.0100	0.0013	mg/L	0.10000	0.0420	102	75-125	0.5	20	
Lithium	0.109	0.0500	0.0011	mg/L	0.10000	0.0026	107	75-125	3	20	

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 02, 2017

Report No.: AAE0812

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050802 - EPA 3005A											
Post Spike (7050802-PS1)			**Source: AAE0770-01**			Prepared: 05/24/17 Analyzed: 05/26/17					
Antimony	118			ug/L	100.00	9.73	108	80-120			
Arsenic	107			ug/L	100.00	0.214	107	80-120			
Barium	140			ug/L	100.00	37.6	102	80-120			
Beryllium	106			ug/L	100.00	0.0088	106	80-120			
Boron	1080			ug/L	1000.0	8.35	108	80-120			
Cadmium	109			ug/L	100.00	0.0285	109	80-120			
Calcium	59900			ug/L	1000.0	58700	118	80-120			
Chromium	106			ug/L	100.00	0.661	105	80-120			
Cobalt	105			ug/L	100.00	1.02	104	80-120			
Copper	102			ug/L	100.00	1.80	100	80-120			
Lead	101			ug/L	100.00	0.0818	101	80-120			
Molybdenum	114			ug/L	100.00	2.71	112	80-120			
Nickel	117			ug/L	100.00	13.3	104	80-120			
Selenium	107			ug/L	100.00	0.739	106	80-120			
Silver	104			ug/L	100.00	0.285	104	80-120			
Thallium	102			ug/L	100.00	0.298	101	80-120			
Vanadium	111			ug/L	100.00	0.909	110	80-120			
Zinc	146			ug/L	100.00	42.0	104	80-120			
Lithium	110			ug/L	100.00	2.63	107	80-120			
Batch 7050803 - EPA 3005A											
Blank (7050803-BLK1)						Prepared: 05/24/17 Analyzed: 05/26/17					
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	0.0126	0.500	0.0104	mg/L							J
Chromium	ND	0.0100	0.0003	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	0.0003	0.0250	0.0003	mg/L							J
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0006	mg/L							
Nickel	ND	0.0100	0.0003	mg/L							
Selenium	ND	0.0100	0.0014	mg/L							
Silver	ND	0.0100	0.0003	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0014	mg/L							

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 02, 2017

Report No.: AAE0812

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050803 - EPA 3005A											
Blank (7050803-BLK1)					Prepared: 05/24/17 Analyzed: 05/26/17						
Zinc	0.0017	0.0100	0.0013	mg/L							J
Lithium	ND	0.0500	0.0011	mg/L							
LCS (7050803-BS1)					Prepared: 05/24/17 Analyzed: 05/26/17						
Antimony	0.108	0.0030	0.0003	mg/L	0.10000		108	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	0.108	0.0030	0.00007	mg/L	0.10000		108	80-120			
Boron	1.08	0.0400	0.0060	mg/L	1.0000		108	80-120			
Cadmium	0.107	0.0010	0.00006	mg/L	0.10000		107	80-120			
Calcium	1.05	0.500	0.0104	mg/L	1.0000		105	80-120			
Chromium	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Cobalt	0.0992	0.0100	0.0005	mg/L	0.10000		99	80-120			
Copper	0.101	0.0250	0.0003	mg/L	0.10000		101	80-120			
Lead	0.0993	0.0050	0.00007	mg/L	0.10000		99	80-120			
Molybdenum	0.107	0.0100	0.0006	mg/L	0.10000		107	80-120			
Nickel	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Selenium	0.104	0.0100	0.0014	mg/L	0.10000		104	80-120			
Silver	0.107	0.0100	0.0003	mg/L	0.10000		107	80-120			
Thallium	0.100	0.0010	0.00005	mg/L	0.10000		100	80-120			
Vanadium	0.104	0.0100	0.0014	mg/L	0.10000		104	80-120			
Zinc	0.104	0.0100	0.0013	mg/L	0.10000		104	80-120			
Lithium	0.110	0.0500	0.0011	mg/L	0.10000		110	80-120			
Matrix Spike (7050803-MS1)			**Source: AAE0826-01**		Prepared: 05/24/17 Analyzed: 05/26/17						
Antimony	0.110	0.0030	0.0003	mg/L	0.10000	ND	110	75-125			
Arsenic	0.109	0.0050	0.0004	mg/L	0.10000	0.0006	109	75-125			
Barium	0.125	0.0100	0.0003	mg/L	0.10000	0.0217	103	75-125			
Beryllium	0.109	0.0030	0.00007	mg/L	0.10000	ND	109	75-125			
Boron	1.07	0.0400	0.0060	mg/L	1.0000	0.0133	106	75-125			
Cadmium	0.111	0.0010	0.00006	mg/L	0.10000	ND	111	75-125			
Calcium	62.8	25.0	0.522	mg/L	1.0000	64.0	NR	75-125			
Chromium	0.108	0.0100	0.0003	mg/L	0.10000	0.0011	107	75-125			
Cobalt	0.107	0.0100	0.0005	mg/L	0.10000	ND	107	75-125			
Copper	0.105	0.0250	0.0003	mg/L	0.10000	0.0003	104	75-125			
Lead	0.102	0.0050	0.00007	mg/L	0.10000	0.0001	102	75-125			
Molybdenum	0.115	0.0100	0.0006	mg/L	0.10000	0.0020	113	75-125			
Nickel	0.107	0.0100	0.0003	mg/L	0.10000	0.0009	106	75-125			
Selenium	0.108	0.0100	0.0014	mg/L	0.10000	ND	108	75-125			
Silver	0.104	0.0100	0.0003	mg/L	0.10000	ND	104	75-125			

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 02, 2017

Report No.: AAE0812

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050803 - EPA 3005A											
Matrix Spike (7050803-MS1)		**Source: AAE0826-01**			Prepared: 05/24/17 Analyzed: 05/26/17						
Thallium	0.104	0.0010	0.00005	mg/L	0.10000	0.0001	104	75-125			
Vanadium	0.112	0.0100	0.0014	mg/L	0.10000	ND	112	75-125			
Zinc	0.107	0.0100	0.0013	mg/L	0.10000	0.0029	104	75-125			
Lithium	0.105	0.0500	0.0011	mg/L	0.10000	ND	105	75-125			
Matrix Spike Dup (7050803-MSD1)		**Source: AAE0826-01**			Prepared: 05/24/17 Analyzed: 05/26/17						
Antimony	0.109	0.0030	0.0003	mg/L	0.10000	ND	109	75-125	0.6	20	
Arsenic	0.104	0.0050	0.0004	mg/L	0.10000	0.0006	104	75-125	5	20	
Barium	0.124	0.0100	0.0003	mg/L	0.10000	0.0217	102	75-125	0.6	20	
Beryllium	0.106	0.0030	0.00007	mg/L	0.10000	ND	106	75-125	3	20	
Boron	1.07	0.0400	0.0060	mg/L	1.0000	0.0133	106	75-125	0.09	20	
Cadmium	0.105	0.0010	0.00006	mg/L	0.10000	ND	105	75-125	5	20	
Calcium	63.4	25.0	0.522	mg/L	1.0000	64.0	NR	75-125	0.9	20	QM-02
Chromium	0.107	0.0100	0.0003	mg/L	0.10000	0.0011	106	75-125	0.5	20	
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000	ND	105	75-125	2	20	
Copper	0.102	0.0250	0.0003	mg/L	0.10000	0.0003	101	75-125	3	20	
Lead	0.100	0.0050	0.00007	mg/L	0.10000	0.0001	100	75-125	2	20	
Molybdenum	0.112	0.0100	0.0006	mg/L	0.10000	0.0020	110	75-125	2	20	
Nickel	0.105	0.0100	0.0003	mg/L	0.10000	0.0009	104	75-125	2	20	
Selenium	0.106	0.0100	0.0014	mg/L	0.10000	ND	106	75-125	2	20	
Silver	0.105	0.0100	0.0003	mg/L	0.10000	ND	105	75-125	0.4	20	
Thallium	0.101	0.0010	0.00005	mg/L	0.10000	0.0001	101	75-125	3	20	
Vanadium	0.111	0.0100	0.0014	mg/L	0.10000	ND	111	75-125	0.9	20	
Zinc	0.104	0.0100	0.0013	mg/L	0.10000	0.0029	101	75-125	3	20	
Lithium	0.107	0.0500	0.0011	mg/L	0.10000	ND	107	75-125	2	20	
Post Spike (7050803-PS1)		**Source: AAE0826-01**			Prepared: 05/24/17 Analyzed: 05/26/17						
Antimony	108			ug/L	100.00	0.289	108	80-120			
Arsenic	105			ug/L	100.00	0.554	105	80-120			
Barium	123			ug/L	100.00	21.7	101	80-120			
Beryllium	107			ug/L	100.00	0.0052	107	80-120			
Boron	1050			ug/L	1000.0	13.3	104	80-120			
Cadmium	106			ug/L	100.00	-0.105	106	80-120			
Calcium	62800			ug/L	1000.0	64000	NR	80-120			QM-02
Chromium	106			ug/L	100.00	1.13	105	80-120			
Cobalt	101			ug/L	100.00	0.155	101	80-120			
Copper	100			ug/L	100.00	0.276	100	80-120			
Lead	97.8			ug/L	100.00	0.140	98	80-120			
Molybdenum	111			ug/L	100.00	1.99	109	80-120			
Nickel	101			ug/L	100.00	0.915	100	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 02, 2017

Report No.: AAE0812

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050803 - EPA 3005A											
Post Spike (7050803-PS1)			**Source: AAE0826-01**			Prepared: 05/24/17 Analyzed: 05/26/17					
Selenium	103			ug/L	100.00	0.641	103	80-120			
Silver	103			ug/L	100.00	0.0043	103	80-120			
Thallium	100			ug/L	100.00	0.141	100	80-120			
Vanadium	108			ug/L	100.00	0.793	108	80-120			
Zinc	102			ug/L	100.00	2.92	99	80-120			
Lithium	105			ug/L	100.00	0.587	104	80-120			
Batch 7050855 - EPA 7470A											
Blank (7050855-BLK1)						Prepared & Analyzed: 05/30/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7050855-BS1)						Prepared & Analyzed: 05/30/17					
Mercury	0.00235	0.00050	0.000041	mg/L	2.5000E-3		94	80-120			
Matrix Spike (7050855-MS1)			**Source: AAE0811-07**			Prepared & Analyzed: 05/30/17					
Mercury	0.00235	0.00050	0.000041	mg/L	2.5000E-3	ND	94	75-125			
Matrix Spike Dup (7050855-MSD1)			**Source: AAE0811-07**			Prepared & Analyzed: 05/30/17					
Mercury	0.00233	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125	0.8	20	
Post Spike (7050855-PS1)			**Source: AAE0811-07**			Prepared & Analyzed: 05/30/17					
Mercury	1.67			ug/L	1.6667	-0.00219	100	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 02, 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 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: Lauren Petty
CC: Maria Padilla, Heath McCorkle
REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com
PROJECT NAME/STATE: Plant Hammond - AP 1&2
PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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		
05/23/17	9:40	W		x	HGWA-4	4		1	1	2	1	
05/23/17	9:52	W		x	HGWA-5	4		1	1	2	2	
05/23/17	10:55	W		x	HGWA-6	4		1	1	2	3	
05/23/17	11:00	W		x	HGWC-7	4		1	1	2	4	
05/23/17	12:25	W		x	HGWC-8	4		1	1	2	5	
05/23/17	13:55	W		x	HGWC-9	6		1	1	4	6	2nd radium volume collected for Lab QA/QC
05/23/17	--	W		x	DUP-1	4		1	1	2	7	
05/23/17	12:40	W		x	FB-1	4		1	1	2	8	
												Please include level IV data validation for the samples included on this chain of custody

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: Myles Rogers MR, Markevious Thomas MT
DATE/TIME: 5/23/2017 - 1400
RELINQUISHED BY: Will Vigo (ERM)
DATE/TIME: 5/23/17 2100
RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:
RECEIVED BY/LAB: [signature]
DATE/TIME: 05/24/17 1305
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
Packed: No NA
Ice: Yes No NA
Temperature: 1.3 Min 1.3 Max
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AAE0812
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: 5/25/2017 9:47:13AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 05/24/17 13:05

Work Order: AAE0812
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 8 **#Containers:** 34

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	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

June 16, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAE0812 Plant Hammond
Pace Project No.: 30219829

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on May 25, 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: AAE0812 Plant Hammond
Pace Project No.: 30219829

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: AAE0812 Plant Hammond
Pace Project No.: 30219829

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30219829001	**HGWA-4**	Water	05/23/17 09:40	05/25/17 10:00
30219829002	**HGWA-5**	Water	05/23/17 09:52	05/25/17 10:00
30219829003	**HGWA-6**	Water	05/23/17 10:55	05/25/17 10:00
30219829004	**HGWC-7**	Water	05/23/17 11:00	05/25/17 10:00
30219829005	**HGWC-8**	Water	05/23/17 12:25	05/25/17 10:00
30219829006	**HGWC-9**	Water	05/23/17 13:55	05/25/17 10:00
30219829007	**Dup-1**	Water	05/23/17 00:00	05/25/17 10:00
30219829008	**FB-1**	Water	05/23/17 12:40	05/25/17 10:00

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

SAMPLE ANALYTE COUNT

Project: AAE0812 Plant Hammond
Pace Project No.: 30219829

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30219829001	**HGWA-4**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30219829002	**HGWA-5**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30219829003	**HGWA-6**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30219829004	**HGWC-7**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30219829005	**HGWC-8**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30219829006	**HGWC-9**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30219829007	**Dup-1**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30219829008	**FB-1**	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: AAE0812 Plant Hammond
Pace Project No.: 30219829

Sample: HGWA-4 **Lab ID: 30219829001** Collected: 05/23/17 09:40 Received: 05/25/17 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	**0.0636 ± 0.0986 (0.213) C:86% T:NA**	pCi/L	06/05/17 08:31	13982-63-3	
Radium-228	EPA 9320	**0.486 ± 0.377 (0.750) C:82% T:86%**	pCi/L	06/12/17 16:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.550 ± 0.476 (0.963)**	pCi/L	06/14/17 09:40	7440-14-4	

Sample: HGWA-5 **Lab ID: 30219829002** Collected: 05/23/17 09:52 Received: 05/25/17 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	**0.156 ± 0.118 (0.186) C:90% T:NA**	pCi/L	06/05/17 08:30	13982-63-3	
Radium-228	EPA 9320	**0.321 ± 0.358 (0.752) C:79% T:89%**	pCi/L	06/12/17 16:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.477 ± 0.476 (0.938)**	pCi/L	06/14/17 09:40	7440-14-4	

Sample: HGWA-6 **Lab ID: 30219829003** Collected: 05/23/17 10:55 Received: 05/25/17 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	**0.136 ± 0.111 (0.184) C:90% T:NA**	pCi/L	06/05/17 08:30	13982-63-3	
Radium-228	EPA 9320	**0.172 ± 0.352 (0.775) C:77% T:88%**	pCi/L	06/12/17 16:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.308 ± 0.463 (0.959)**	pCi/L	06/14/17 09:40	7440-14-4	

Sample: HGWC-7 **Lab ID: 30219829004** Collected: 05/23/17 11:00 Received: 05/25/17 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	**0.129 ± 0.112 (0.195) C:88% T:NA**	pCi/L	06/05/17 08:30	13982-63-3	
Radium-228	EPA 9320	**0.492 ± 0.368 (0.725) C:79% T:88%**	pCi/L	06/12/17 16:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.621 ± 0.480 (0.920)**	pCi/L	06/14/17 09:40	7440-14-4	

Sample: HGWC-8 **Lab ID: 30219829005** Collected: 05/23/17 12:25 Received: 05/25/17 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	**0.167 ± 0.134 (0.238) C:88% T:NA**	pCi/L	06/05/17 08:30	13982-63-3	
Radium-228	EPA 9320	**0.538 ± 0.395 (0.774) C:79% T:82%**	pCi/L	06/12/17 16:00	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: AAE0812 Plant Hammond
Pace Project No.: 30219829

Sample: HGWC-8 **Lab ID: 30219829005** Collected: 05/23/17 12:25 Received: 05/25/17 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	**0.705 ± 0.529 (1.01)**	pCi/L	06/14/17 09:40	7440-14-4	

Sample: HGWC-9 **Lab ID: 30219829006** Collected: 05/23/17 13:55 Received: 05/25/17 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	**0.200 ± 0.130 (0.183) C:87% T:NA**	pCi/L	06/05/17 08:30	13982-63-3	
Radium-228	EPA 9320	**0.724 ± 0.433 (0.810) C:78% T:82%**	pCi/L	06/12/17 16:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.924 ± 0.563 (0.993)**	pCi/L	06/14/17 09:40	7440-14-4	

Sample: Dup-1 **Lab ID: 30219829007** Collected: 05/23/17 00:00 Received: 05/25/17 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	**0.164 ± 0.131 (0.226) C:82% T:NA**	pCi/L	06/05/17 08:30	13982-63-3	
Radium-228	EPA 9320	**0.523 ± 0.360 (0.693) C:82% T:85%**	pCi/L	06/12/17 16:01	15262-20-1	
Total Radium	Total Radium Calculation	**0.687 ± 0.491 (0.919)**	pCi/L	06/14/17 09:40	7440-14-4	

Sample: FB-1 **Lab ID: 30219829008** Collected: 05/23/17 12:40 Received: 05/25/17 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	**-0.0850 ± 0.0746 (0.274) C:90% T:NA**	pCi/L	06/05/17 08:30	13982-63-3	
Radium-228	EPA 9320	**0.839 ± 0.462 (0.829) C:80% T:70%**	pCi/L	06/12/17 16:01	15262-20-1	
Total Radium	Total Radium Calculation	**0.839 ± 0.537 (1.10)**	pCi/L	06/14/17 09:40	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: AAE0812 Plant Hammond
Pace Project No.: 30219829

QC Batch: 259989 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30219829001, 30219829002, 30219829003, 30219829004, 30219829005, 30219829006, 30219829007, 30219829008

METHOD BLANK: 1280842 Matrix: Water
Associated Lab Samples: 30219829001, 30219829002, 30219829003, 30219829004, 30219829005, 30219829006, 30219829007, 30219829008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.138 ± 0.115 (0.200) C:93% T:NA	pCi/L	06/05/17 08:31	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAE0812 Plant Hammond
Pace Project No.: 30219829

QC Batch: 260239 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30219829001, 30219829002, 30219829003, 30219829004, 30219829005, 30219829006, 30219829007, 30219829008

METHOD BLANK: 1281815 Matrix: Water
Associated Lab Samples: 30219829001, 30219829002, 30219829003, 30219829004, 30219829005, 30219829006, 30219829007, 30219829008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.305 ± 0.349 (0.735) C:84% T:85%	pCi/L	06/12/17 15:58	

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: AAE0812 Plant Hammond
Pace Project No.: 30219829

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#: 30219829

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAE0812 Workorder Name: Plant Hammond Owner Received Date: Results Requested By: 6/16/2017

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	HGWA-4	G	5/23/2017 9:40	AAE0812-01	GW	2	X	
2	HGWA-5	G	5/23/2017 9:52	AAE0812-02	GW	2	X	
3	HGWA-6	G	5/23/2017 10:55	AAE0812-03	GW	2	X	
4	HGWC-7	G	5/23/2017 11:00	AAE0812-04	GW	2	X	
5	HGWC-8	G	5/23/2017 12:25	AAE0812-05	GW	2	X	
6	HGWC-9	G	5/23/2017 13:55	AAE0812-06	GW	4	X	
7	Dup-1	G	5/23/2017 0:00	AAE0812-07	GW	2	X	
8	FB-1	G	5/23/2017 12:40	AAE0812-08	W	2	X	
9								
10								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	5/24/17	Karen Sim	5/25/17 1000	EQuIS deliverable required (Profile 7564)
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.

30219829

CHAIN OF COUSTODY 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: Lauren Petty

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Part 257 App. III & IV (EPA 6020/7470) (Container type: P; Preservation: 3)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C) (Container type: P; Preservation: 7)	Radium 226 & 228 (SW-846 9315/9320) (Container type: P; Preservation: 3)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
05/23/17	8:40	W		x	HGWA-4	4	1	1	2	1	
05/23/17	9:52	W		x	HGWA-5	4	1	1	2	2	
05/23/17	10:55	W		x	HGWA-6	4	1	1	2	3	
05/23/17	11:00	W		x	HGWC-7	4	1	1	2	4	
05/23/17	12:25	W		x	HGWC-8	4	1	1	2	5	
05/23/17	13:55	W		x	HGWC-9	6	1	1	4	6	2nd radium volume collected for Lab QA/QC
05/23/17	--	W		x	DUP-1	4	1	1	2	7	
05/23/17	12:40	W		x	FB-1	4	1	1	2	8	

Please include level IV data validation for the samples included on this chain of custody

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: Myles Rogers MR, Markevious Thomas MT — DATE/TIME: 5/23/2017 - 1400

RELINQUISHED BY: Will Vigo (ERM) — DATE/TIME: 5/23/17 2100

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: M Zalman — DATE/TIME: 05/24/17 1305

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

pH checked: Yes No NA — Ice: Yes No NA — Temperature: 1.3 Min 1.3 Max — Custody Seal: Intact Broken Not Present — Cooler ID:

FOR LAB USE ONLY
LAB #: AAE0812
Entered into LIMS: MR
Tracking #:

20170523 AP 1&2 COC.xlsx

KEH

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

30219829

Client Name: Pace Georgia Project #

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

Tracking #: 612510456 75

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 5/25/17

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: 5/25/17

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:	JLW
Date:	6/7/2017
Worklist:	35948
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1281815
MB concentration:	0.305
M/B Counting Uncertainty:	0.345
MB MDC:	0.735
MB Numerical Performance Indicator:	1.73
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS35948	LCSD35948
Count Date:	6/12/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	24.308	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.803	
Target Conc. (pCi/L, g, F):	6.055	
Uncertainty (Calculated):	0.436	
Result (pCi/L, g, F):	6.239	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.733	
Numerical Performance Indicator:	0.42	
Percent Recovery:	103.04%	
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.:	30219829006	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30219829006DUP	
Sample Result (pCi/L, g, F):	0.724	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.413	
Sample Duplicate Result (pCi/L, g, F):	0.368	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.313	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	1.346	30219829006
Duplicate RPD:	65.17%	30219829006DUP
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:	LAL
Date:	6/1/2017
Worklist:	35893
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1280842
MB concentration:	0.138
M/B Counting Uncertainty:	0.113
MB MDC:	0.200
MB Numerical Performance Indicator:	2.39
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS35893	LCSD35893
Count Date:	6/5/2017	
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):	15.805	
Uncertainty (Calculated):	0.743	
Result (pCi/L, g, F):	14.596	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.917	
Numerical Performance Indicator:	-2.01	
Percent Recovery:	92.35%	
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.:	30219829006	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30219829006DUP	
Sample Result (pCi/L, g, F):	0.200	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.127	
Sample Duplicate Result (pCi/L, g, F):	0.144	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.119	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.627	30219829006
Duplicate RPD:	32.31%	30219829006DUP
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, 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: AAE0858
June 05, 2017
Project: CCR Event
Project #:Plant Hammond

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 05, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWC-10	AAE0858-01	Water	05/24/17 09:55	05/25/17 12:40
HGWC-11	AAE0858-02	Water	05/24/17 11:25	05/25/17 12:40
HGWC-12	AAE0858-03	Water	05/24/17 12:35	05/25/17 12:40
HGWC-13	AAE0858-04	Water	05/24/17 11:30	05/25/17 12:40
HGWC-14	AAE0858-05	Water	05/24/17 14:50	05/25/17 12:40
HGWC-15	AAE0858-06	Water	05/24/17 13:02	05/25/17 12:40
HGWC-16	AAE0858-07	Water	05/24/17 14:40	05/25/17 12:40
Dup-2	AAE0858-08	Water	05/24/17 00:00	05/25/17 12:40
FERB-1	AAE0858-09	Water	05/24/17 14:50	05/25/17 12:40
FB-2	AAE0858-10	Water	05/24/17 15:10	05/25/17 12:40
FERB-2	AAE0858-11	Water	05/24/17 15:15	05/25/17 12:40

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 05, 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

June 05, 2017

Report No.: AAE0858
Client ID: HGWC-10
Date/Time Sampled: 5/24/2017 9:55:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0858-01
Date/Time Received: 5/25/2017 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	696	25	10	mg/L	SM 2540 C		1	05/30/17 18:00	05/30/17 18:00	7050912	JPT
Inorganic Anions											
Chloride	81	2.5	0.13	mg/L	EPA 300.0		10	05/31/17 15:00	06/01/17 20:13	7050979	RLC
Fluoride	0.13	0.30	0.004	mg/L	EPA 300.0	J	1	05/31/17 15:00	06/01/17 01:58	7050979	RLC
Sulfate	190	10	0.92	mg/L	EPA 300.0		10	05/31/17 15:00	06/01/17 20:13	7050979	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 22:37	7050846	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 22:37	7050846	CSW
Barium	0.0996	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 22:37	7050846	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 22:37	7050846	CSW
Boron	0.814	0.0400	0.0060	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 22:37	7050846	CSW
Cadmium	0.0002	0.0010	0.00006	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 22:37	7050846	CSW
Calcium	171	25.0	0.522	mg/L	EPA 6020B		50	05/25/17 17:00	05/30/17 22:43	7050846	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 22:37	7050846	CSW
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 22:37	7050846	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 22:37	7050846	CSW
Molybdenum	0.0014	0.0100	0.0006	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 22:37	7050846	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 22:37	7050846	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 22:37	7050846	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 22:37	7050846	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 14:15	05/30/17 17:29	7050856	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

June 05, 2017

Report No.: AAE0858
Client ID: HGWC-11
Date/Time Sampled: 5/24/2017 11:25:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0858-02
Date/Time Received: 5/25/2017 12:40:00PM

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	05/30/17 18:00	05/30/17 18:00	7050912	JPT
Inorganic Anions											
Chloride	69	2.5	0.13	mg/L	EPA 300.0		10	05/31/17 15:00	06/01/17 20:34	7050979	RLC
Fluoride	0.35	0.30	0.004	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 02:19	7050979	RLC
Sulfate	230	10	0.92	mg/L	EPA 300.0		10	05/31/17 15:00	06/01/17 20:34	7050979	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:00	7050846	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:00	7050846	CSW
Barium	0.0437	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:00	7050846	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:00	7050846	CSW
Boron	2.29	0.0400	0.0060	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:00	7050846	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:00	7050846	CSW
Calcium	117	25.0	0.522	mg/L	EPA 6020B		50	05/25/17 17:00	05/30/17 23:05	7050846	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:00	7050846	CSW
Cobalt	0.0008	0.0100	0.0005	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:00	7050846	CSW
Lead	0.00009	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:00	7050846	CSW
Molybdenum	0.0373	0.0100	0.0006	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:00	7050846	CSW
Selenium	0.0038	0.0100	0.0014	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:00	7050846	CSW
Thallium	0.00008	0.0010	0.00005	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:00	7050846	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:00	7050846	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 14:15	05/30/17 17:32	7050856	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

June 05, 2017

Report No.: AAE0858
Client ID: HGWC-12
Date/Time Sampled: 5/24/2017 12:35:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0858-03
Date/Time Received: 5/25/2017 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	803	25	10	mg/L	SM 2540 C		1	05/30/17 18:00	05/30/17 18:00	7050912	JPT
Inorganic Anions											
Chloride	120	2.5	0.13	mg/L	EPA 300.0		10	05/31/17 15:00	06/01/17 20:54	7050979	RLC
Fluoride	0.34	0.30	0.004	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 02:39	7050979	RLC
Sulfate	210	10	0.92	mg/L	EPA 300.0		10	05/31/17 15:00	06/01/17 20:54	7050979	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:11	7050846	CSW
Arsenic	0.0022	0.0050	0.0004	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:11	7050846	CSW
Barium	0.106	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:11	7050846	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:11	7050846	CSW
Boron	2.95	0.0400	0.0060	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:11	7050846	CSW
Cadmium	0.00009	0.0010	0.00006	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:11	7050846	CSW
Calcium	158	25.0	0.522	mg/L	EPA 6020B		50	05/25/17 17:00	05/30/17 23:17	7050846	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:11	7050846	CSW
Cobalt	0.0015	0.0100	0.0005	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:11	7050846	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:11	7050846	CSW
Molybdenum	0.0470	0.0100	0.0006	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:11	7050846	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:11	7050846	CSW
Thallium	0.00009	0.0010	0.00005	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:11	7050846	CSW
Lithium	0.0105	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:11	7050846	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 14:15	05/30/17 17:34	7050856	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

June 05, 2017

Report No.: AAE0858
Client ID: HGWC-13
Date/Time Sampled: 5/24/2017 11:30:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0858-04
Date/Time Received: 5/25/2017 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	377	25	10	mg/L	SM 2540 C		1	05/30/17 18:00	05/30/17 18:00	7050912	JPT
Inorganic Anions											
Chloride	50	0.25	0.01	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 04:23	7050979	RLC
Fluoride	0.54	0.30	0.004	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 04:23	7050979	RLC
Sulfate	110	10	0.92	mg/L	EPA 300.0		10	05/31/17 15:00	06/01/17 21:15	7050979	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:23	7050846	CSW
Arsenic	0.393	0.0050	0.0004	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:23	7050846	CSW
Barium	0.0627	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:23	7050846	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:23	7050846	CSW
Boron	1.74	0.0400	0.0060	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:23	7050846	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:23	7050846	CSW
Calcium	77.1	25.0	0.522	mg/L	EPA 6020B		50	05/25/17 17:00	05/30/17 23:28	7050846	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:23	7050846	CSW
Cobalt	0.0022	0.0100	0.0005	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:23	7050846	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:23	7050846	CSW
Molybdenum	0.0400	0.0100	0.0006	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:23	7050846	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:23	7050846	CSW
Thallium	0.0003	0.0010	0.00005	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:23	7050846	CSW
Lithium	0.0317	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:23	7050846	CSW
Mercury	0.00005	0.00050	0.000041	mg/L	EPA 7470A	J	1	05/30/17 14:15	05/30/17 17:37	7050856	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

June 05, 2017

Report No.: AAE0858
Client ID: HGWC-14
Date/Time Sampled: 5/24/2017 2:50:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0858-05
Date/Time Received: 5/25/2017 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	3140	25	10	mg/L	SM 2540 C		1	05/30/17 18:00	05/30/17 18:00	7050912	JPT
Inorganic Anions											
Chloride	510	25	1.3	mg/L	EPA 300.0		100	05/31/17 15:00	06/01/17 21:36	7050979	RLC
Fluoride	0.32	0.30	0.004	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 04:44	7050979	RLC
Sulfate	1400	100	9.2	mg/L	EPA 300.0		100	05/31/17 15:00	06/01/17 21:36	7050979	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:34	7050846	CSW
Arsenic	0.0048	0.0050	0.0004	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:34	7050846	CSW
Barium	0.0228	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:34	7050846	CSW
Beryllium	0.0005	0.0030	0.00007	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:34	7050846	CSW
Boron	25.8	2.00	0.302	mg/L	EPA 6020B		50	05/25/17 17:00	05/30/17 23:40	7050846	CSW
Cadmium	0.0001	0.0010	0.00006	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:34	7050846	CSW
Calcium	617	250	5.22	mg/L	EPA 6020B		500	05/25/17 17:00	05/31/17 14:48	7050846	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:34	7050846	CSW
Cobalt	0.0279	0.0100	0.0005	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:34	7050846	CSW
Lead	0.0016	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:34	7050846	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:34	7050846	CSW
Selenium	0.0083	0.0100	0.0014	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:34	7050846	CSW
Thallium	0.0003	0.0010	0.00005	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:34	7050846	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:34	7050846	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 14:15	05/30/17 17:39	7050856	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

June 05, 2017

Report No.: AAE0858
Client ID: HGWC-15
Date/Time Sampled: 5/24/2017 1:02:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0858-06
Date/Time Received: 5/25/2017 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1320	25	10	mg/L	SM 2540 C		1	05/30/17 18:00	05/30/17 18:00	7050912	JPT
Inorganic Anions											
Chloride	240	5.0	0.26	mg/L	EPA 300.0		20	05/31/17 15:00	06/01/17 21:56	7050979	RLC
Fluoride	0.31	0.30	0.004	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 05:06	7050979	RLC
Sulfate	500	20	1.8	mg/L	EPA 300.0		20	05/31/17 15:00	06/01/17 21:56	7050979	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:45	7050846	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:45	7050846	CSW
Barium	0.0283	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:45	7050846	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:45	7050846	CSW
Boron	2.26	0.0400	0.0060	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:45	7050846	CSW
Cadmium	0.0041	0.0010	0.00006	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:45	7050846	CSW
Calcium	265	25.0	0.522	mg/L	EPA 6020B		50	05/25/17 17:00	05/30/17 23:51	7050846	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:45	7050846	CSW
Cobalt	0.0446	0.0100	0.0005	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:45	7050846	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:45	7050846	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:45	7050846	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:45	7050846	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/25/17 17:00	05/30/17 23:45	7050846	CSW
Lithium	0.0029	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/30/17 23:45	7050846	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 14:15	05/30/17 17:46	7050856	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

June 05, 2017

Report No.: AAE0858
Client ID: HGWC-16
Date/Time Sampled: 5/24/2017 2:40:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0858-07
Date/Time Received: 5/25/2017 12:40:00PM

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	05/30/17 18:00	05/30/17 18:00	7050912	JPT
Inorganic Anions											
Chloride	44	0.25	0.01	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 05:27	7050979	RLC
Fluoride	0.46	0.30	0.004	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 05:27	7050979	RLC
Sulfate	230	10	0.92	mg/L	EPA 300.0		10	05/31/17 15:00	06/01/17 22:17	7050979	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:08	7050846	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:08	7050846	CSW
Barium	0.106	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:08	7050846	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:08	7050846	CSW
Boron	1.67	0.0400	0.0060	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:08	7050846	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:08	7050846	CSW
Calcium	153	25.0	0.522	mg/L	EPA 6020B		50	05/25/17 17:00	05/31/17 00:14	7050846	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:08	7050846	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:08	7050846	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/31/17 00:08	7050846	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:08	7050846	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:08	7050846	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:08	7050846	CSW
Lithium	0.0029	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/31/17 00:08	7050846	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 14:15	05/30/17 17:48	7050856	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

June 05, 2017

Report No.: AAE0858
Client ID: Dup-2
Date/Time Sampled: 5/24/2017 12:00:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0858-08
Date/Time Received: 5/25/2017 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	366	25	10	mg/L	SM 2540 C		1	05/30/17 18:00	05/30/17 18:00	7050912	JPT
Inorganic Anions											
Chloride	50	0.25	0.01	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 05:48	7050979	RLC
Fluoride	0.51	0.30	0.004	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 05:48	7050979	RLC
Sulfate	120	10	0.92	mg/L	EPA 300.0		10	05/31/17 15:00	06/01/17 22:38	7050979	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:20	7050846	CSW
Arsenic	0.350	0.0050	0.0004	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:20	7050846	CSW
Barium	0.0647	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:20	7050846	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:20	7050846	CSW
Boron	1.87	0.0400	0.0060	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:20	7050846	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:20	7050846	CSW
Calcium	80.7	25.0	0.522	mg/L	EPA 6020B		50	05/25/17 17:00	05/31/17 00:25	7050846	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:20	7050846	CSW
Cobalt	0.0023	0.0100	0.0005	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/31/17 00:20	7050846	CSW
Lead	0.00007	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/31/17 00:20	7050846	CSW
Molybdenum	0.0417	0.0100	0.0006	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:20	7050846	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:20	7050846	CSW
Thallium	0.0004	0.0010	0.00005	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/31/17 00:20	7050846	CSW
Lithium	0.0335	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/31/17 00:20	7050846	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 14:15	05/30/17 17:51	7050856	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

June 05, 2017

Report No.: AAE0858
Client ID: FERB-1
Date/Time Sampled: 5/24/2017 2:50:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0858-09
Date/Time Received: 5/25/2017 12:40:00PM

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	05/30/17 18:00	05/30/17 18:00	7050912	JPT
Inorganic Anions											
Chloride	ND	0.25	0.01	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 06:09	7050979	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 06:09	7050979	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 06:09	7050979	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:31	7050846	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:31	7050846	CSW
Barium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:31	7050846	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:31	7050846	CSW
Boron	0.0091	0.0400	0.0060	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/31/17 00:31	7050846	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:31	7050846	CSW
Calcium	0.0639	0.500	0.0104	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/31/17 00:31	7050846	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:31	7050846	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:31	7050846	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:31	7050846	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:31	7050846	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:31	7050846	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:31	7050846	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:31	7050846	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 14:15	05/30/17 17:53	7050856	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

June 05, 2017

Report No.: AAE0858
Client ID: FB-2
Date/Time Sampled: 5/24/2017 3:10:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0858-10
Date/Time Received: 5/25/2017 12:40:00PM

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	05/30/17 18:00	05/30/17 18:00	7050912	JPT
Inorganic Anions											
Chloride	0.14	0.25	0.01	mg/L	EPA 300.0	J	1	05/31/17 15:00	06/01/17 06:31	7050979	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 06:31	7050979	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 06:31	7050979	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:37	7050846	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:37	7050846	CSW
Barium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:37	7050846	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:37	7050846	CSW
Boron	0.0063	0.0400	0.0060	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/31/17 00:37	7050846	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:37	7050846	CSW
Calcium	ND	0.500	0.0104	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:37	7050846	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:37	7050846	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:37	7050846	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:37	7050846	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:37	7050846	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:37	7050846	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:37	7050846	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:37	7050846	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 14:15	05/30/17 17:56	7050856	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

June 05, 2017

Report No.: AAE0858
Client ID: FERB-2
Date/Time Sampled: 5/24/2017 3:15:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAE0858-11
Date/Time Received: 5/25/2017 12:40:00PM

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	05/30/17 18:00	05/30/17 18:00	7050912	JPT
Inorganic Anions											
Chloride	ND	0.25	0.01	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 06:52	7050979	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 06:52	7050979	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 06:52	7050979	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:42	7050846	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:42	7050846	CSW
Barium	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/31/17 00:42	7050846	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:42	7050846	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:42	7050846	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:42	7050846	CSW
Calcium	0.0153	0.500	0.0104	mg/L	EPA 6020B	J	1	05/25/17 17:00	05/31/17 00:42	7050846	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:42	7050846	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:42	7050846	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:42	7050846	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:42	7050846	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:42	7050846	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:42	7050846	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	05/25/17 17:00	05/31/17 00:42	7050846	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 14:15	05/30/17 17:58	7050856	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

June 05, 2017

Report No.: AAE0858

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050912 - SM 2540 C											
Blank (7050912-BLK1)						Prepared & Analyzed: 05/30/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7050912-BS1)						Prepared & Analyzed: 05/30/17					
Total Dissolved Solids	384	25	10	mg/L	400.00		96	84-108			
Duplicate (7050912-DUP1)		**Source: AAE0857-04**				Prepared & Analyzed: 05/30/17					
Total Dissolved Solids	185	25	10	mg/L		184			0.5	10	
Duplicate (7050912-DUP2)		**Source: AAE0858-10**				Prepared & Analyzed: 05/30/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	

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 05, 2017

Report No.: AAE0858

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050979 - EPA 300.0											
Blank (7050979-BLK1)						Prepared & Analyzed: 05/31/17					
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 (7050979-BS1)						Prepared & Analyzed: 05/31/17					
Chloride	10.2	0.25	0.01	mg/L	10.020		101	90-110			
Fluoride	10.2	0.30	0.004	mg/L	10.020		101	90-110			
Sulfate	10.3	1.0	0.09	mg/L	10.050		103	90-110			
Matrix Spike (7050979-MS1)		**Source: AAE0857-03**				Prepared: 05/31/17 Analyzed: 06/01/17					
Chloride	12.9	0.25	0.01	mg/L	10.020	2.91	100	90-110			
Fluoride	10.2	0.30	0.004	mg/L	10.020	0.009	102	90-110			
Sulfate	115	1.0	0.09	mg/L	10.050	118	NR	90-110			QM-02
Matrix Spike (7050979-MS2)		**Source: AAE0894-01**				Prepared: 05/31/17 Analyzed: 06/01/17					
Chloride	99.6	0.25	0.01	mg/L	10.020	99.9	NR	90-110			QM-02
Fluoride	11.2	0.30	0.004	mg/L	10.020	0.42	107	90-110			
Sulfate	275	1.0	0.09	mg/L	10.050	290	NR	90-110			QM-02
Matrix Spike Dup (7050979-MSD1)		**Source: AAE0857-03**				Prepared: 05/31/17 Analyzed: 06/01/17					
Chloride	13.0	0.25	0.01	mg/L	10.020	2.91	100	90-110	0.2	15	
Fluoride	10.3	0.30	0.004	mg/L	10.020	0.009	102	90-110	0.2	15	
Sulfate	115	1.0	0.09	mg/L	10.050	118	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

June 05, 2017

Report No.: AAE0858

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050846 - EPA 3005A											
Blank (7050846-BLK1)						Prepared: 05/25/17 Analyzed: 05/30/17					
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 (7050846-BS1)						Prepared: 05/25/17 Analyzed: 05/30/17					
Antimony	0.105	0.0030	0.0003	mg/L	0.10000		105	80-120			
Arsenic	0.101	0.0050	0.0004	mg/L	0.10000		101	80-120			
Barium	0.0985	0.0100	0.0003	mg/L	0.10000		99	80-120			
Beryllium	0.106	0.0030	0.00007	mg/L	0.10000		106	80-120			
Boron	1.06	0.0400	0.0060	mg/L	1.0000		106	80-120			
Cadmium	0.104	0.0010	0.00006	mg/L	0.10000		104	80-120			
Calcium	0.960	0.500	0.0104	mg/L	1.0000		96	80-120			
Chromium	0.0979	0.0100	0.0003	mg/L	0.10000		98	80-120			
Cobalt	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			
Copper	0.101	0.0250	0.0003	mg/L	0.10000		101	80-120			
Lead	0.0957	0.0050	0.00007	mg/L	0.10000		96	80-120			
Molybdenum	0.105	0.0100	0.0006	mg/L	0.10000		105	80-120			
Nickel	0.101	0.0100	0.0003	mg/L	0.10000		101	80-120			
Selenium	0.100	0.0100	0.0014	mg/L	0.10000		100	80-120			
Silver	0.104	0.0100	0.0003	mg/L	0.10000		104	80-120			
Thallium	0.0984	0.0010	0.00005	mg/L	0.10000		98	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	0.103	0.0500	0.0011	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 05, 2017

Report No.: AAE0858

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050846 - EPA 3005A											
Matrix Spike (7050846-MS1)		**Source: AAE0857-01**			Prepared: 05/25/17 Analyzed: 05/30/17						
Antimony	0.106	0.0030	0.0003	mg/L	0.10000	ND	106	75-125			
Arsenic	0.102	0.0050	0.0004	mg/L	0.10000	ND	102	75-125			
Barium	0.122	0.0100	0.0003	mg/L	0.10000	0.0256	97	75-125			
Beryllium	0.0993	0.0030	0.00007	mg/L	0.10000	ND	99	75-125			
Boron	1.03	0.0400	0.0060	mg/L	1.0000	0.0094	102	75-125			
Cadmium	0.107	0.0010	0.00006	mg/L	0.10000	ND	107	75-125			
Calcium	35.9	25.0	0.522	mg/L	1.0000	34.8	115	75-125			
Chromium	0.101	0.0100	0.0003	mg/L	0.10000	0.0004	101	75-125			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	ND	102	75-125			
Copper	0.101	0.0250	0.0003	mg/L	0.10000	0.0005	100	75-125			
Lead	0.0959	0.0050	0.00007	mg/L	0.10000	ND	96	75-125			
Molybdenum	0.104	0.0100	0.0006	mg/L	0.10000	ND	104	75-125			
Nickel	0.103	0.0100	0.0003	mg/L	0.10000	0.0007	102	75-125			
Selenium	0.102	0.0100	0.0014	mg/L	0.10000	ND	102	75-125			
Silver	0.103	0.0100	0.0003	mg/L	0.10000	ND	103	75-125			
Thallium	0.0989	0.0010	0.00005	mg/L	0.10000	ND	99	75-125			
Vanadium	0.106	0.0100	0.0014	mg/L	0.10000	ND	106	75-125			
Zinc	0.105	0.0100	0.0013	mg/L	0.10000	0.0046	101	75-125			
Lithium	0.0972	0.0500	0.0011	mg/L	0.10000	0.0017	95	75-125			
Matrix Spike Dup (7050846-MSD1)		**Source: AAE0857-01**			Prepared: 05/25/17 Analyzed: 05/30/17						
Antimony	0.108	0.0030	0.0003	mg/L	0.10000	ND	108	75-125	1	20	
Arsenic	0.103	0.0050	0.0004	mg/L	0.10000	ND	103	75-125	2	20	
Barium	0.125	0.0100	0.0003	mg/L	0.10000	0.0256	99	75-125	2	20	
Beryllium	0.100	0.0030	0.00007	mg/L	0.10000	ND	100	75-125	0.9	20	
Boron	1.02	0.0400	0.0060	mg/L	1.0000	0.0094	101	75-125	1	20	
Cadmium	0.109	0.0010	0.00006	mg/L	0.10000	ND	109	75-125	1	20	
Calcium	36.1	25.0	0.522	mg/L	1.0000	34.8	138	75-125	0.6	20	QM-02
Chromium	0.0997	0.0100	0.0003	mg/L	0.10000	0.0004	99	75-125	1	20	
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000	ND	103	75-125	1	20	
Copper	0.101	0.0250	0.0003	mg/L	0.10000	0.0005	100	75-125	0.01	20	
Lead	0.0993	0.0050	0.00007	mg/L	0.10000	ND	99	75-125	4	20	
Molybdenum	0.106	0.0100	0.0006	mg/L	0.10000	ND	106	75-125	2	20	
Nickel	0.103	0.0100	0.0003	mg/L	0.10000	0.0007	102	75-125	0.05	20	
Selenium	0.100	0.0100	0.0014	mg/L	0.10000	ND	100	75-125	2	20	
Silver	0.103	0.0100	0.0003	mg/L	0.10000	ND	103	75-125	0.06	20	
Thallium	0.100	0.0010	0.00005	mg/L	0.10000	ND	100	75-125	1	20	
Vanadium	0.105	0.0100	0.0014	mg/L	0.10000	ND	105	75-125	1	20	
Zinc	0.104	0.0100	0.0013	mg/L	0.10000	0.0046	100	75-125	1	20	
Lithium	0.0983	0.0500	0.0011	mg/L	0.10000	0.0017	97	75-125	1	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 05, 2017

Report No.: AAE0858

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050846 - EPA 3005A											
Post Spike (7050846-PS1)			**Source: AAE0857-01**			Prepared: 05/25/17 Analyzed: 05/30/17					
Antimony	106			ug/L	100.00	0.0902	106	80-120			
Arsenic	104			ug/L	100.00	-0.639	104	80-120			
Barium	125			ug/L	100.00	25.6	99	80-120			
Beryllium	103			ug/L	100.00	0.0021	103	80-120			
Boron	1010			ug/L	1000.0	9.35	100	80-120			
Cadmium	106			ug/L	100.00	0.0211	106	80-120			
Calcium	34200			ug/L	1000.0	34800	NR	80-120			QM-02
Chromium	101			ug/L	100.00	0.355	101	80-120			
Cobalt	101			ug/L	100.00	0.0042	101	80-120			
Copper	101			ug/L	100.00	0.503	100	80-120			
Lead	99.4			ug/L	100.00	0.0321	99	80-120			
Molybdenum	107			ug/L	100.00	0.0486	107	80-120			
Nickel	104			ug/L	100.00	0.670	103	80-120			
Selenium	102			ug/L	100.00	-0.0971	102	80-120			
Silver	103			ug/L	100.00	0.0014	103	80-120			
Thallium	100			ug/L	100.00	0.0034	100	80-120			
Vanadium	108			ug/L	100.00	-0.251	108	80-120			
Zinc	106			ug/L	100.00	4.58	101	80-120			
Lithium	101			ug/L	100.00	1.75	99	80-120			
Batch 7050856 - EPA 7470A											
Blank (7050856-BLK1)						Prepared & Analyzed: 05/30/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7050856-BS1)						Prepared & Analyzed: 05/30/17					
Mercury	0.00245	0.00050	0.000041	mg/L	2.5000E-3		98	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 05, 2017

Report No.: AAE0858

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050856 - EPA 7470A											
Matrix Spike (7050856-MS1)		**Source: AAE0858-01**				Prepared & Analyzed: 05/30/17					
Mercury	0.00241	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125			
Matrix Spike Dup (7050856-MSD1)		**Source: AAE0858-01**				Prepared & Analyzed: 05/30/17					
Mercury	0.00240	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125	0.6	20	
Post Spike (7050856-PS1)		**Source: AAE0858-01**				Prepared & Analyzed: 05/30/17					
Mercury	1.64			ug/L	1.6667	0.00915	98	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 05, 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: Lauren Petty
CC: Maria Padilla, Heath McCorkle
REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com
PROJECT NAME/STATE: Plant Hammond - AP 1&2
PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	CONTAINERS # of	Metals Part 257 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	
05/24/17	9:55	W		x	HGWC-10	4	1	1	2	1
05/24/17	11:25	W		x	HGWC-11	4	1	1	2	2
05/24/17	12:35	W		x	HGWC-12	4	1	1	2	3
05/24/17	11:30	W		x	HGWC-13	4	1	1	2	4
05/24/17	14:50	W		x	HGWC-14	4	1	1	2	5
05/24/17	13:02	W		x	HGWC-15	4	1	1	2	6
05/24/17	14:40	W		x	HGWC-16	4	1	1	2	7
05/24/17	--	W		x	DUP-2	4	1	1	2	8
05/24/17	14:50	W		x	FERB-1	4	1	1	2	9
05/24/17	15:10	W		x	FB-2	4	1	1	2	10
05/24/17	15:15	W		x	FERB-2	4	1	1	2	11

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: Myles Rogers MR, Markevious Thomas MT, Will Virgo WV
DATE/TIME: 5/24/2017 - 1530
RELINQUISHED BY: Will Virgo (ERM) 1800
DATE/TIME: 5/24/17
RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

FOR LAB USE ONLY
LAB #: AAF-0858 (OH)
Entered into LIMS:

RECEIVED BY/LAB: Charles Hunter
DATE/TIME: 5/25/17 1240
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
Tracking #:
pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 2.9°C Max: 2.9°C
Custody Seal: Intact Broken Not Present
# of Coolers: 3
Cooler ID:

20170524 AP 1&2 COC.xlsx

PACE ANALYTICAL SERVICES, LLC.

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

LOG-IN CHECKLIST **Printed: 5/26/2017 4:35:07PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 05/25/17 12:40

Work Order: AAE0858
Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 11 **#Containers:** 44

Minimum Temp(C): 2.9 **Maximum Temp(C):** 2.9 **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

June 19, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAE0858 Plant Hammond
Pace Project No.: 30219997

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on May 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: AAE0858 Plant Hammond
Pace Project No.: 30219997

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: AAE0858 Plant Hammond
Pace Project No.: 30219997

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30219997001	**HGWC-10**	Water	05/24/17 09:55	05/26/17 10:00
30219997002	**HGWC-11**	Water	05/24/17 11:25	05/26/17 10:00
30219997003	**HGWC-12**	Water	05/24/17 12:35	05/26/17 10:00
30219997004	**HGWC-13**	Water	05/24/17 11:30	05/26/17 10:00
30219997005	**HGWC-14**	Water	05/24/17 14:50	05/26/17 10:00
30219997006	**HGWC-15**	Water	05/24/17 13:02	05/26/17 10:00
30219997007	**HGWC-16**	Water	05/24/17 14:40	05/26/17 10:00
30219997008	**Dup-2**	Water	05/24/17 00:00	05/26/17 10:00
30219997009	**FERB-1**	Water	05/24/17 14:50	05/26/17 10:00
30219997010	**FB-2**	Water	05/24/17 15:10	05/26/17 10:00
30219997011	**FERB-2**	Water	05/24/17 15:15	05/26/17 10:00

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

SAMPLE ANALYTE COUNT

Project: AAE0858 Plant Hammond
Pace Project No.: 30219997

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30219997001	**HGWC-10**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30219997002	**HGWC-11**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30219997003	**HGWC-12**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30219997004	**HGWC-13**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30219997005	**HGWC-14**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30219997006	**HGWC-15**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30219997007	**HGWC-16**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30219997008	**Dup-2**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30219997009	**FERB-1**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30219997010	**FB-2**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30219997011	**FERB-2**	EPA 9315	JC2	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: AAE0858 Plant Hammond
Pace Project No.: 30219997

Sample: HGWC-10 **Lab ID: 30219997001** Collected: 05/24/17 09:55 Received: 05/26/17 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	**0.111 ± 0.105 (0.191) C:89% T:NA**	pCi/L	06/05/17 10:09	13982-63-3	
Radium-228	EPA 9320	**0.614 ± 0.356 (0.643) C:79% T:85%**	pCi/L	06/12/17 16:02	15262-20-1	
Total Radium	Total Radium Calculation	**0.725 ± 0.461 (0.834)**	pCi/L	06/14/17 14:31	7440-14-4	

Sample: HGWC-11 **Lab ID: 30219997002** Collected: 05/24/17 11:25 Received: 05/26/17 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	**0.128 ± 0.119 (0.224) C:93% T:NA**	pCi/L	06/05/17 10:09	13982-63-3	
Radium-228	EPA 9320	**0.559 ± 0.336 (0.613) C:81% T:85%**	pCi/L	06/12/17 16:02	15262-20-1	
Total Radium	Total Radium Calculation	**0.687 ± 0.455 (0.837)**	pCi/L	06/14/17 14:31	7440-14-4	

Sample: HGWC-12 **Lab ID: 30219997003** Collected: 05/24/17 12:35 Received: 05/26/17 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	**0.258 ± 0.139 (0.169) C:95% T:NA**	pCi/L	06/05/17 10:09	13982-63-3	
Radium-228	EPA 9320	**0.754 ± 0.387 (0.672) C:79% T:86%**	pCi/L	06/12/17 16:02	15262-20-1	
Total Radium	Total Radium Calculation	**1.01 ± 0.526 (0.841)**	pCi/L	06/14/17 14:31	7440-14-4	

Sample: HGWC-13 **Lab ID: 30219997004** Collected: 05/24/17 11:30 Received: 05/26/17 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	**0.171 ± 0.128 (0.214) C:87% T:NA**	pCi/L	06/05/17 10:09	13982-63-3	
Radium-228	EPA 9320	**0.484 ± 0.525 (1.11) C:79% T:81%**	pCi/L	06/12/17 16:05	15262-20-1	
Total Radium	Total Radium Calculation	**0.655 ± 0.653 (1.32)**	pCi/L	06/14/17 14:31	7440-14-4	

Sample: HGWC-14 **Lab ID: 30219997005** Collected: 05/24/17 14:50 Received: 05/26/17 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	**0.310 ± 0.168 (0.257) C:97% T:NA**	pCi/L	06/05/17 10:09	13982-63-3	
Radium-228	EPA 9320	**0.690 ± 0.523 (1.04) C:78% T:75%**	pCi/L	06/12/17 16:05	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: AAE0858 Plant Hammond
Pace Project No.: 30219997

Sample: HGWC-14 **Lab ID: 30219997005** Collected: 05/24/17 14:50 Received: 05/26/17 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	**1.000 ± 0.691 (1.30)**	pCi/L	06/14/17 14:42	7440-14-4	

Sample: HGWC-15 **Lab ID: 30219997006** Collected: 05/24/17 13:02 Received: 05/26/17 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	**0.202 ± 0.135 (0.209) C:92% T:NA**	pCi/L	06/05/17 10:09	13982-63-3	
Radium-228	EPA 9320	**-0.381 ± 0.458 (1.10) C:77% T:83%**	pCi/L	06/12/17 16:05	15262-20-1	
Total Radium	Total Radium Calculation	**0.202 ± 0.593 (1.31)**	pCi/L	06/14/17 14:42	7440-14-4	

Sample: HGWC-16 **Lab ID: 30219997007** Collected: 05/24/17 14:40 Received: 05/26/17 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	**0.243 ± 0.185 (0.294) C:95% T:NA**	pCi/L	06/08/17 08:28	13982-63-3	
Radium-228	EPA 9320	**0.802 ± 0.354 (0.568) C:78% T:92%**	pCi/L	06/13/17 11:12	15262-20-1	
Total Radium	Total Radium Calculation	**1.05 ± 0.539 (0.862)**	pCi/L	06/14/17 14:42	7440-14-4	

Sample: Dup-2 **Lab ID: 30219997008** Collected: 05/24/17 00:00 Received: 05/26/17 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	**0.219 ± 0.190 (0.331) C:89% T:NA**	pCi/L	06/08/17 08:28	13982-63-3	
Radium-228	EPA 9320	**0.740 ± 0.383 (0.668) C:75% T:86%**	pCi/L	06/13/17 11:13	15262-20-1	
Total Radium	Total Radium Calculation	**0.959 ± 0.573 (0.999)**	pCi/L	06/14/17 14:42	7440-14-4	

Sample: FERB-1 **Lab ID: 30219997009** Collected: 05/24/17 14:50 Received: 05/26/17 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	**-0.00831 ± 0.156 (0.440) C:80% T:NA**	pCi/L	06/08/17 08:28	13982-63-3	
Radium-228	EPA 9320	**0.658 ± 0.428 (0.810) C:70% T:82%**	pCi/L	06/13/17 11:13	15262-20-1	
Total Radium	Total Radium Calculation	**0.658 ± 0.584 (1.25)**	pCi/L	06/14/17 14:42	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: AAE0858 Plant Hammond
Pace Project No.: 30219997

Sample: FB-2 **Lab ID: 30219997010** Collected: 05/24/17 15:10 Received: 05/26/17 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	**0.103 ± 0.157 (0.337) C:77% T:NA**	pCi/L	06/08/17 08:28	13982-63-3	
Radium-228	EPA 9320	**0.668 ± 0.379 (0.687) C:80% T:82%**	pCi/L	06/13/17 11:13	15262-20-1	
Total Radium	Total Radium Calculation	**0.771 ± 0.536 (1.02)**	pCi/L	06/14/17 14:42	7440-14-4	

Sample: FERB-2 **Lab ID: 30219997011** Collected: 05/24/17 15:15 Received: 05/26/17 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	**-0.0492 ± 0.111 (0.370) C:83% T:NA**	pCi/L	06/08/17 08:28	13982-63-3	
Radium-228	EPA 9320	**0.299 ± 0.320 (0.663) C:78% T:81%**	pCi/L	06/13/17 11:13	15262-20-1	
Total Radium	Total Radium Calculation	**0.299 ± 0.430 (1.03)**	pCi/L	06/14/17 14:42	7440-14-4	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAE0858 Plant Hammond
Pace Project No.: 30219997

QC Batch: 259989 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30219997001, 30219997002, 30219997003, 30219997004, 30219997005, 30219997006

METHOD BLANK: 1280842 Matrix: Water
Associated Lab Samples: 30219997001, 30219997002, 30219997003, 30219997004, 30219997005, 30219997006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.138 ± 0.115 (0.200) C:93% T:NA	pCi/L	06/05/17 08:31	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAE0858 Plant Hammond
Pace Project No.: 30219997

QC Batch: 260845 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30219997007, 30219997008, 30219997009, 30219997010, 30219997011

METHOD BLANK: 1284544 Matrix: Water
Associated Lab Samples: 30219997007, 30219997008, 30219997009, 30219997010, 30219997011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.109 ± 0.154 (0.323) C:89% T:NA	pCi/L	06/08/17 08:28	

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

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAE0858 Plant Hammond
Pace Project No.: 30219997

QC Batch: 260239 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30219997001, 30219997002, 30219997003, 30219997004, 30219997005, 30219997006

METHOD BLANK: 1281815 Matrix: Water
Associated Lab Samples: 30219997001, 30219997002, 30219997003, 30219997004, 30219997005, 30219997006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.305 ± 0.349 (0.735) C:84% T:85%	pCi/L	06/12/17 15:58	

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: AAE0858 Plant Hammond
Pace Project No.: 30219997

QC Batch: 260864 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30219997007, 30219997008, 30219997009, 30219997010, 30219997011

METHOD BLANK: 1284598 Matrix: Water
Associated Lab Samples: 30219997007, 30219997008, 30219997009, 30219997010, 30219997011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.565 ± 0.330 (0.586) C:77% T:82%	pCi/L	06/13/17 11:12	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: AAE0858 Plant Hammond
Pace Project No.: 30219997

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: AAE0858 Workorder Name: Plant Hammond Owner Received Date: Results Requested By: 6/19/2017

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#: 30219997

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	HGWC-10	G	5/24/2017 9:55	AAE0858-01	GW	2	X	001
2	HGWC-11	G	5/24/2017 11:25	AAE0858-02	GW	2	X	002
3	HGWC-12	G	5/24/2017 12:35	AAE0858-03	GW	2	X	003
4	HGWC-13	G	5/24/2017 11:30	AAE0858-04	GW	2	X	004
5	HGWC-14	G	5/24/2017 14:50	AAE0858-05	GW	2	X	005
6	HGWC-15	G	5/24/2017 13:02	AAE0858-06	GW	2	X	006
7	HGWC-16	G	5/24/2017 14:40	AAE0858-07	GW	2	X	007
8	Dup-2	G	5/24/2017 0:00	AAE0858-08	GW	2	X	008
9	FERB-1	G	5/24/2017 14:50	AAE0858-09	W	2	X	009
10	FB-2	G	5/24/2017 15:10	AAE0858-10	W	2	X	010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	5/25/17	Ashley Hall/Pace	5-26-17/1005	EQuIS deliverable required (Profile 7564)
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.

30219997

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAE0858 Workorder Name: Plant Hammond Owner Received Date: Results Requested By: 6/19/2017

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	FERB-2	G	5/24/2017 15:15	AAE0858-11	W	2	X	011
12								
13								
14								
15								
16								
17								
18								
19								
20								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1					EQuIS deliverable required (Profile 7564)
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.

30219997

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 B10165, Atlanta, GA 30308, 404-506-7239

REPORT TO: Lauren Petty — CC: Maria Padilla, Heath McCorkle

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

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Part 257 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	
05/24/17	9:55	W		x	HGWC-10	4	1	1	2	1
05/24/17	11:25	W		x	HGWC-11	4	1	1	2	2
05/24/17	12:35	W		x	HGWC-12	4	1	1	2	3
05/24/17	11:30	W		x	HGWC-13	4	1	1	2	4
05/24/17	14:50	W		x	HGWC-14	4	1	1	2	5
05/24/17	13:02	W		x	HGWC-15	4	1	1	2	6
05/24/17	14:40	W		x	HGWC-16	4	1	1	2	7
05/24/17	--	W		x	DUP-2	4	1	1	2	8
05/24/17	14:50	W		x	FERB-1	4	1	1	2	9
05/24/17	15:10	W		x	FB-2	4	1	1	2	10
05/24/17	15:15	W		x	FERB-2	4	1	1	2	11

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: Myles Rogers, Markevious Thomas, Will Virgo — DATE/TIME: 5/24/2017 - 1530

RELINQUISHED BY: Will Virgo (ERM) 1800 — DATE/TIME: 5/24/17

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: [signature] — DATE/TIME: 5/25/17 1240

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

pH checked: Yes No NA — Ice: Yes No NA — Temperature: 2.9°, 2.9°

FOR LAB USE ONLY — LAB #: AAF-0858

Entered into LIMS: (OH)

Tracking #:

20170524 AP 1&2 COC.xlsx

30219997

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace, GA Project #

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

Tracking #: 6812 5104 5881

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: AMB 5-26-17

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.	X			15.
All containers needing preservation are found to be in compliance with EPA recommendation.	X			pH<2
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: AMB 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: AMB Date: 5-26-17

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-228
Analyst:	JLW
Date:	6/9/2017
Worklist:	36017
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1284598
MB concentration:	0.565
M/B Counting Uncertainty:	0.314
MB MDC:	0.586
MB Numerical Performance Indicator:	3.53
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS36017	LCSD36017
Count Date:	6/13/2017	6/13/2017
Spike I.D.:	17-005	17-005
Spike Concentration (pCi/mL):	24.301	24.301
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.819	0.806
Target Conc. (pCi/L, g, F):	5.931	6.034
Uncertainty (Calculated):	0.427	0.434
Result (pCi/L, g, F):	6.448	5.230
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.643	0.734
Numerical Performance Indicator:	1.31	-1.85
Percent Recovery:	108.73%	86.68%
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.:	LCS36017	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD36017	
Sample Result (pCi/L, g, F):	6.448	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.643	
Sample Duplicate Result (pCi/L, g, F):	5.230	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.734	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	2.449	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	22.57%	
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:

6/19/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	6/7/2017
Worklist:	35948
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1281815
MB concentration:	0.305
M/B Counting Uncertainty:	0.345
MB MDC:	0.735
MB Numerical Performance Indicator:	1.73
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS35948	LCSD35948
Count Date:	6/12/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	24.308	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.803	
Target Conc. (pCi/L, g, F):	6.055	
Uncertainty (Calculated):	0.436	
Result (pCi/L, g, F):	6.239	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.733	
Numerical Performance Indicator:	0.42	
Percent Recovery:	103.04%	
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.:	30219829006	Enter Duplicate
Duplicate Sample I.D.	30219829006DUP	sample IDs if
Sample Result (pCi/L, g, F):	0.724	other than
Sample Result Counting Uncertainty (pCi/L, g, F):	0.413	LCS/LCSD in
Sample Duplicate Result (pCi/L, g, F):	0.368	the space below.
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.313	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	1.346	30219829006
Duplicate RPD:	65.17%	30219829006DUP
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.

6/19/17

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	6/1/2017
Worklist:	35893
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1280842
MB concentration:	0.138
M/B Counting Uncertainty:	0.113
MB MDC:	0.200
MB Numerical Performance Indicator:	2.39
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS35893	LCSD35893
Count Date:	6/5/2017	
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):	15.805	
Uncertainty (Calculated):	0.743	
Result (pCi/L, g, F):	14.596	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.917	
Numerical Performance Indicator:	-2.01	
Percent Recovery:	92.35%	
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.:	30219829006
Duplicate Sample I.D.	30219829006DUP
Sample Result (pCi/L, g, F):	0.200
Sample Result Counting Uncertainty (pCi/L, g, F):	0.127
Sample Duplicate Result (pCi/L, g, F):	0.144
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.119
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	0.627
Duplicate RPD:	32.31%
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.

30219829006
30219829006DUP

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:

LMDL

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

Jmc 6/19/17

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	JC2
Date:	6/7/2017
Worklist:	36007
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1284544
MB concentration:	0.109
M/B Counting Uncertainty:	0.153
MB MDC:	0.323
MB Numerical Performance Indicator:	1.40
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS36007	LCSD36007
Count Date:	6/8/2017	
Spike I.D.:	13-033	
Spike Concentration (pCi/mL):	19.848	
Volume Used (mL):	0.40	
Aliquot Volume (L, g, F):	0.501	
Target Conc. (pCi/L, g, F):	15.835	
Uncertainty (Calculated):	0.745	
Result (pCi/L, g, F):	13.485	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.100	
Numerical Performance Indicator:	-3.47	
Percent Recovery:	85.16%	
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.:	30219997007	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30219997007DUP	
Sample Result (pCi/L, g, F):	0.243	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.181	
Sample Duplicate Result (pCi/L, g, F):	-0.039	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.145	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	2.376	30219997007
Duplicate RPD:	276.22%	30219997007DUP
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:

LMK

6/19/17

***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: AAE0894
June 05, 2017
Project: CCR Event
Project #:Plant Hammond

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 05, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWC-17	AAE0894-01	Ground Water	05/25/17 09:35	05/26/17 09:55
HGWC-18	AAE0894-02	Ground Water	05/25/17 09:40	05/26/17 09:55

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 05, 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

June 05, 2017

Report No.: AAE0894
Client ID: HGWC-17
Date/Time Sampled: 5/25/2017 9:35:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAE0894-01
Date/Time Received: 5/26/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1080	25	10	mg/L	SM 2540 C		1	05/31/17 17:50	05/31/17 17:50	7050957	JPT
Inorganic Anions											
Chloride	99	12	0.65	mg/L	EPA 300.0		50	05/31/17 15:00	06/02/17 00:21	7050979	RLC
Fluoride	0.42	0.30	0.004	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 07:13	7050979	RLC
Sulfate	430	50	4.6	mg/L	EPA 300.0		50	05/31/17 15:00	06/02/17 00:21	7050979	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:20	7050903	CSW
Arsenic	0.0007	0.0050	0.0004	mg/L	EPA 6020B	J	1	05/30/17 11:10	06/02/17 15:20	7050903	CSW
Barium	0.0255	0.0100	0.0003	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:20	7050903	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:20	7050903	CSW
Boron	8.58	2.00	0.302	mg/L	EPA 6020B		50	05/30/17 11:10	06/02/17 15:25	7050903	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:20	7050903	CSW
Calcium	292	25.0	0.522	mg/L	EPA 6020B		50	05/30/17 11:10	06/02/17 15:25	7050903	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:20	7050903	CSW
Cobalt	0.0154	0.0100	0.0005	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:20	7050903	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:20	7050903	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:20	7050903	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:20	7050903	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	05/30/17 11:10	06/02/17 15:20	7050903	CSW
Lithium	0.0011	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/30/17 11:10	06/02/17 15:20	7050903	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	05/30/17 11:45	05/30/17 20:02	7050858	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

June 05, 2017

Report No.: AAE0894
Client ID: HGWC-18
Date/Time Sampled: 5/25/2017 9:40:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAE0894-02
Date/Time Received: 5/26/2017 9:55:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1970	25	10	mg/L	SM 2540 C		1	05/31/17 17:50	05/31/17 17:50	7050957	JPT
Inorganic Anions											
Chloride	290	25	1.3	mg/L	EPA 300.0		100	05/31/17 15:00	06/02/17 00:41	7050979	RLC
Fluoride	0.54	0.30	0.004	mg/L	EPA 300.0		1	05/31/17 15:00	06/01/17 09:20	7050979	RLC
Sulfate	920	100	9.2	mg/L	EPA 300.0		100	05/31/17 15:00	06/02/17 00:41	7050979	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:31	7050903	CSW
Arsenic	0.0060	0.0050	0.0004	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:31	7050903	CSW
Barium	0.0336	0.0100	0.0003	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:31	7050903	CSW
Beryllium	0.0036	0.0030	0.00007	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:31	7050903	CSW
Boron	13.2	2.00	0.302	mg/L	EPA 6020B		50	05/30/17 11:10	06/02/17 15:37	7050903	CSW
Cadmium	0.0027	0.0010	0.00006	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:31	7050903	CSW
Calcium	492	25.0	0.522	mg/L	EPA 6020B		50	05/30/17 11:10	06/02/17 15:37	7050903	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:31	7050903	CSW
Cobalt	0.209	0.0100	0.0005	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:31	7050903	CSW
Lead	0.0012	0.0050	0.00007	mg/L	EPA 6020B	J	1	05/30/17 11:10	06/02/17 15:31	7050903	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:31	7050903	CSW
Selenium	0.0190	0.0100	0.0014	mg/L	EPA 6020B		1	05/30/17 11:10	06/02/17 15:31	7050903	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	05/30/17 11:10	06/02/17 15:31	7050903	CSW
Lithium	0.0154	0.0500	0.0011	mg/L	EPA 6020B	J	1	05/30/17 11:10	06/02/17 15:31	7050903	CSW
Mercury	0.00008	0.00050	0.000041	mg/L	EPA 7470A	J	1	05/30/17 11:45	05/30/17 20:04	7050858	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

June 05, 2017

Report No.: AAE0894

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050957 - SM 2540 C											
Blank (7050957-BLK1)						Prepared & Analyzed: 05/31/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7050957-BS1)						Prepared & Analyzed: 05/31/17					
Total Dissolved Solids	381	25	10	mg/L	400.00		95	84-108			
Duplicate (7050957-DUP1)		**Source: AAE0911-07**				Prepared & Analyzed: 05/31/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7050957-DUP2)		**Source: AAE0912-01**				Prepared & Analyzed: 05/31/17					
Total Dissolved Solids	190	25	10	mg/L		223			16	10	QR-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

June 05, 2017

Report No.: AAE0894

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050979 - EPA 300.0											
Blank (7050979-BLK1)						Prepared & Analyzed: 05/31/17					
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 (7050979-BS1)						Prepared & Analyzed: 05/31/17					
Chloride	10.2	0.25	0.01	mg/L	10.020		101	90-110			
Fluoride	10.2	0.30	0.004	mg/L	10.020		101	90-110			
Sulfate	10.3	1.0	0.09	mg/L	10.050		103	90-110			
Matrix Spike (7050979-MS1)		**Source: AAE0857-03**				Prepared: 05/31/17 Analyzed: 06/01/17					
Chloride	12.9	0.25	0.01	mg/L	10.020	2.91	100	90-110			
Fluoride	10.2	0.30	0.004	mg/L	10.020	0.009	102	90-110			
Sulfate	115	1.0	0.09	mg/L	10.050	118	NR	90-110			QM-02
Matrix Spike (7050979-MS2)		**Source: AAE0894-01**				Prepared: 05/31/17 Analyzed: 06/01/17					
Chloride	99.6	0.25	0.01	mg/L	10.020	99.9	NR	90-110			QM-02
Fluoride	11.2	0.30	0.004	mg/L	10.020	0.42	107	90-110			
Sulfate	275	1.0	0.09	mg/L	10.050	290	NR	90-110			QM-02
Matrix Spike Dup (7050979-MSD1)		**Source: AAE0857-03**				Prepared: 05/31/17 Analyzed: 06/01/17					
Chloride	13.0	0.25	0.01	mg/L	10.020	2.91	100	90-110	0.2	15	
Fluoride	10.3	0.30	0.004	mg/L	10.020	0.009	102	90-110	0.2	15	
Sulfate	115	1.0	0.09	mg/L	10.050	118	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

June 05, 2017

Report No.: AAE0894

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050858 - EPA 7470A											
Blank (7050858-BLK1)						Prepared & Analyzed: 05/30/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7050858-BS1)						Prepared & Analyzed: 05/30/17					
Mercury	0.00236	0.00050	0.000041	mg/L	2.5000E-3		95	80-120			
Matrix Spike (7050858-MS1)		**Source: AAE0894-01**				Prepared & Analyzed: 05/30/17					
Mercury	0.00202	0.00050	0.000041	mg/L	2.5000E-3	ND	81	75-125			
Matrix Spike Dup (7050858-MSD1)		**Source: AAE0894-01**				Prepared & Analyzed: 05/30/17					
Mercury	0.00208	0.00050	0.000041	mg/L	2.5000E-3	ND	83	75-125	3	20	
Post Spike (7050858-PS1)		**Source: AAE0894-01**				Prepared & Analyzed: 05/30/17					
Mercury	1.51			ug/L	1.6667	0.0252	89	80-120			
Batch 7050903 - EPA 3005A											
Blank (7050903-BLK1)						Prepared: 05/30/17 Analyzed: 06/02/17					
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							

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 05, 2017

Report No.: AAE0894

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050903 - EPA 3005A											
LCS (7050903-BS1)						Prepared: 05/30/17 Analyzed: 06/02/17					
Antimony	0.110	0.0030	0.0003	mg/L	0.10000		110	80-120			
Arsenic	0.104	0.0050	0.0004	mg/L	0.10000		104	80-120			
Barium	0.106	0.0100	0.0003	mg/L	0.10000		106	80-120			
Beryllium	0.103	0.0030	0.00007	mg/L	0.10000		103	80-120			
Boron	1.07	0.0400	0.0060	mg/L	1.0000		107	80-120			
Cadmium	0.104	0.0010	0.00006	mg/L	0.10000		104	80-120			
Calcium	1.08	0.500	0.0104	mg/L	1.0000		108	80-120			
Chromium	0.104	0.0100	0.0003	mg/L	0.10000		104	80-120			
Cobalt	0.106	0.0100	0.0005	mg/L	0.10000		106	80-120			
Copper	0.103	0.0250	0.0003	mg/L	0.10000		103	80-120			
Lead	0.103	0.0050	0.00007	mg/L	0.10000		103	80-120			
Molybdenum	0.105	0.0100	0.0006	mg/L	0.10000		105	80-120			
Nickel	0.106	0.0100	0.0003	mg/L	0.10000		106	80-120			
Selenium	0.105	0.0100	0.0014	mg/L	0.10000		105	80-120			
Silver	0.102	0.0100	0.0003	mg/L	0.10000		102	80-120			
Thallium	0.104	0.0010	0.00005	mg/L	0.10000		104	80-120			
Vanadium	0.106	0.0100	0.0014	mg/L	0.10000		106	80-120			
Zinc	0.106	0.0100	0.0013	mg/L	0.10000		106	80-120			
Lithium	0.106	0.0500	0.0011	mg/L	0.10000		106	80-120			
Matrix Spike (7050903-MS1)		**Source: AAE0911-01**				Prepared: 05/30/17 Analyzed: 06/02/17					
Antimony	0.108	0.0030	0.0003	mg/L	0.10000	ND	108	75-125			
Arsenic	0.105	0.0050	0.0004	mg/L	0.10000	0.0015	103	75-125			
Barium	0.456	0.0100	0.0003	mg/L	0.10000	0.193	263	75-125			QM-02
Beryllium	0.0993	0.0030	0.00007	mg/L	0.10000	ND	99	75-125			
Boron	1.01	0.0400	0.0060	mg/L	1.0000	0.0100	100	75-125			
Cadmium	0.102	0.0010	0.00006	mg/L	0.10000	ND	102	75-125			
Calcium	34.6	25.0	0.522	mg/L	1.0000	33.8	73	75-125			QM-02
Chromium	0.107	0.0100	0.0003	mg/L	0.10000	ND	107	75-125			
Cobalt	0.104	0.0100	0.0005	mg/L	0.10000	ND	104	75-125			
Copper	0.103	0.0250	0.0003	mg/L	0.10000	ND	103	75-125			
Lead	0.101	0.0050	0.00007	mg/L	0.10000	0.0001	101	75-125			
Molybdenum	0.109	0.0100	0.0006	mg/L	0.10000	0.0020	107	75-125			
Nickel	0.105	0.0100	0.0003	mg/L	0.10000	ND	105	75-125			
Selenium	0.103	0.0100	0.0014	mg/L	0.10000	ND	103	75-125			
Silver	0.101	0.0100	0.0003	mg/L	0.10000	ND	101	75-125			
Thallium	0.103	0.0010	0.00005	mg/L	0.10000	0.0001	103	75-125			
Vanadium	0.110	0.0100	0.0014	mg/L	0.10000	ND	110	75-125			
Zinc	0.105	0.0100	0.0013	mg/L	0.10000	0.0015	104	75-125			
Lithium	0.104	0.0500	0.0011	mg/L	0.10000	ND	104	75-125			

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 05, 2017

Report No.: AAE0894

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050903 - EPA 3005A											
Matrix Spike Dup (7050903-MSD1)		**Source: AAE0911-01**			Prepared: 05/30/17 Analyzed: 06/02/17						
Antimony	0.108	0.0030	0.0003	mg/L	0.10000	ND	108	75-125	0.3	20	
Arsenic	0.105	0.0050	0.0004	mg/L	0.10000	0.0015	103	75-125	0.1	20	
Barium	0.461	0.0100	0.0003	mg/L	0.10000	0.193	268	75-125	1	20	QM-02
Beryllium	0.103	0.0030	0.00007	mg/L	0.10000	ND	103	75-125	4	20	
Boron	1.02	0.0400	0.0060	mg/L	1.0000	0.0100	101	75-125	1	20	
Cadmium	0.105	0.0010	0.00006	mg/L	0.10000	ND	105	75-125	2	20	
Calcium	35.3	25.0	0.522	mg/L	1.0000	33.8	145	75-125	2	20	QM-02
Chromium	0.102	0.0100	0.0003	mg/L	0.10000	ND	102	75-125	4	20	
Cobalt	0.0996	0.0100	0.0005	mg/L	0.10000	ND	100	75-125	4	20	
Copper	0.100	0.0250	0.0003	mg/L	0.10000	ND	100	75-125	3	20	
Lead	0.100	0.0050	0.00007	mg/L	0.10000	0.0001	100	75-125	1	20	
Molybdenum	0.105	0.0100	0.0006	mg/L	0.10000	0.0020	103	75-125	3	20	
Nickel	0.100	0.0100	0.0003	mg/L	0.10000	ND	100	75-125	4	20	
Selenium	0.105	0.0100	0.0014	mg/L	0.10000	ND	105	75-125	1	20	
Silver	0.101	0.0100	0.0003	mg/L	0.10000	ND	101	75-125	0.1	20	
Thallium	0.102	0.0010	0.00005	mg/L	0.10000	0.0001	102	75-125	0.9	20	
Vanadium	0.106	0.0100	0.0014	mg/L	0.10000	ND	106	75-125	3	20	
Zinc	0.102	0.0100	0.0013	mg/L	0.10000	0.0015	101	75-125	3	20	
Lithium	0.104	0.0500	0.0011	mg/L	0.10000	ND	104	75-125	0.06	20	
Post Spike (7050903-PS1)		**Source: AAE0911-01**			Prepared: 05/30/17 Analyzed: 06/02/17						
Antimony	106			ug/L	100.00	0.0698	106	80-120			
Arsenic	105			ug/L	100.00	1.49	103	80-120			
Barium	463			ug/L	100.00	193	270	80-120			QM-02
Beryllium	103			ug/L	100.00	0.0042	103	80-120			
Boron	1040			ug/L	1000.0	9.96	103	80-120			
Cadmium	100			ug/L	100.00	-0.0083	100	80-120			
Calcium	35400			ug/L	1000.0	33800	160	80-120			QM-02
Chromium	105			ug/L	100.00	0.145	105	80-120			
Cobalt	104			ug/L	100.00	0.156	104	80-120			
Copper	98.4			ug/L	100.00	-0.110	98	80-120			
Lead	99.2			ug/L	100.00	0.0975	99	80-120			
Molybdenum	106			ug/L	100.00	2.05	104	80-120			
Nickel	101			ug/L	100.00	0.229	101	80-120			
Selenium	104			ug/L	100.00	0.434	103	80-120			
Silver	102			ug/L	100.00	-0.0023	102	80-120			
Thallium	102			ug/L	100.00	0.0965	102	80-120			
Vanadium	107			ug/L	100.00	0.898	106	80-120			
Zinc	103			ug/L	100.00	1.49	101	80-120			
Lithium	101			ug/L	100.00	0.192	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

June 05, 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).

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: Lauren Petty
CC: Maria Padilla, Heath McCorkle

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

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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							
05/25/17	9:35	GW		x	HGWC-17	4		1	1	2						1	
05/25/17	9:40	GW		x	HGWC-18	6		1	1	4						2	2nd Radium Volume Collected

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: Myles Rogers MR, Markevious Thomas MT
DATE/TIME: 5/25/2017 - 1230
RELINQUISHED BY:
DATE/TIME: 5/26/17 9:55

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

RECEIVED BY LAB: Laburman
DATE/TIME: 05/26/17 0955
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

Iced: No NA
Ice: Yes No NA
Temperature: 1.2 Min: 1.2 Max
Custody Seal: Intact Broken Not Present NA
# of Coolers
Cooler ID:

FOR LAB USE ONLY
LAB #: AAE0894
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: 5/26/2017 4:35:54PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 05/26/17 09:55

Work Order: AAE0894
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 2 **#Containers:** 10

Minimum Temp(C): 1.2 **Maximum Temp(C):** 1.2 **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 21, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAE0894 Plant Hammond
Pace Project No.: 30220163

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on May 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: AAE0894 Plant Hammond
Pace Project No.: 30220163

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: AAE0894 Plant Hammond
Pace Project No.: 30220163

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30220163001	**HGWC-17**	Water	05/25/17 09:35	05/30/17 09:45
30220163002	**HGWC-18**	Water	05/25/17 09:40	05/30/17 09:45

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

SAMPLE ANALYTE COUNT

Project: AAE0894 Plant Hammond
Pace Project No.: 30220163

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30220163001	**HGWC-17**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30220163002	**HGWC-18**	EPA 9315	JC2	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: AAE0894 Plant Hammond
Pace Project No.: 30220163

Sample: HGWC-17 **Lab ID: 30220163001** Collected: 05/25/17 09:35 Received: 05/30/17 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	**0.283 ± 0.209 (0.345) C:93% T:NA**	pCi/L	06/08/17 10:00	13982-63-3	
Radium-228	EPA 9320	**0.925 ± 0.527 (0.994) C:77% T:83%**	pCi/L	06/14/17 15:19	15262-20-1	
Total Radium	Total Radium Calculation	**1.21 ± 0.736 (1.34)**	pCi/L	06/16/17 13:43	7440-14-4	

Sample: HGWC-18 **Lab ID: 30220163002** Collected: 05/25/17 09:40 Received: 05/30/17 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	**0.794 ± 0.313 (0.301) C:94% T:NA**	pCi/L	06/08/17 10:00	13982-63-3	
Radium-228	EPA 9320	**0.835 ± 0.417 (0.723) C:81% T:77%**	pCi/L	06/14/17 11:31	15262-20-1	
Total Radium	Total Radium Calculation	**1.63 ± 0.730 (1.02)**	pCi/L	06/16/17 13:43	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: AAE0894 Plant Hammond
Pace Project No.: 30220163

QC Batch: 260846 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30220163001, 30220163002

METHOD BLANK: 1284545 Matrix: Water
Associated Lab Samples: 30220163001, 30220163002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0515 ± 0.131 (0.318) C:85% T:NA	pCi/L	06/08/17 10:00	

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

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAE0894 Plant Hammond
Pace Project No.: 30220163

QC Batch: 260865 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30220163001, 30220163002

METHOD BLANK: 1284599 Matrix: Water
Associated Lab Samples: 30220163001, 30220163002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.187 ± 0.335 (0.733) C:75% T:86%	pCi/L	06/14/17 11:31	

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: AAE0894 Plant Hammond
Pace Project No.: 30220163

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.

30220163

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAE0894 Workorder Name: Plant Hammond Owner Received Date: Results Requested By: 6/21/2017

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#:30220163

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3					Requested Analysis Radium 226, 228, Total														LAB USE ONLY
1	HGWC-17	G	5/25/2017 9:35	AAE0811-01	GW	2					X														001
2	HGWC-18	G	5/25/2017 9:40	AAE0811-02	GW	4					X														002
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	5/26/17	Karen Hill	5/30/17 0945	EQuIS deliverable required (Profile 7564)
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.

30220163

CHAIN OF CUSTODY RECORD

PaceAnalytical®

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: Lauren Petty

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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								
05/25/17	9:35	GW		x	HGWC-17	4		1	1	2							1	
05/25/17	9:40	GW		x	HGWC-16	6		1	1	4							2	2nd Radium Volume Collected

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: Myles Rogers MR, Markevious Thomas MT — DATE/TIME: 5/25/2017 - 1230

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: [signature] — DATE/TIME: 5/26/17 9:55

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: [signature] — DATE/TIME: 05/26/17 0955

pH checked: (Yes) No NA — Ice: (Yes) No NA — Temperature: 1.2 Min: 1.2 Max:

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

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

FOR LAB USE ONLY
LAB #: AAE0894
Entered into LIMS: MR
Tracking #:

AM

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace Georgia Project # 30220163

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

Tracking #: 6812 5104 6400

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 5/30/17

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 KK 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: KK Date: 5/30/17

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-226
Analyst:	JC2
Date:	6/7/2017
Worklist:	36008
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1284545
MB concentration:	0.052
M/B Counting Uncertainty:	0.131
MB MDC:	0.318
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
	LCS36008	LCSD36008
Count Date:	6/8/2017	
Spike I.D.:	13-033	
Spike Concentration (pCi/mL):	19.848	
Volume Used (mL):	0.40	
Aliquot Volume (L, g, F):	0.501	
Target Conc. (pCi/L, g, F):	15.852	
Uncertainty (Calculated):	0.746	
Result (pCi/L, g, F):	12.493	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.060	
Numerical Performance Indicator:	-5.08	
Percent Recovery:	78.81%	
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.:	30220161002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30220161002DUP	
Sample Result (pCi/L, g, F):	0.088	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.147	
Sample Duplicate Result (pCi/L, g, F):	0.331	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.214	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-1.838	30220161002
Duplicate RPD:	115.95%	30220161002DUP
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.

6/21/17

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	6/9/2017
Worklist:	36018
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1284599
MB concentration:	0.187
M/B Counting Uncertainty:	0.333
MB MDC:	0.733
MB Numerical Performance Indicator:	1.10
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS36018	LCSD36018
Count Date:	6/14/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	24.293	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.805	
Target Conc. (pCi/L, g, F):	6.036	
Uncertainty (Calculated):	0.435	
Result (pCi/L, g, F):	5.976	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.656	
Numerical Performance Indicator:	-0.15	
Percent Recovery:	99.02%	
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.:	30220163002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30220163002DUP	
Sample Result (pCi/L, g, F):	0.835	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.389	
Sample Duplicate Result (pCi/L, g, F):	1.347	
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:	-1.822	30220163002
Duplicate RPD:	46.94%	30220163002DUP
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, 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: AAJ0310
October 23, 2017
Project: CCR Event
Project #:Plant Hammond

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

October 23, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWC-14	AAJ0310-01	Ground Water	10/04/17 09:42	10/06/17 16:00
HGWC-15	AAJ0310-02	Ground Water	10/04/17 09:35	10/06/17 16:00
HGWC-16	AAJ0310-03	Ground Water	10/04/17 10:35	10/06/17 16:00
HGWC-17	AAJ0310-04	Ground Water	10/04/17 10:30	10/06/17 16:00
HGWC-18	AAJ0310-05	Ground Water	10/04/17 11:00	10/06/17 16:00
Dup-2	AAJ0310-06	Ground Water	10/04/17 00:00	10/06/17 16:00
FB-2	AAJ0310-07	Water	10/04/17 09:25	10/06/17 16:00
FERB-2	AAJ0310-08	Water	10/04/17 09:30	10/06/17 16:00
HGWA-1	AAJ0310-09	Ground Water	10/03/17 09:55	10/06/17 16:00
HGWA-2	AAJ0310-10	Ground Water	10/03/17 10:30	10/06/17 16:00
HGWA-3	AAJ0310-11	Ground Water	10/03/17 10:25	10/06/17 16:00
HGWA-4	AAJ0310-12	Ground Water	10/03/17 11:57	10/06/17 16:00
HGWA-5	AAJ0310-13	Ground Water	10/03/17 13:47	10/06/17 16:00
HGWA-6	AAJ0310-14	Ground Water	10/03/17 14:30	10/06/17 16:00
HGWC-7	AAJ0310-15	Ground Water	10/03/17 11:25	10/06/17 16:00
HGWC-8	AAJ0310-16	Ground Water	10/03/17 11:58	10/06/17 16:00
HGWC-9	AAJ0310-17	Ground Water	10/03/17 12:15	10/06/17 16:00
HGWC-10	AAJ0310-18	Ground Water	10/03/17 13:08	10/06/17 16:00
HGWC-11	AAJ0310-19	Ground Water	10/03/17 13:40	10/06/17 16:00
HGWC-12	AAJ0310-20	Ground Water	10/03/17 14:17	10/06/17 16:00
HGWC-13	AAJ0310-21	Ground Water	10/03/17 15:00	10/06/17 16:00
FB-1	AAJ0310-22	Water	10/03/17 15:10	10/06/17 16:00
FERB-1	AAJ0310-23	Water	10/03/17 15:15	10/06/17 16:00
Dup-1	AAJ0310-24	Ground Water	10/03/17 00:00	10/06/17 16:00

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

October 23, 2017

Report No.: AAJ0310
Client ID: HGWC-14
Date/Time Sampled: 10/4/2017 9:42:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-01
Date/Time Received: 10/6/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	3210	25	10	mg/L	SM 2540 C		1	10/10/17 16:55	10/10/17 16:55	7100258	JPT
Inorganic Anions											
Chloride	420	25	2.4	mg/L	EPA 300.0		100	10/12/17 09:44	10/15/17 20:19	7100350	RLC
Fluoride	0.52	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:44	10/13/17 19:55	7100350	RLC
Sulfate	1400	100	1.7	mg/L	EPA 300.0		100	10/12/17 09:44	10/15/17 20:19	7100350	RLC
Metals, Total											
Boron	20.5	2.00	0.298	mg/L	EPA 6020B		50	10/11/17 09:45	10/12/17 19:08	7100283	CSW
Calcium	644	250	20.2	mg/L	EPA 6020B		500	10/11/17 09:45	10/16/17 15:13	7100283	CSW

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: HGWC-15
Date/Time Sampled: 10/4/2017 9:35:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-02
Date/Time Received: 10/6/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1340	25	10	mg/L	SM 2540 C		1	10/10/17 16:55	10/10/17 16:55	7100258	JPT
Inorganic Anions											
Chloride	210	2.5	0.24	mg/L	EPA 300.0		10	10/12/17 09:44	10/15/17 20:40	7100350	RLC
Fluoride	0.60	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:44	10/13/17 21:38	7100350	RLC
Sulfate	560	25	0.42	mg/L	EPA 300.0		25	10/12/17 09:44	10/18/17 00:21	7100350	RLC
Metals, Total											
Boron	2.00	0.0400	0.0060	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 19:13	7100283	CSW
Calcium	230	25.0	2.02	mg/L	EPA 6020B		50	10/11/17 09:45	10/12/17 19:19	7100283	CSW

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: HGWC-16
Date/Time Sampled: 10/4/2017 10:35:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-03
Date/Time Received: 10/6/2017 4:00:00PM

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	10/10/17 16:55	10/10/17 16:55	7100258	JPT
Inorganic Anions											
Chloride	50	0.25	0.02	mg/L	EPA 300.0		1	10/12/17 09:44	10/13/17 21:59	7100350	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:44	10/13/17 21:59	7100350	RLC
Sulfate	220	10	0.17	mg/L	EPA 300.0		10	10/12/17 09:44	10/15/17 21:00	7100350	RLC
Metals, Total											
Boron	1.43	0.0400	0.0060	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 19:25	7100283	CSW
Calcium	156	25.0	2.02	mg/L	EPA 6020B		50	10/11/17 09:45	10/12/17 19:31	7100283	CSW

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: HGWC-17
Date/Time Sampled: 10/4/2017 10:30:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-04
Date/Time Received: 10/6/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1210	25	10	mg/L	SM 2540 C		1	10/10/17 16:55	10/10/17 16:55	7100258	JPT
Inorganic Anions											
Chloride	130	2.5	0.24	mg/L	EPA 300.0		10	10/12/17 09:44	10/15/17 21:21	7100350	RLC
Fluoride	0.93	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:44	10/13/17 22:20	7100350	RLC
Sulfate	490	10	0.17	mg/L	EPA 300.0		10	10/12/17 09:44	10/15/17 21:21	7100350	RLC
Metals, Total											
Boron	6.80	2.00	0.298	mg/L	EPA 6020B		50	10/11/17 09:45	10/16/17 15:19	7100283	CSW
Calcium	305	25.0	2.02	mg/L	EPA 6020B		50	10/11/17 09:45	10/12/17 19:53	7100283	CSW

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: HGWC-18
Date/Time Sampled: 10/4/2017 11:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-05
Date/Time Received: 10/6/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	2200	25	10	mg/L	SM 2540 C		1	10/10/17 16:55	10/10/17 16:55	7100258	JPT
Inorganic Anions											
Chloride	260	25	2.4	mg/L	EPA 300.0		100	10/12/17 09:46	10/15/17 23:04	7100351	RLC
Fluoride	0.95	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:46	10/12/17 17:13	7100351	RLC
Sulfate	870	100	1.7	mg/L	EPA 300.0	B-01	100	10/12/17 09:46	10/15/17 23:04	7100351	RLC
Metals, Total											
Boron	10.0	2.00	0.298	mg/L	EPA 6020B		50	10/11/17 09:45	10/16/17 15:25	7100283	CSW
Calcium	470	25.0	2.02	mg/L	EPA 6020B		50	10/11/17 09:45	10/12/17 20:05	7100283	CSW

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: Dup-2
Date/Time Sampled: 10/4/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-06
Date/Time Received: 10/6/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	653	25	10	mg/L	SM 2540 C		1	10/10/17 16:55	10/10/17 16:55	7100258	JPT
Inorganic Anions											
Chloride	47	0.25	0.02	mg/L	EPA 300.0		1	10/12/17 09:46	10/12/17 17:35	7100351	RLC
Fluoride	0.15	0.30	0.03	mg/L	EPA 300.0	J	1	10/12/17 09:46	10/12/17 17:35	7100351	RLC
Sulfate	220	10	0.17	mg/L	EPA 300.0	B-01	10	10/12/17 09:46	10/15/17 23:25	7100351	RLC
Metals, Total											
Boron	2.16	0.400	0.0595	mg/L	EPA 6020B		10	10/11/17 09:45	10/16/17 16:16	7100283	CSW
Calcium	160	25.0	2.02	mg/L	EPA 6020B		50	10/11/17 09:45	10/12/17 20:16	7100283	CSW

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: FB-2
Date/Time Sampled: 10/4/2017 9:25:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAJ0310-07
Date/Time Received: 10/6/2017 4:00:00PM

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	10/10/17 16:55	10/10/17 16:55	7100258	JPT
Inorganic Anions											
Chloride	0.09	0.25	0.02	mg/L	EPA 300.0	J	1	10/12/17 09:46	10/12/17 17:56	7100351	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:46	10/12/17 17:56	7100351	RLC
Sulfate	0.15	1.0	0.02	mg/L	EPA 300.0	J, B-01	1	10/12/17 09:46	10/12/17 17:56	7100351	RLC
Metals, Total											
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	10/11/17 09:45	10/14/17 20:51	7100283	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 20:22	7100283	CSW

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: FERB-2
Date/Time Sampled: 10/4/2017 9:30:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AAJ0310-08
Date/Time Received: 10/6/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	37	25	10	mg/L	SM 2540 C		1	10/10/17 16:55	10/10/17 16:55	7100258	JPT
Inorganic Anions											
Chloride	0.07	0.25	0.02	mg/L	EPA 300.0	J	1	10/12/17 09:46	10/12/17 18:17	7100351	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:46	10/12/17 18:17	7100351	RLC
Sulfate	0.08	1.0	0.02	mg/L	EPA 300.0	J, B-01	1	10/12/17 09:46	10/12/17 18:17	7100351	RLC
Metals, Total											
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	10/11/17 09:45	10/14/17 20:57	7100283	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 20:28	7100283	CSW

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: HGWA-1
Date/Time Sampled: 10/3/2017 9:55:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-09
Date/Time Received: 10/6/2017 4:00:00PM

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	10/09/17 12:55	10/09/17 12:55	7100222	JPT
Inorganic Anions											
Chloride	5.6	0.25	0.02	mg/L	EPA 300.0		1	10/12/17 09:46	10/12/17 18:38	7100351	RLC
Fluoride	0.13	0.30	0.03	mg/L	EPA 300.0	J	1	10/12/17 09:46	10/12/17 18:38	7100351	RLC
Sulfate	42	1.0	0.02	mg/L	EPA 300.0	B-01	1	10/12/17 09:46	10/12/17 18:38	7100351	RLC
Metals, Total											
Boron	0.0198	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/14/17 21:02	7100283	CSW
Calcium	102	25.0	2.02	mg/L	EPA 6020B		50	10/11/17 09:45	10/12/17 20:39	7100283	CSW

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: HGWA-2
Date/Time Sampled: 10/3/2017 10:30:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-10
Date/Time Received: 10/6/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	127	25	10	mg/L	SM 2540 C		1	10/09/17 12:55	10/09/17 12:55	7100222	JPT
Inorganic Anions											
Chloride	6.3	0.25	0.02	mg/L	EPA 300.0		1	10/12/17 09:46	10/12/17 19:00	7100351	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:46	10/12/17 19:00	7100351	RLC
Sulfate	47	5.0	0.08	mg/L	EPA 300.0	B-01	5	10/12/17 09:46	10/15/17 23:46	7100351	RLC
Metals, Total											
Boron	0.0386	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/14/17 21:20	7100283	CSW
Calcium	20.2	5.00	2.02	mg/L	EPA 6020B		50	10/11/17 09:45	10/12/17 21:02	7100283	CSW

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: HGWA-3
Date/Time Sampled: 10/3/2017 10:25:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-11
Date/Time Received: 10/6/2017 4:00:00PM

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	10/09/17 12:55	10/09/17 12:55	7100222	JPT
Inorganic Anions											
Chloride	6.5	0.25	0.02	mg/L	EPA 300.0		1	10/12/17 09:46	10/12/17 19:21	7100351	RLC
Fluoride	0.13	0.30	0.03	mg/L	EPA 300.0	J	1	10/12/17 09:46	10/12/17 19:21	7100351	RLC
Sulfate	48	1.0	0.02	mg/L	EPA 300.0	B-01	1	10/12/17 09:46	10/12/17 19:21	7100351	RLC
Metals, Total											
Boron	0.0097	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/14/17 21:25	7100283	CSW
Calcium	76.3	25.0	2.02	mg/L	EPA 6020B		50	10/11/17 09:45	10/12/17 21:13	7100283	CSW

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: HGWA-4
Date/Time Sampled: 10/3/2017 11:57:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-12
Date/Time Received: 10/6/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	161	25	10	mg/L	SM 2540 C		1	10/09/17 12:55	10/09/17 12:55	7100222	JPT
Inorganic Anions											
Chloride	4.8	0.25	0.02	mg/L	EPA 300.0		1	10/12/17 09:46	10/12/17 19:42	7100351	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:46	10/12/17 19:42	7100351	RLC
Sulfate	1.3	1.0	0.02	mg/L	EPA 300.0	B-01	1	10/12/17 09:46	10/12/17 19:42	7100351	RLC
Metals, Total											
Boron	0.0162	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/14/17 21:31	7100283	CSW
Calcium	46.9	25.0	2.02	mg/L	EPA 6020B		50	10/11/17 09:45	10/12/17 21:25	7100283	CSW

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: HGWA-5
Date/Time Sampled: 10/3/2017 1:47:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-13
Date/Time Received: 10/6/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	147	25	10	mg/L	SM 2540 C		1	10/09/17 12:55	10/09/17 12:55	7100222	JPT
Inorganic Anions											
Chloride	1.7	0.25	0.02	mg/L	EPA 300.0		1	10/12/17 09:46	10/12/17 20:03	7100351	RLC
Fluoride	0.06	0.30	0.03	mg/L	EPA 300.0	J	1	10/12/17 09:46	10/12/17 20:03	7100351	RLC
Sulfate	21	1.0	0.02	mg/L	EPA 300.0	B-01	1	10/12/17 09:46	10/12/17 20:03	7100351	RLC
Metals, Total											
Boron	0.0071	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/14/17 21:37	7100283	CSW
Calcium	29.0	25.0	2.02	mg/L	EPA 6020B		50	10/11/17 09:45	10/12/17 21:36	7100283	CSW

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: HGWA-6
Date/Time Sampled: 10/3/2017 2:30:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-14
Date/Time Received: 10/6/2017 4:00:00PM

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	10/09/17 12:55	10/09/17 12:55	7100222	JPT
Inorganic Anions											
Chloride	2.1	0.25	0.02	mg/L	EPA 300.0		1	10/12/17 09:46	10/12/17 20:24	7100351	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:46	10/12/17 20:24	7100351	RLC
Sulfate	38	1.0	0.02	mg/L	EPA 300.0	B-01	1	10/12/17 09:46	10/12/17 20:24	7100351	RLC
Metals, Total											
Boron	0.0170	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/14/17 21:42	7100283	CSW
Calcium	55.1	25.0	2.02	mg/L	EPA 6020B		50	10/11/17 09:45	10/12/17 21:48	7100283	CSW

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: HGWC-7
Date/Time Sampled: 10/3/2017 11:25:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-15
Date/Time Received: 10/6/2017 4:00:00PM

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	10/09/17 12:55	10/09/17 12:55	7100222	JPT
Inorganic Anions											
Chloride	52	2.5	0.24	mg/L	EPA 300.0		10	10/12/17 09:46	10/16/17 00:06	7100351	RLC
Fluoride	0.17	0.30	0.03	mg/L	EPA 300.0	J	1	10/12/17 09:46	10/12/17 22:12	7100351	RLC
Sulfate	120	10	0.17	mg/L	EPA 300.0	B-01	10	10/12/17 09:46	10/16/17 00:06	7100351	RLC
Metals, Total											
Boron	0.967	0.400	0.0595	mg/L	EPA 6020B		10	10/11/17 09:45	10/17/17 13:23	7100283	CSW
Calcium	108	25.0	2.02	mg/L	EPA 6020B		50	10/11/17 09:45	10/12/17 22:10	7100283	CSW

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: HGWC-8
Date/Time Sampled: 10/3/2017 11:58:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-16
Date/Time Received: 10/6/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	812	25	10	mg/L	SM 2540 C		1	10/09/17 12:55	10/09/17 12:55	7100222	JPT
Inorganic Anions											
Chloride	130	2.5	0.24	mg/L	EPA 300.0		10	10/12/17 09:46	10/16/17 00:27	7100351	RLC
Fluoride	0.66	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:46	10/12/17 22:33	7100351	RLC
Sulfate	230	10	0.17	mg/L	EPA 300.0	B-01	10	10/12/17 09:46	10/16/17 00:27	7100351	RLC
Metals, Total											
Boron	2.84	2.00	0.298	mg/L	EPA 6020B		50	10/11/17 09:45	10/17/17 13:23	7100283	CSW
Calcium	158	25.0	2.02	mg/L	EPA 6020B		50	10/11/17 09:45	10/12/17 22:22	7100283	CSW

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: HGWC-9
Date/Time Sampled: 10/3/2017 12:15:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-17
Date/Time Received: 10/6/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1040	25	10	mg/L	SM 2540 C		1	10/09/17 12:55	10/09/17 12:55	7100222	JPT
Inorganic Anions											
Chloride	160	2.5	0.24	mg/L	EPA 300.0		10	10/12/17 09:46	10/16/17 00:48	7100351	RLC
Fluoride	0.53	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:46	10/12/17 23:39	7100351	RLC
Sulfate	240	10	0.17	mg/L	EPA 300.0	B-01	10	10/12/17 09:46	10/16/17 00:48	7100351	RLC
Metals, Total											
Boron	2.05	0.0400	0.0060	mg/L	EPA 6020B		1	10/12/17 18:05	10/16/17 19:29	7100377	KLH
Calcium	188	25.0	2.02	mg/L	EPA 6020B		50	10/12/17 18:05	10/16/17 19:35	7100377	KLH

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: HGWC-10
Date/Time Sampled: 10/3/2017 1:08:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-18
Date/Time Received: 10/6/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	746	25	10	mg/L	SM 2540 C		1	10/09/17 12:55	10/09/17 12:55	7100222	JPT
Inorganic Anions											
Chloride	100	2.5	0.24	mg/L	EPA 300.0		10	10/12/17 09:46	10/16/17 01:08	7100351	RLC
Fluoride	0.46	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:46	10/13/17 00:00	7100351	RLC
Sulfate	200	10	0.17	mg/L	EPA 300.0	B-01	10	10/12/17 09:46	10/16/17 01:08	7100351	RLC
Metals, Total											
Boron	0.871	0.0400	0.0060	mg/L	EPA 6020B		1	10/12/17 18:05	10/16/17 19:40	7100377	KLH
Calcium	162	25.0	2.02	mg/L	EPA 6020B		50	10/12/17 18:05	10/16/17 19:46	7100377	KLH

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: HGWC-11
Date/Time Sampled: 10/3/2017 1:40:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-19
Date/Time Received: 10/6/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	443	25	10	mg/L	SM 2540 C		1	10/09/17 12:55	10/09/17 12:55	7100222	JPT
Inorganic Anions											
Chloride	28	0.25	0.02	mg/L	EPA 300.0		1	10/12/17 09:46	10/13/17 00:22	7100351	RLC
Fluoride	0.56	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:46	10/13/17 00:22	7100351	RLC
Sulfate	230	10	0.17	mg/L	EPA 300.0	B-01	10	10/12/17 09:46	10/16/17 01:29	7100351	RLC
Metals, Total											
Boron	1.47	0.0400	0.0060	mg/L	EPA 6020B		1	10/12/17 18:05	10/16/17 19:52	7100377	KLH
Calcium	87.7	25.0	2.02	mg/L	EPA 6020B		50	10/12/17 18:05	10/16/17 19:57	7100377	KLH

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: HGWC-12
Date/Time Sampled: 10/3/2017 2:17:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-20
Date/Time Received: 10/6/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	608	25	10	mg/L	SM 2540 C		1	10/09/17 14:10	10/09/17 14:10	7100223	JPT
Inorganic Anions											
Chloride	93	1.2	0.12	mg/L	EPA 300.0		5	10/12/17 09:46	10/16/17 01:50	7100351	RLC
Fluoride	0.58	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:46	10/13/17 00:44	7100351	RLC
Sulfate	190	5.0	0.08	mg/L	EPA 300.0	B-01	5	10/12/17 09:46	10/16/17 01:50	7100351	RLC
Metals, Total											
Boron	2.35	0.0400	0.0060	mg/L	EPA 6020B		1	10/12/17 18:05	10/16/17 20:03	7100377	KLH
Calcium	130	25.0	2.02	mg/L	EPA 6020B		50	10/12/17 18:05	10/16/17 20:09	7100377	KLH

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: HGWC-13
Date/Time Sampled: 10/3/2017 3:00:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-21
Date/Time Received: 10/6/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	268	25	10	mg/L	SM 2540 C		1	10/09/17 14:10	10/09/17 14:10	7100223	JPT
Inorganic Anions											
Chloride	29	0.25	0.02	mg/L	EPA 300.0		1	10/12/17 09:46	10/13/17 01:06	7100351	RLC
Fluoride	0.83	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:46	10/13/17 01:06	7100351	RLC
Sulfate	67	5.0	0.08	mg/L	EPA 300.0	B-01	5	10/12/17 09:46	10/20/17 09:18	7100351	RLC
Metals, Total											
Boron	1.43	0.0400	0.0060	mg/L	EPA 6020B		1	10/12/17 18:05	10/16/17 20:15	7100377	KLH
Calcium	62.0	25.0	2.02	mg/L	EPA 6020B		50	10/12/17 18:05	10/16/17 20:20	7100377	KLH

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: FB-1
Date/Time Sampled: 10/3/2017 3:10:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAJ0310-22
Date/Time Received: 10/6/2017 4:00:00PM

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	10/09/17 14:10	10/09/17 14:10	7100223	JPT
Inorganic Anions											
Chloride	0.07	0.25	0.02	mg/L	EPA 300.0	J	1	10/12/17 09:46	10/13/17 01:28	7100351	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:46	10/13/17 01:28	7100351	RLC
Sulfate	0.06	1.0	0.02	mg/L	EPA 300.0	J, B-01	1	10/12/17 09:46	10/13/17 01:28	7100351	RLC
Metals, Total											
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	10/12/17 18:05	10/16/17 20:37	7100377	KLH
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/12/17 18:05	10/16/17 20:37	7100377	KLH

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: FERB-1
Date/Time Sampled: 10/3/2017 3:15:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AAJ0310-23
Date/Time Received: 10/6/2017 4:00:00PM

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	10/09/17 14:10	10/09/17 14:10	7100223	JPT
Inorganic Anions											
Chloride	0.10	0.25	0.02	mg/L	EPA 300.0	J	1	10/12/17 09:46	10/13/17 02:55	7100351	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:46	10/13/17 02:55	7100351	RLC
Sulfate	0.04	1.0	0.02	mg/L	EPA 300.0	J, B-01	1	10/12/17 09:46	10/13/17 02:55	7100351	RLC
Metals, Total											
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	10/12/17 18:05	10/16/17 20:49	7100377	KLH
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/12/17 18:05	10/16/17 20:49	7100377	KLH

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310
Client ID: Dup-1
Date/Time Sampled: 10/3/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAJ0310-24
Date/Time Received: 10/6/2017 4:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	305	25	10	mg/L	SM 2540 C		1	10/09/17 14:10	10/09/17 14:10	7100223	JPT
Inorganic Anions											
Chloride	29	0.25	0.02	mg/L	EPA 300.0		1	10/12/17 09:46	10/13/17 03:17	7100351	RLC
Fluoride	0.57	0.30	0.03	mg/L	EPA 300.0		1	10/12/17 09:46	10/13/17 03:17	7100351	RLC
Sulfate	68	5.0	0.08	mg/L	EPA 300.0	B-01	5	10/12/17 09:46	10/16/17 02:31	7100351	RLC
Metals, Total											
Boron	1.50	0.0400	0.0060	mg/L	EPA 6020B		1	10/12/17 18:05	10/16/17 21:00	7100377	KLH
Calcium	62.6	25.0	2.02	mg/L	EPA 6020B		50	10/12/17 18:05	10/16/17 21:06	7100377	KLH

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100222 - SM 2540 C											
Blank (7100222-BLK1)						Prepared & Analyzed: 10/09/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7100222-BS1)						Prepared & Analyzed: 10/09/17					
Total Dissolved Solids	387	25	10	mg/L	400.00		97	84-108			
Duplicate (7100222-DUP1)		**Source: AAJ0239-22**				Prepared & Analyzed: 10/09/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7100222-DUP2)		**Source: AAJ0310-11**				Prepared & Analyzed: 10/09/17					
Total Dissolved Solids	280	25	10	mg/L		300			7	10	
Batch 7100223 - SM 2540 C											
Blank (7100223-BLK1)						Prepared & Analyzed: 10/09/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7100223-BS1)						Prepared & Analyzed: 10/09/17					
Total Dissolved Solids	360	25	10	mg/L	400.00		90	84-108			
Duplicate (7100223-DUP1)		**Source: AAJ0126-10**				Prepared & Analyzed: 10/09/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7100223-DUP2)		**Source: AAJ0239-10**				Prepared & Analyzed: 10/09/17					
Total Dissolved Solids	63	25	10	mg/L		74			16	10	QR-03
Batch 7100258 - SM 2540 C											
Blank (7100258-BLK1)						Prepared & Analyzed: 10/10/17					
Total Dissolved Solids	ND	25	10	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

October 23, 2017

Report No.: AAJ0310

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100258 - SM 2540 C											
LCS (7100258-BS1)						Prepared & Analyzed: 10/10/17					
Total Dissolved Solids	367	25	10	mg/L	400.00		92	84-108			
Duplicate (7100258-DUP1)			**Source: AAJ0239-12**			Prepared & Analyzed: 10/10/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7100258-DUP2)			**Source: AAJ0245-05**			Prepared & Analyzed: 10/10/17					
Total Dissolved Solids	369	25	10	mg/L		359			3	10	

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100350 - EPA 300.0											
Blank (7100350-BLK1)						Prepared: 10/12/17 Analyzed: 10/13/17					
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 (7100350-BS1)						Prepared: 10/12/17 Analyzed: 10/13/17					
Chloride	10.5	0.25	0.02	mg/L	10.020		105	90-110			
Fluoride	9.45	0.30	0.03	mg/L	10.020		94	90-110			
Sulfate	10.8	1.0	0.02	mg/L	10.050		107	90-110			
Matrix Spike (7100350-MS1)		**Source: AAJ0245-12**				Prepared: 10/12/17 Analyzed: 10/13/17					
Chloride	12.2	0.25	0.02	mg/L	10.020	1.49	107	90-110			
Fluoride	10.2	0.30	0.03	mg/L	10.020	0.11	101	90-110			
Sulfate	25.4	1.0	0.02	mg/L	10.050	16.2	92	90-110			
Matrix Spike (7100350-MS2)		**Source: AAJ0245-18**				Prepared: 10/12/17 Analyzed: 10/13/17					
Chloride	11.8	0.25	0.02	mg/L	10.020	1.44	103	90-110			
Fluoride	10.1	0.30	0.03	mg/L	10.020	0.09	100	90-110			
Sulfate	18.4	1.0	0.02	mg/L	10.050	8.31	100	90-110			
Matrix Spike Dup (7100350-MSD1)		**Source: AAJ0245-12**				Prepared: 10/12/17 Analyzed: 10/13/17					
Chloride	11.6	0.25	0.02	mg/L	10.020	1.49	101	90-110	5	15	
Fluoride	9.85	0.30	0.03	mg/L	10.020	0.11	97	90-110	4	15	
Sulfate	25.4	1.0	0.02	mg/L	10.050	16.2	92	90-110	0.1	15	
Batch 7100351 - EPA 300.0											
Blank (7100351-BLK1)						Prepared & Analyzed: 10/12/17					
Chloride	ND	0.25	0.02	mg/L							
Fluoride	ND	0.30	0.03	mg/L							
Sulfate	0.02	1.0	0.02	mg/L							J

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100351 - EPA 300.0											
LCS (7100351-BS1)						Prepared & Analyzed: 10/12/17					
Chloride	10.5	0.25	0.02	mg/L	10.020		105	90-110			
Fluoride	10.1	0.30	0.03	mg/L	10.020		101	90-110			
Sulfate	10.7	1.0	0.02	mg/L	10.050		106	90-110			
Matrix Spike (7100351-MS1)			**Source: AAJ0310-16**			Prepared & Analyzed: 10/12/17					
Chloride	102	0.25	0.02	mg/L	10.020	102	NR	90-110			QM-02
Fluoride	10.9	0.30	0.03	mg/L	10.020	0.66	102	90-110			
Sulfate	172	1.0	0.02	mg/L	10.050	179	NR	90-110			QM-02
Matrix Spike (7100351-MS2)			**Source: AAJ0310-21**			Prepared: 10/12/17 Analyzed: 10/13/17					
Chloride	36.5	0.25	0.02	mg/L	10.020	29.5	70	90-110			QM-02
Fluoride	11.0	0.30	0.03	mg/L	10.020	0.83	101	90-110			
Sulfate	69.3	1.0	0.02	mg/L	10.050	66.2	31	90-110			QM-02
Matrix Spike Dup (7100351-MSD1)			**Source: AAJ0310-16**			Prepared & Analyzed: 10/12/17					
Chloride	102	0.25	0.02	mg/L	10.020	102	NR	90-110	0.4	15	QM-02
Fluoride	11.0	0.30	0.03	mg/L	10.020	0.66	103	90-110	0.6	15	
Sulfate	172	1.0	0.02	mg/L	10.050	179	NR	90-110	0.2	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

October 23, 2017

Report No.: AAJ0310

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100283 - EPA 3005A											
Blank (7100283-BLK1)						Prepared: 10/11/17 Analyzed: 10/12/17					
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	0.0002	0.0050	0.00007	mg/L							J
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 (7100283-BS1)						Prepared: 10/11/17 Analyzed: 10/12/17					
Antimony	0.108	0.0030	0.0006	mg/L	0.10000		108	80-120			
Arsenic	0.0992	0.0050	0.0005	mg/L	0.10000		99	80-120			
Barium	0.105	0.0100	0.0004	mg/L	0.10000		105	80-120			
Beryllium	0.0990	0.0030	0.00009	mg/L	0.10000		99	80-120			
Cadmium	0.100	0.0010	0.0001	mg/L	0.10000		100	80-120			
Chromium	0.102	0.0100	0.0005	mg/L	0.10000		102	80-120			
Cobalt	0.101	0.0100	0.0003	mg/L	0.10000		101	80-120			
Copper	0.101	0.0250	0.0003	mg/L	0.10000		101	80-120			
Lead	0.102	0.0050	0.00007	mg/L	0.10000		102	80-120			
Nickel	0.0972	0.0100	0.0005	mg/L	0.10000		97	80-120			
Selenium	0.103	0.0100	0.0018	mg/L	0.10000		103	80-120			
Silver	0.102	0.0100	0.0002	mg/L	0.10000		102	80-120			
Thallium	0.102	0.0010	0.00005	mg/L	0.10000		102	80-120			
Vanadium	0.102	0.0100	0.0012	mg/L	0.10000		102	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			

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100283 - EPA 3005A											
Matrix Spike (7100283-MS1)		**Source: AAJ0310-01**			Prepared: 10/11/17 Analyzed: 10/12/17						
Antimony	0.110	0.0030	0.0006	mg/L	0.10000	ND	110	75-125			
Arsenic	0.115	0.0050	0.0005	mg/L	0.10000	0.0081	107	75-125			
Barium	0.129	0.0100	0.0004	mg/L	0.10000	0.0220	107	75-125			
Beryllium	0.0974	0.0150	0.0005	mg/L	0.10000	ND	97	75-125			
Cadmium	0.100	0.0010	0.0001	mg/L	0.10000	ND	100	75-125			
Chromium	0.0982	0.0100	0.0005	mg/L	0.10000	ND	98	75-125			
Cobalt	0.119	0.0100	0.0003	mg/L	0.10000	0.0233	95	75-125			
Copper	0.0848	0.0250	0.0003	mg/L	0.10000	ND	85	75-125			
Lead	0.0880	0.0050	0.00007	mg/L	0.10000	0.0015	86	75-125			
Nickel	0.0931	0.0100	0.0005	mg/L	0.10000	0.0053	88	75-125			
Selenium	0.125	0.0100	0.0018	mg/L	0.10000	0.0143	111	75-125			
Silver	0.0927	0.0100	0.0002	mg/L	0.10000	ND	93	75-125			
Thallium	0.0925	0.0010	0.00005	mg/L	0.10000	0.0003	92	75-125			
Vanadium	0.104	0.0100	0.0012	mg/L	0.10000	ND	104	75-125			
Zinc	0.0916	0.0100	0.0012	mg/L	0.10000	0.0046	87	75-125			
Lithium	0.102	0.250	0.0075	mg/L	0.10000	ND	102	75-125			J
Matrix Spike Dup (7100283-MSD1)		**Source: AAJ0310-01**			Prepared: 10/11/17 Analyzed: 10/12/17						
Antimony	0.106	0.0030	0.0006	mg/L	0.10000	ND	106	75-125	3	20	
Arsenic	0.114	0.0050	0.0005	mg/L	0.10000	0.0081	106	75-125	0.8	20	
Barium	0.124	0.0100	0.0004	mg/L	0.10000	0.0220	102	75-125	4	20	
Beryllium	0.0972	0.0150	0.0005	mg/L	0.10000	ND	97	75-125	0.2	20	
Cadmium	0.0967	0.0010	0.0001	mg/L	0.10000	ND	97	75-125	3	20	
Chromium	0.0969	0.0100	0.0005	mg/L	0.10000	ND	97	75-125	1	20	
Cobalt	0.114	0.0100	0.0003	mg/L	0.10000	0.0233	90	75-125	4	20	
Copper	0.0824	0.0250	0.0003	mg/L	0.10000	ND	82	75-125	3	20	
Lead	0.0861	0.0050	0.00007	mg/L	0.10000	0.0015	85	75-125	2	20	
Nickel	0.0914	0.0100	0.0005	mg/L	0.10000	0.0053	86	75-125	2	20	
Selenium	0.123	0.0100	0.0018	mg/L	0.10000	0.0143	109	75-125	2	20	
Silver	0.0888	0.0100	0.0002	mg/L	0.10000	ND	89	75-125	4	20	
Thallium	0.0892	0.0010	0.00005	mg/L	0.10000	0.0003	89	75-125	4	20	
Vanadium	0.102	0.0100	0.0012	mg/L	0.10000	ND	102	75-125	2	20	
Zinc	0.0885	0.0100	0.0012	mg/L	0.10000	0.0046	84	75-125	3	20	
Lithium	0.104	0.250	0.0075	mg/L	0.10000	ND	104	75-125	2	20	J

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100283 - EPA 3005A											
Post Spike (7100283-PS1)			**Source: AAJ0310-01**			Prepared: 10/11/17 Analyzed: 10/12/17					
Antimony	112			ug/L	100.00	0.120	112	80-120			
Arsenic	112			ug/L	100.00	8.10	104	80-120			
Barium	129			ug/L	100.00	22.0	107	80-120			
Beryllium	99.1			ug/L	100.00	0.412	99	80-120			
Cadmium	96.5			ug/L	100.00	0.0841	96	80-120			
Chromium	94.4			ug/L	100.00	0.193	94	80-120			
Cobalt	115			ug/L	100.00	23.3	92	80-120			
Copper	81.0			ug/L	100.00	0.0583	81	80-120			
Lead	86.8			ug/L	100.00	1.48	85	80-120			
Nickel	89.6			ug/L	100.00	5.30	84	80-120			
Selenium	123			ug/L	100.00	14.3	109	80-120			
Silver	89.8			ug/L	100.00	0.0123	90	80-120			
Thallium	91.4			ug/L	100.00	0.281	91	80-120			
Vanadium	102			ug/L	100.00	-0.215	102	80-120			
Zinc	89.7			ug/L	100.00	4.62	85	80-120			
Lithium	104			ug/L	100.00	0.486	104	80-120			
Batch 7100377 - EPA 3005A											
Blank (7100377-BLK1)						Prepared: 10/12/17 Analyzed: 10/16/17					
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

October 23, 2017

Report No.: AAJ0310

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100377 - EPA 3005A											
LCS (7100377-BS1)						Prepared: 10/12/17 Analyzed: 10/16/17					
Antimony	0.0994	0.0030	0.0006	mg/L	0.10000		99	80-120			
Arsenic	0.0981	0.0050	0.0005	mg/L	0.10000		98	80-120			
Barium	0.0949	0.0100	0.0004	mg/L	0.10000		95	80-120			
Beryllium	0.104	0.0030	0.00009	mg/L	0.10000		104	80-120			
Cadmium	0.0995	0.0010	0.0001	mg/L	0.10000		99	80-120			
Chromium	0.0976	0.0100	0.0005	mg/L	0.10000		98	80-120			
Cobalt	0.0983	0.0100	0.0003	mg/L	0.10000		98	80-120			
Copper	0.0974	0.0250	0.0003	mg/L	0.10000		97	80-120			
Lead	0.0960	0.0050	0.00007	mg/L	0.10000		96	80-120			
Nickel	0.0954	0.0100	0.0005	mg/L	0.10000		95	80-120			
Selenium	0.103	0.0100	0.0018	mg/L	0.10000		103	80-120			
Silver	0.0993	0.0100	0.0002	mg/L	0.10000		99	80-120			
Thallium	0.0967	0.0010	0.00005	mg/L	0.10000		97	80-120			
Vanadium	0.0974	0.0100	0.0012	mg/L	0.10000		97	80-120			
Zinc	0.0976	0.0100	0.0012	mg/L	0.10000		98	80-120			
Lithium	0.108	0.0500	0.0015	mg/L	0.10000		108	80-120			
Matrix Spike (7100377-MS1)		**Source: AAJ0310-21**				Prepared: 10/12/17 Analyzed: 10/19/17					
Antimony	0.0959	0.0150	0.0030	mg/L	0.10000	ND	96	75-125			
Arsenic	0.379	0.0050	0.0005	mg/L	0.10000	0.279	100	75-125			
Barium	0.156	0.0500	0.0021	mg/L	0.10000	0.0633	93	75-125			
Beryllium	0.0980	0.0030	0.00009	mg/L	0.10000	ND	98	75-125			
Cadmium	0.0943	0.0010	0.0001	mg/L	0.10000	ND	94	75-125			
Chromium	0.0947	0.0100	0.0005	mg/L	0.10000	ND	95	75-125			
Cobalt	0.0937	0.0100	0.0003	mg/L	0.10000	0.0015	92	75-125			
Copper	0.0922	0.0250	0.0003	mg/L	0.10000	0.0007	92	75-125			
Lead	0.0894	0.0050	0.00007	mg/L	0.10000	0.00007	89	75-125			
Nickel	0.0903	0.0100	0.0005	mg/L	0.10000	0.0006	90	75-125			
Selenium	0.105	0.0100	0.0018	mg/L	0.10000	ND	105	75-125			
Silver	0.0934	0.0500	0.0012	mg/L	0.10000	ND	93	75-125			
Thallium	0.0922	0.0010	0.00005	mg/L	0.10000	0.0003	92	75-125			
Vanadium	0.0943	0.0100	0.0012	mg/L	0.10000	ND	94	75-125			
Zinc	0.0937	0.0100	0.0012	mg/L	0.10000	0.0013	92	75-125			
Lithium	0.126	0.0500	0.0015	mg/L	0.10000	0.0256	100	75-125			

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report No.: AAJ0310

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100377 - EPA 3005A											
Matrix Spike Dup (7100377-MSD1)		**Source: AAJ0310-21**			Prepared: 10/12/17 Analyzed: 10/19/17						
Antimony	0.0992	0.0150	0.0030	mg/L	0.10000	ND	99	75-125	3	20	
Arsenic	0.388	0.0050	0.0005	mg/L	0.10000	0.279	109	75-125	2	20	
Barium	0.162	0.0500	0.0021	mg/L	0.10000	0.0633	99	75-125	4	20	
Beryllium	0.0939	0.0030	0.00009	mg/L	0.10000	ND	94	75-125	4	20	
Cadmium	0.0972	0.0010	0.0001	mg/L	0.10000	ND	97	75-125	3	20	
Chromium	0.0938	0.0100	0.0005	mg/L	0.10000	ND	94	75-125	1	20	
Cobalt	0.0914	0.0100	0.0003	mg/L	0.10000	0.0015	90	75-125	2	20	
Copper	0.0913	0.0250	0.0003	mg/L	0.10000	0.0007	91	75-125	1	20	
Lead	0.0931	0.0050	0.00007	mg/L	0.10000	0.00007	93	75-125	4	20	
Nickel	0.0917	0.0100	0.0005	mg/L	0.10000	0.0006	91	75-125	2	20	
Selenium	0.102	0.0100	0.0018	mg/L	0.10000	ND	102	75-125	3	20	
Silver	0.0964	0.0500	0.0012	mg/L	0.10000	ND	96	75-125	3	20	
Thallium	0.0961	0.0010	0.00005	mg/L	0.10000	0.0003	96	75-125	4	20	
Vanadium	0.0953	0.0100	0.0012	mg/L	0.10000	ND	95	75-125	1	20	
Zinc	0.0973	0.0100	0.0012	mg/L	0.10000	0.0013	96	75-125	4	20	
Lithium	0.125	0.0500	0.0015	mg/L	0.10000	0.0256	99	75-125	0.5	20	
Post Spike (7100377-PS1)		**Source: AAJ0310-21**			Prepared: 10/12/17 Analyzed: 10/19/17						
Antimony	98.8			ug/L	100.00	0.258	99	80-120			
Arsenic	374			ug/L	100.00	279	95	80-120			
Barium	162			ug/L	100.00	63.3	99	80-120			
Beryllium	94.8			ug/L	100.00	0.0354	95	80-120			
Cadmium	100			ug/L	100.00	-0.0220	100	80-120			
Chromium	96.6			ug/L	100.00	0.207	96	80-120			
Cobalt	94.9			ug/L	100.00	1.50	93	80-120			
Copper	92.7			ug/L	100.00	0.677	92	80-120			
Lead	93.3			ug/L	100.00	0.0743	93	80-120			
Nickel	91.3			ug/L	100.00	0.639	91	80-120			
Selenium	105			ug/L	100.00	-1.29	105	80-120			
Silver	98.1			ug/L	100.00	0.0013	98	80-120			
Thallium	95.5			ug/L	100.00	0.276	95	80-120			
Vanadium	97.9			ug/L	100.00	-1.98	98	80-120			
Zinc	94.0			ug/L	100.00	1.34	93	80-120			
Lithium	127			ug/L	100.00	25.6	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

October 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-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.

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 23, 2017

Report Notes

Per consultant 10/9/2017, metals parameters should be boron and calcium; not barium that is noted on COC. BMcD

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:
42 Inverness Center Parkway
Birmingham, AL 35242
205-992-5417

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

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals - (Part 257 Appendix III) EPA 6020; Ba & Ca	Cl, F, SO4 & TDS (EPA 300.0 & SM 2540C)							LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P								
PRESERVATION:								3	7								
10/04/17	09:42	W		X	HGWC-14	2		1	1							24	1
10/04/17	09:35	W		X	HGWC-15	2		1	1							25	2
10/04/17	10:35	W		X	HGWC-16	2		1	1							26	3
10/04/17	10:30	W		X	HGWC-17	2		1	1							27	4
10/04/17	11:00	W		X	HGWC-18	2		1	1							28	5
10/04/17	--	W		X	DUP-2	2		1	1							29	6
10/04/17	9:25	W		X	FB-2	2		1	1							30	7
10/04/17	9:30	W		X	FERB-2	2		1	1							31	8
																	24

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: W.Virgo WV, M.Thomas MT, H.Beaugh HB
DATE/TIME: 10/4/2017 - 12:00
RELINQUISHED BY: Will Virgo (ERM)
DATE/TIME: 10/4/17 2130

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

RECEIVED BY LAB: Kaitlin Hanley
DATE/TIME: 10/6/17 1600
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
Checked: No NA
Ice: Yes No NA
Temperature: Min: 1.1°C Max: 5
Custody Seal: Not Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: ~~AAJ0245~~ 104
Entered into LIMS:
Tracking #: AAJ0310

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:
42 Inverness Center Parkway
Birmingham, AL 35242
205-992-5417

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

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals - (Part 257 Appendix III) EPA 6020; Ba & Ca	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)							LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:								P	P	P							
PRESERVATION:								3	7	3							
10/03/17	09:55	W		X	HGWA-1	2		1	1							32	9
10/03/17	10:30	W		X	HGWA-2	2		1	1							33	10
10/03/17	10:25	W		X	HGWA-3	2		1	1							34	11
10/03/17	11:57	W		X	HGWA-4	2		1	1							35	12
10/03/17	13:47	W		X	HGWA-5	2		1	1							36	13
10/03/17	14:30	W		X	HGWA-6	2		1	1							37	14
10/03/17	11:25	W		X	HGWC-7	2		1	1							38	15
10/03/17	11:58	W		X	HGWC-8	2		1	1							39	16
10/03/17	12:15	W		X	HGWC-9	2		1	1							40	17
10/03/17	13:08	W		X	HGWC-10	2		1	1							41	18
10/03/17	13:40	W		X	HGWC-11	2		1	1							42	19
10/03/17	14:17	W		X	HGWC-12	2		1	1							43	20

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: W.Virgo WTP, M.Thomas JLT, H.Beaugh H.B.
DATE/TIME: 10/3/17 - 15:30

RELINQUISHED BY: Will V. Virgo (ERM)
DATE/TIME: 10/3/17 2100

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: Charles Hanks
DATE/TIME: 10/6/17 1600

Checked: No NA
Ice: Yes No NA
Temperature: Min 1.1°C 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 #: ~~AAJ0245~~ AAJ0370
Entered into LIMS:
Tracking #: AAJ0370

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: 42 Inverness Center Parkway, Birmingham, AL 35242, 205-992-5417

REPORT TO: Laurn Petty

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals - (Part 257 Appendix III) EPA 6020: Ba & Ca (Container type P, Preservation 3)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C) (Container type P, Preservation 7)	(Container type P, Preservation 3)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
10/03/17	15:00	W		X	HGWC-13	2	1	1		44	21
10/03/17	15:10	W		X	FB-1	2	1	1		45	22
10/03/17	15:15	W		X	FERB-1	2	1	1		46	23
10/03/17	--	W		X	DUP-1	2	1	1		47	24

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: M.Thomas MT, W.Virgo WFV, H.Beaugh HB — DATE/TIME: 10/3/17 - 15:30

RELINQUISHED BY: Will Virgo (ERM) — DATE/TIME: 10/3/17 2100

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: Charles Hunt — DATE/TIME: 10/6/17 1600

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

Checked: No NA; Ice: Yes (circled) No NA; Temperature: Min 1.6°C Max; Custody Seal: Intact (circled) Broken Not Present; # of Coolers; Cooler ID:

FOR LAB USE ONLY

LAB #: AAJ0245 (crossed out) AAJ0310

Entered into LIMS:

Tracking #: AAJ0310

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project # AA50378

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-1 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.1 °C Biological Tissue is Frozen: Yes (No)

Date and Initials of person examining contents: 10/6/17 CA

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: 10/23/2017 2:43:07PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 10/06/17 16:00

Work Order: AAJ0310
Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 24 **#Containers:** 48

Minimum Temp(C): 1.1 **Maximum Temp(C):** 1.1 **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:

Per consultant 10/9/2017, metals parameters should be boron and calcium; not barium that is noted on COC. BMcD

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:

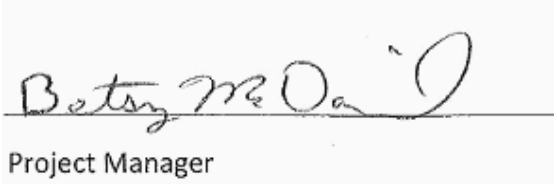
Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: **Mr. Joju Abraham**

Report Number: **AZG0254**
July 21, 2016
Project: CCR Event
Project #:Plant Hammond

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

July 21, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWA-4	AZG0254-01	Ground Water	07/11/16 15:09	07/12/16 08:40
HGWA-5	AZG0254-02	Ground Water	07/11/16 15:41	07/12/16 08:40
HGWA-6	AZG0254-03	Ground Water	07/11/16 14:30	07/12/16 08:40
HGWA-1	AZG0254-04	Ground Water	07/11/16 15:42	07/12/16 08:40
HGWA-2	AZG0254-05	Ground Water	07/11/16 16:25	07/12/16 08:40

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

July 21, 2016

Report No.: AZG0254
Client ID: HGWA-4
Date/Time Sampled: 7/11/2016 3:09:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0254-01
Date/Time Received: 7/12/2016 8:40:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	266	25	10	mg/L	SM 2540 C		1	07/18/16 13:50	07/18/16 13:50	6070364	JPT
Inorganic Anions											
Chloride	5.0	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/14/16 11:07	07/14/16 18:58	6070308	RLC
Fluoride	0.09	0.30	0.02	mg/L	EPA 300.0	J	1	07/14/16 11:07	07/14/16 18:58	6070308	RLC
Sulfate	3.7	1.0	0.05	mg/L	EPA 300.0		1	07/14/16 11:07	07/14/16 18:58	6070308	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:18	6070252	KLH
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:18	6070252	KLH
Barium	0.0309	0.0100	0.0003	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:18	6070252	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:18	6070252	KLH
Boron	0.0175	0.100	0.0044	mg/L	EPA 6020B	J	1	07/13/16 08:10	07/14/16 15:18	6070252	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:18	6070252	KLH
Calcium	73.0	10.0	0.251	mg/L	EPA 6020B		20	07/13/16 08:10	07/14/16 17:55	6070252	KLH
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:18	6070252	KLH
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:18	6070252	KLH
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:18	6070252	KLH
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:18	6070252	KLH
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:18	6070252	KLH
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:18	6070252	KLH
Lithium	0.0015	0.0500	0.0012	mg/L	EPA 6020B	J	1	07/13/16 08:10	07/14/16 15:18	6070252	KLH
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/13/16 14:10	07/14/16 15:12	6070254	CSW

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

July 21, 2016

Report No.: AZG0254
Client ID: HGWA-5
Date/Time Sampled: 7/11/2016 3:41:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0254-02
Date/Time Received: 7/12/2016 8:40:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	158	25	10	mg/L	SM 2540 C		1	07/18/16 13:50	07/18/16 13:50	6070364	JPT
Inorganic Anions											
Chloride	2.0	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/14/16 11:07	07/14/16 19:18	6070308	RLC
Fluoride	0.09	0.30	0.02	mg/L	EPA 300.0	J	1	07/14/16 11:07	07/14/16 19:18	6070308	RLC
Sulfate	27	1.0	0.05	mg/L	EPA 300.0		1	07/14/16 11:07	07/14/16 19:18	6070308	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:24	6070252	KLH
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:24	6070252	KLH
Barium	0.0565	0.0100	0.0003	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:24	6070252	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:24	6070252	KLH
Boron	0.0052	0.100	0.0044	mg/L	EPA 6020B	J	1	07/13/16 08:10	07/14/16 15:24	6070252	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:24	6070252	KLH
Calcium	35.4	5.00	0.126	mg/L	EPA 6020B		10	07/13/16 08:10	07/14/16 18:01	6070252	KLH
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:24	6070252	KLH
Cobalt	0.0010	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/13/16 08:10	07/14/16 15:24	6070252	KLH
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:24	6070252	KLH
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:24	6070252	KLH
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:24	6070252	KLH
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:24	6070252	KLH
Lithium	0.0034	0.0500	0.0012	mg/L	EPA 6020B	J	1	07/13/16 08:10	07/14/16 15:24	6070252	KLH
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/13/16 14:10	07/14/16 15:40	6070254	CSW

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

July 21, 2016

Report No.: AZG0254
Client ID: HGWA-6
Date/Time Sampled: 7/11/2016 2:30:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0254-03
Date/Time Received: 7/12/2016 8:40:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	225	25	10	mg/L	SM 2540 C		1	07/18/16 13:50	07/18/16 13:50	6070364	JPT
Inorganic Anions											
Chloride	1.7	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/14/16 11:07	07/14/16 20:20	6070308	RLC
Fluoride	0.13	0.30	0.02	mg/L	EPA 300.0	J	1	07/14/16 11:07	07/14/16 20:20	6070308	RLC
Sulfate	34	1.0	0.05	mg/L	EPA 300.0		1	07/14/16 11:07	07/14/16 20:20	6070308	RLC
Metals, Total											
Antimony	0.0010	0.0030	0.0002	mg/L	EPA 6020B	B-01, J	1	07/13/16 08:10	07/14/16 15:30	6070252	KLH
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:30	6070252	KLH
Barium	0.134	0.0100	0.0003	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:30	6070252	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:30	6070252	KLH
Boron	0.0179	0.100	0.0044	mg/L	EPA 6020B	J	1	07/13/16 08:10	07/14/16 15:30	6070252	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:30	6070252	KLH
Calcium	49.3	10.0	0.251	mg/L	EPA 6020B		20	07/13/16 08:10	07/14/16 18:06	6070252	KLH
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:30	6070252	KLH
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:30	6070252	KLH
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:30	6070252	KLH
Molybdenum	0.0008	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/13/16 08:10	07/14/16 15:30	6070252	KLH
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:30	6070252	KLH
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:30	6070252	KLH
Lithium	0.0100	0.0500	0.0012	mg/L	EPA 6020B	J	1	07/13/16 08:10	07/14/16 15:30	6070252	KLH
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/13/16 14:10	07/14/16 15:42	6070254	CSW

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

July 21, 2016

Report No.: AZG0254
Client ID: HGWA-1
Date/Time Sampled: 7/11/2016 3:42:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0254-04
Date/Time Received: 7/12/2016 8:40:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	363	25	10	mg/L	SM 2540 C		1	07/18/16 13:50	07/18/16 13:50	6070364	JPT
Inorganic Anions											
Chloride	6.3	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/14/16 11:07	07/14/16 20:41	6070308	RLC
Fluoride	0.16	0.30	0.02	mg/L	EPA 300.0	J	1	07/14/16 11:07	07/14/16 20:41	6070308	RLC
Sulfate	41	1.0	0.05	mg/L	EPA 300.0		1	07/14/16 11:07	07/14/16 20:41	6070308	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:36	6070252	KLH
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:36	6070252	KLH
Barium	0.0311	0.0100	0.0003	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:36	6070252	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:36	6070252	KLH
Boron	0.0142	0.100	0.0044	mg/L	EPA 6020B	J	1	07/13/16 08:10	07/14/16 15:36	6070252	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:36	6070252	KLH
Calcium	97.2	10.0	0.251	mg/L	EPA 6020B		20	07/13/16 08:10	07/14/16 18:24	6070252	KLH
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:36	6070252	KLH
Cobalt	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/13/16 08:10	07/14/16 15:36	6070252	KLH
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:36	6070252	KLH
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:36	6070252	KLH
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:36	6070252	KLH
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:36	6070252	KLH
Lithium	ND	0.0500	0.0012	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:36	6070252	KLH
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/13/16 14:10	07/14/16 15:45	6070254	CSW

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

July 21, 2016

Report No.: AZG0254
Client ID: HGWA-2
Date/Time Sampled: 7/11/2016 4:25:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0254-05
Date/Time Received: 7/12/2016 8:40:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	125	25	10	mg/L	SM 2540 C		1	07/14/16 13:05	07/14/16 13:05	6070304	JPT
Inorganic Anions											
Chloride	5.9	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/14/16 11:07	07/14/16 22:24	6070308	RLC
Fluoride	0.05	0.30	0.02	mg/L	EPA 300.0	J	1	07/14/16 11:07	07/14/16 22:24	6070308	RLC
Sulfate	45	1.0	0.05	mg/L	EPA 300.0		1	07/14/16 11:07	07/14/16 22:24	6070308	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:41	6070252	KLH
Arsenic	0.0020	0.0050	0.0007	mg/L	EPA 6020B	J	1	07/13/16 08:10	07/14/16 15:41	6070252	KLH
Barium	0.112	0.0100	0.0003	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:41	6070252	KLH
Beryllium	0.0001	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/13/16 08:10	07/14/16 15:41	6070252	KLH
Boron	0.0337	0.100	0.0044	mg/L	EPA 6020B	J	1	07/13/16 08:10	07/14/16 15:41	6070252	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:41	6070252	KLH
Calcium	22.3	2.50	0.0628	mg/L	EPA 6020B		5	07/13/16 08:10	07/14/16 15:47	6070252	KLH
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:41	6070252	KLH
Cobalt	0.0267	0.0100	0.0003	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:41	6070252	KLH
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:41	6070252	KLH
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:41	6070252	KLH
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:41	6070252	KLH
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	07/13/16 08:10	07/14/16 15:41	6070252	KLH
Lithium	0.0014	0.0500	0.0012	mg/L	EPA 6020B	J	1	07/13/16 08:10	07/14/16 15:41	6070252	KLH
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/13/16 14:10	07/14/16 15:47	6070254	CSW

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

July 21, 2016

Report No.: AZG0254

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070260 - SM 2540 C											
Blank (6070260-BLK1)						Prepared & Analyzed: 07/13/16					
Total Dissolved Solids	12	25	10	mg/L							J
LCS (6070260-BS1)						Prepared & Analyzed: 07/13/16					
Total Dissolved Solids	428	25	10	mg/L	400.00		107	84-108			
Duplicate (6070260-DUP1)		**Source: AZG0253-03**				Prepared & Analyzed: 07/13/16					
Total Dissolved Solids	254	25	10	mg/L		242			5	10	
Duplicate (6070260-DUP2)		**Source: AZG0254-02**				Prepared & Analyzed: 07/13/16					
Total Dissolved Solids	172	25	10	mg/L		182			6	10	
Batch 6070304 - SM 2540 C											
Blank (6070304-BLK1)						Prepared & Analyzed: 07/14/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6070304-BS1)						Prepared & Analyzed: 07/14/16					
Total Dissolved Solids	384	25	10	mg/L	400.00		96	84-108			
Duplicate (6070304-DUP1)		**Source: AZG0253-04**				Prepared & Analyzed: 07/14/16					
Total Dissolved Solids	155	25	10	mg/L		149			4	10	
Duplicate (6070304-DUP2)		**Source: AZG0286-03**				Prepared & Analyzed: 07/14/16					
Total Dissolved Solids	244	25	10	mg/L		249			2	10	
Batch 6070323 - SM 2540 C											
Blank (6070323-BLK1)						Prepared & Analyzed: 07/14/16					
Total Dissolved Solids	ND	25	10	mg/L							

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 21, 2016

Report No.: AZG0254

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070323 - SM 2540 C											
LCS (6070323-BS1)						Prepared & Analyzed: 07/14/16					
Total Dissolved Solids	391	25	10	mg/L	400.00		98	84-108			
Duplicate (6070323-DUP1)			**Source: AZG0225-01RE1**			Prepared & Analyzed: 07/14/16					
Total Dissolved Solids	165	25	10	mg/L		282			52	10	QR-03
Duplicate (6070323-DUP2)			**Source: AZG0253-03RE1**			Prepared & Analyzed: 07/14/16					
Total Dissolved Solids	275	25	10	mg/L		377			31	10	QR-03
Batch 6070364 - SM 2540 C											
Blank (6070364-BLK1)						Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6070364-BS1)						Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	402	25	10	mg/L	400.00		100	84-108			
Duplicate (6070364-DUP1)			**Source: AZG0225-01RE2**			Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	141	25	10	mg/L		139			1	10	
Duplicate (6070364-DUP2)			**Source: AZG0225-02RE2**			Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	17	25	10	mg/L		16			6	10	J
Duplicate (6070364-DUP3)			**Source: AZG0225-03RE2**			Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	125	25	10	mg/L		125			0	10	
Duplicate (6070364-DUP4)			**Source: AZG0225-04RE2**			Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	137	25	10	mg/L		131			4	10	

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

July 21, 2016

Report No.: AZG0254

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070364 - SM 2540 C											
Duplicate (6070364-DUP5)			**Source: AZG0253-01RE2**			Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	145	25	10	mg/L		142			2	10	
Duplicate (6070364-DUP6)			**Source: AZG0253-02RE2**			Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	179	25	10	mg/L		195			9	10	
Duplicate (6070364-DUP7)			**Source: AZG0253-03RE2**			Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	257	25	10	mg/L		262			2	10	
Duplicate (6070364-DUP8)			**Source: AZG0254-01RE2**			Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	268	25	10	mg/L		266			0.7	10	
Duplicate (6070364-DUP9)			**Source: AZG0254-02RE2**			Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	161	25	10	mg/L		158			2	10	
Duplicate (6070364-DUPA)			**Source: AZG0254-03RE2**			Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	225	25	10	mg/L		225			0	10	
Duplicate (6070364-DUPB)			**Source: AZG0254-04RE2**			Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	358	25	10	mg/L		363			1	10	

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

July 21, 2016

Report No.: AZG0254

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070308 - EPA 300.0											
Blank (6070308-BLK1)						Prepared & Analyzed: 07/14/16					
Chloride	0.04	0.25	0.01	mg/L							J
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
LCS (6070308-BS1)						Prepared & Analyzed: 07/14/16					
Chloride	10.0	0.25	0.01	mg/L	10.010		100	90-110			
Fluoride	10.7	0.30	0.02	mg/L	10.010		107	90-110			
Sulfate	10.2	1.0	0.05	mg/L	10.010		102	90-110			
Matrix Spike (6070308-MS1)		**Source: AZG0254-02**				Prepared & Analyzed: 07/14/16					
Chloride	11.5	0.25	0.01	mg/L	10.010	2.00	95	90-110			
Fluoride	10.7	0.30	0.02	mg/L	10.010	0.09	106	90-110			
Sulfate	34.2	1.0	0.05	mg/L	10.010	26.6	77	90-110			QM-05
Matrix Spike (6070308-MS2)		**Source: AZG0254-05**				Prepared & Analyzed: 07/14/16					
Chloride	15.7	0.25	0.01	mg/L	10.010	5.86	98	90-110			
Fluoride	11.2	0.30	0.02	mg/L	10.010	0.05	112	90-110			QM-05
Sulfate	50.4	1.0	0.05	mg/L	10.010	44.7	56	90-110			QM-05
Matrix Spike Dup (6070308-MSD1)		**Source: AZG0254-02**				Prepared & Analyzed: 07/14/16					
Chloride	11.5	0.25	0.01	mg/L	10.010	2.00	95	90-110	0.2	15	
Fluoride	10.8	0.30	0.02	mg/L	10.010	0.09	107	90-110	0.5	15	
Sulfate	34.3	1.0	0.05	mg/L	10.010	26.6	77	90-110	0.1	15	QM-05

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

July 21, 2016

Report No.: AZG0254

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070252 - EPA 3005A											
Blank (6070252-BLK1)						Prepared: 07/13/16 Analyzed: 07/14/16					
Antimony	0.0004	0.0030	0.0002	mg/L							J
Arsenic	ND	0.0050	0.0007	mg/L							
Barium	ND	0.0050	0.0003	mg/L							
Beryllium	ND	0.0030	0.00009	mg/L							
Boron	ND	0.100	0.0044	mg/L							
Cadmium	ND	0.0010	0.0001	mg/L							
Calcium	ND	0.500	0.0126	mg/L							
Chromium	ND	0.0100	0.0004	mg/L							
Cobalt	ND	0.0100	0.0003	mg/L							
Copper	ND	0.0250	0.0004	mg/L							
Lead	ND	0.0050	0.00008	mg/L							
Molybdenum	ND	0.0100	0.0005	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Selenium	ND	0.0100	0.0009	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Thallium	ND	0.0010	0.00006	mg/L							
Vanadium	ND	0.0100	0.0016	mg/L							
Zinc	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0012	mg/L							
LCS (6070252-BS1)						Prepared: 07/13/16 Analyzed: 07/14/16					
Antimony	0.114	0.0030	0.0002	mg/L	0.10000		114	80-120			
Arsenic	0.102	0.0050	0.0007	mg/L	0.10000		102	80-120			
Barium	0.108	0.0100	0.0003	mg/L	0.10000		108	80-120			
Beryllium	0.107	0.0030	0.00009	mg/L	0.10000		107	80-120			
Boron	1.12	0.100	0.0044	mg/L	1.0000		112	80-120			
Cadmium	0.0988	0.0010	0.0001	mg/L	0.10000		99	80-120			
Calcium	1.06	0.500	0.0126	mg/L	1.0000		106	80-120			
Chromium	0.102	0.0100	0.0004	mg/L	0.10000		102	80-120			
Cobalt	0.104	0.0100	0.0003	mg/L	0.10000		104	80-120			
Copper	0.103	0.0250	0.0004	mg/L	0.10000		103	80-120			
Lead	0.0962	0.0050	0.00008	mg/L	0.10000		96	80-120			
Molybdenum	0.110	0.0100	0.0005	mg/L	0.10000		110	80-120			
Nickel	0.105	0.0100	0.0005	mg/L	0.10000		105	80-120			
Selenium	0.0987	0.0100	0.0009	mg/L	0.10000		99	80-120			
Silver	0.110	0.0100	0.0002	mg/L	0.10000		110	80-120			
Thallium	0.0969	0.0010	0.00006	mg/L	0.10000		97	80-120			
Vanadium	0.105	0.0100	0.0016	mg/L	0.10000		105	80-120			
Zinc	0.103	0.0100	0.0013	mg/L	0.10000		103	80-120			
Lithium	0.101	0.0500	0.0012	mg/L	0.10000		101	80-120			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 21, 2016

Report No.: AZG0254

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070252 - EPA 3005A											
Matrix Spike (6070252-MS1)		**Source: AZG0225-02**			Prepared: 07/13/16 Analyzed: 07/14/16						
Antimony	0.112	0.0030	0.0002	mg/L	0.10000	0.0023	109	75-125			
Arsenic	0.101	0.0050	0.0007	mg/L	0.10000	ND	101	75-125			
Barium	0.112	0.0100	0.0003	mg/L	0.10000	0.0095	103	75-125			
Beryllium	0.110	0.0030	0.00009	mg/L	0.10000	ND	110	75-125			
Boron	1.12	0.100	0.0044	mg/L	1.0000	0.0067	111	75-125			
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000	ND	101	75-125			
Calcium	2.03	0.500	0.0126	mg/L	1.0000	1.00	103	75-125			
Chromium	0.103	0.0100	0.0004	mg/L	0.10000	ND	103	75-125			
Cobalt	0.102	0.0100	0.0003	mg/L	0.10000	0.0004	102	75-125			
Copper	0.120	0.0250	0.0004	mg/L	0.10000	0.0152	105	75-125			
Lead	0.0992	0.0050	0.00008	mg/L	0.10000	0.0001	99	75-125			
Molybdenum	0.104	0.0100	0.0005	mg/L	0.10000	ND	104	75-125			
Nickel	0.119	0.0100	0.0005	mg/L	0.10000	0.0140	105	75-125			
Selenium	0.0990	0.0100	0.0009	mg/L	0.10000	ND	99	75-125			
Silver	0.105	0.0100	0.0002	mg/L	0.10000	ND	105	75-125			
Thallium	0.0989	0.0010	0.00006	mg/L	0.10000	ND	99	75-125			
Vanadium	0.105	0.0100	0.0016	mg/L	0.10000	0.0028	102	75-125			
Zinc	0.109	0.0100	0.0013	mg/L	0.10000	0.0098	99	75-125			
Lithium	0.108	0.0500	0.0012	mg/L	0.10000	0.0049	103	75-125			
Matrix Spike Dup (6070252-MSD1)		**Source: AZG0225-02**			Prepared: 07/13/16 Analyzed: 07/14/16						
Antimony	0.113	0.0030	0.0002	mg/L	0.10000	0.0023	110	75-125	1	20	
Arsenic	0.0999	0.0050	0.0007	mg/L	0.10000	ND	100	75-125	1	20	
Barium	0.114	0.0100	0.0003	mg/L	0.10000	0.0095	104	75-125	1	20	
Beryllium	0.107	0.0030	0.00009	mg/L	0.10000	ND	107	75-125	3	20	
Boron	1.02	0.100	0.0044	mg/L	1.0000	0.0067	101	75-125	9	20	
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000	ND	101	75-125	0.7	20	
Calcium	2.07	0.500	0.0126	mg/L	1.0000	1.00	106	75-125	2	20	
Chromium	0.101	0.0100	0.0004	mg/L	0.10000	ND	101	75-125	2	20	
Cobalt	0.102	0.0100	0.0003	mg/L	0.10000	0.0004	101	75-125	0.6	20	
Copper	0.121	0.0250	0.0004	mg/L	0.10000	0.0152	106	75-125	1	20	
Lead	0.0964	0.0050	0.00008	mg/L	0.10000	0.0001	96	75-125	3	20	
Molybdenum	0.109	0.0100	0.0005	mg/L	0.10000	ND	109	75-125	4	20	
Nickel	0.119	0.0100	0.0005	mg/L	0.10000	0.0140	105	75-125	0.4	20	
Selenium	0.0974	0.0100	0.0009	mg/L	0.10000	ND	97	75-125	2	20	
Silver	0.109	0.0100	0.0002	mg/L	0.10000	ND	109	75-125	4	20	
Thallium	0.0969	0.0010	0.00006	mg/L	0.10000	ND	97	75-125	2	20	
Vanadium	0.104	0.0100	0.0016	mg/L	0.10000	0.0028	101	75-125	0.9	20	
Zinc	0.112	0.0100	0.0013	mg/L	0.10000	0.0098	102	75-125	3	20	
Lithium	0.105	0.0500	0.0012	mg/L	0.10000	0.0049	100	75-125	3	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

July 21, 2016

Report No.: AZG0254

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070252 - EPA 3005A											
Post Spike (6070252-PS1)			**Source: AZG0225-02**			Prepared: 07/13/16 Analyzed: 07/14/16					
Antimony	104			ug/L	100.00	2.32	102	80-120			
Arsenic	99.6			ug/L	100.00	0.534	99	80-120			
Barium	108			ug/L	100.00	9.46	99	80-120			
Beryllium	105			ug/L	100.00	0.0534	105	80-120			
Boron	1050			ug/L	1000.0	6.73	104	80-120			
Cadmium	99.3			ug/L	100.00	0.0519	99	80-120			
Calcium	2020			ug/L	1000.0	1000	102	80-120			
Chromium	104			ug/L	100.00	0.423	103	80-120			
Cobalt	102			ug/L	100.00	0.377	102	80-120			
Copper	114			ug/L	100.00	15.2	99	80-120			
Lead	96.7			ug/L	100.00	0.130	97	80-120			
Molybdenum	103			ug/L	100.00	0.0777	102	80-120			
Nickel	117			ug/L	100.00	14.0	102	80-120			
Selenium	94.9			ug/L	100.00	-0.285	95	80-120			
Silver	103			ug/L	100.00	0.0065	103	80-120			
Thallium	97.9			ug/L	100.00	0.0339	98	80-120			
Vanadium	103			ug/L	100.00	2.78	101	80-120			
Zinc	106			ug/L	100.00	9.83	96	80-120			
Lithium	103			ug/L	100.00	4.93	98	80-120			
Batch 6070254 - EPA 7470A											
Blank (6070254-BLK1)						Prepared: 07/13/16 Analyzed: 07/14/16					
Mercury	ND	0.00020	0.00013	mg/L							
LCS (6070254-BS1)						Prepared: 07/13/16 Analyzed: 07/14/16					
Mercury	0.00247	0.00050	0.00013	mg/L	2.5000E-3		99	80-120			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 21, 2016

Report No.: AZG0254

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070254 - EPA 7470A											
Matrix Spike (6070254-MS1)		**Source: AZG0225-01**				Prepared: 07/13/16 Analyzed: 07/14/16					
Mercury	0.00240	0.00050	0.00013	mg/L	2.5000E-3	ND	96	75-125			
Matrix Spike Dup (6070254-MSD1)		**Source: AZG0225-01**				Prepared: 07/13/16 Analyzed: 07/14/16					
Mercury	0.00236	0.00050	0.00013	mg/L	2.5000E-3	ND	94	75-125	2	20	
Post Spike (6070254-PS1)		**Source: AZG0225-01**				Prepared: 07/13/16 Analyzed: 07/14/16					
Mercury	1.64			ug/L	1.6667	-0.0409	101	80-120			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 21, 2016

Legend

Definition of Laboratory Terms

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

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-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.

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

CLIENT NAME: Southern Company Services
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd. SE B10185 Atlanta, GA 30308 404-506-7239
REPORT TO: Joju Abraham
CC: Heath McCorkle, Maria Padilla
REQUESTED COMPLETION DATE:
PO #:
PROJECT NAME/STATE: Plant Hammond AP GW CCR
PROJECT #:

ANALYSIS REQUESTED

								Metals App. III + IV EPA 6020 & EPA 7470	Cl, F, SO4 EPA 300 TDS SM2540C	Ra-SW-846 9315 + 9320							
					CONTAINER TYPE:			P	P	P							
					PRESERVATION:			3	7	3							
Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS										LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
7/11/16	15:09	GW		✓	HGWA-4	3		1	1	1						1	
7/11/16	15:41	GW		✓	HGWA-5	3		1	1	1						2	
7/11/16	14:30	GW		✓	HGWA-6	4		1	1	2						3	
7/11/16	15:42	GW		✓	HGWA-1	3		1	1	1						4	
7/11/16	16:25	GW		✓	HGWA-2	3		1	1	1						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: Greg Sink, Geologist — DATE/TIME: 7-11-2016 17:45
RECEIVED BY: — DATE/TIME:
RELINQUISHED BY: [signature] — 7/12/16 08:40 — DATE/TIME:
RELINQUISHED BY: — DATE/TIME:
RECEIVED BY LAB: Charlee Harbo — DATE/TIME: 7/12/16 0840
pH checked: Yes 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:

FOR LAB USE ONLY
LAB #: AZG0254
Entered into LIMS: GH
Tracking #:

COC Revised 2016-05-17.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: 7/21/2016 3:21:42PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 07/12/16 08:40

Work Order: AZG0254
Logged In By: Charles Hawks

OBSERVATIONS

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

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

August 15, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Hammond AP GW CCR
Pace Project No.: 30189718

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on July 13, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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 Hammond AP GW CCR
Pace Project No.: 30189718

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 Hammond AP GW CCR
Pace Project No.: 30189718

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30189718001	**HGWA-4**	Water	07/11/16 15:09	07/13/16 09:40
30189718002	**HGWA-5**	Water	07/11/16 15:41	07/13/16 09:40
30189718003	**HGWA-6**	Water	07/11/16 14:30	07/13/16 09:40
30189718004	**HGWA-1**	Water	07/11/16 15:42	07/13/16 09:40
30189718005	**HGWA-2**	Water	07/11/16 16:25	07/13/16 09:40

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

SAMPLE ANALYTE COUNT

Project: Plant Hammond AP GW CCR
Pace Project No.: 30189718

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30189718001	**HGWA-4**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189718002	**HGWA-5**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189718003	**HGWA-6**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189718004	**HGWA-1**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189718005	**HGWA-2**	EPA 9315	JAL	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 Hammond AP GW CCR
Pace Project No.: 30189718

Sample: HGWA-4 **Lab ID: 30189718001** Collected: 07/11/16 15:09 Received: 07/13/16 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.442 ± 0.305 (0.546) C:95% T:NA**	pCi/L	08/14/16 16:55	13982-63-3	
Radium-228	EPA 9320	**0.749 ± 0.377 (0.644) C:69% T:83%**	pCi/L	08/09/16 02:08	15262-20-1	
Total Radium	Total Radium Calculation	**1.19 ± 0.682 (1.19)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: HGWA-5 **Lab ID: 30189718002** Collected: 07/11/16 15:41 Received: 07/13/16 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0599 ± 0.112 (0.253) C:95% T:NA**	pCi/L	08/15/16 08:03	13982-63-3	
Radium-228	EPA 9320	**1.62 ± 0.583 (0.852) C:59% T:78%**	pCi/L	08/09/16 02:08	15262-20-1	
Total Radium	Total Radium Calculation	**1.68 ± 0.695 (1.11)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: HGWA-6 **Lab ID: 30189718003** Collected: 07/11/16 14:30 Received: 07/13/16 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0454 ± 0.174 (0.421) C:97% T:NA**	pCi/L	08/15/16 08:03	13982-63-3	
Radium-228	EPA 9320	**0.449 ± 0.328 (0.622) C:75% T:78%**	pCi/L	08/09/16 02:08	15262-20-1	
Total Radium	Total Radium Calculation	**0.494 ± 0.502 (1.04)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: HGWA-1 **Lab ID: 30189718004** Collected: 07/11/16 15:42 Received: 07/13/16 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.113 ± 0.148 (0.307) C:90% T:NA**	pCi/L	08/15/16 08:03	13982-63-3	
Radium-228	EPA 9320	**0.625 ± 0.310 (0.514) C:73% T:87%**	pCi/L	08/09/16 02:08	15262-20-1	
Total Radium	Total Radium Calculation	**0.738 ± 0.458 (0.821)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: HGWA-2 **Lab ID: 30189718005** Collected: 07/11/16 16:25 Received: 07/13/16 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.234 ± 0.205 (0.388) C:88% T:NA**	pCi/L	08/15/16 08:03	13982-63-3	
Radium-228	EPA 9320	**1.15 ± 0.424 (0.613) C:70% T:85%**	pCi/L	08/09/16 02:08	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 Hammond AP GW CCR
Pace Project No.: 30189718

Sample: HGWA-2 **Lab ID: 30189718005** Collected: 07/11/16 16:25 Received: 07/13/16 09:40 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 ± 0.629 (1.00)**	pCi/L	08/15/16 14:32	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 Hammond AP GW CCR
Pace Project No.: 30189718

QC Batch: 227858 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30189718001, 30189718002, 30189718003, 30189718004, 30189718005

METHOD BLANK: 1116127 Matrix: Water
Associated Lab Samples: 30189718001, 30189718002, 30189718003, 30189718004, 30189718005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.524 ± 0.378 (0.726) C:74% T:84%	pCi/L	08/08/16 21:20	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond AP GW CCR
Pace Project No.: 30189718

QC Batch: 229107 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30189718001, 30189718002, 30189718003, 30189718004, 30189718005

METHOD BLANK: 1122752 Matrix: Water
Associated Lab Samples: 30189718001, 30189718002, 30189718003, 30189718004, 30189718005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.218 ± 0.224 (0.447) C:98% T:NA	pCi/L	08/14/16 16:55	

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.

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

QUALIFIERS

Project: Plant Hammond AP GW CCR
Pace Project No.: 30189718

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#:30189718

30189718

0868

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

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

PAGE: 1 OF 1

CLIENT NAME: Southern Company Services

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd. SE BIN185 Atlanta, GA 30308 404-506-7239

REPORT TO: Joju Abraham

CC: Heath McCorkle, Maria Padilla

REQUESTED COMPLETION DATE:

PO #:

PROJECT NAME/STATE: Plant Hammond AP GW CCR

PROJECT #:

ANALYSIS REQUESTED:
- CONTAINER TYPE: P / P / P
- PRESERVATION: 3 / 7 / 3
- metals App III + IV EPA 6020 / EPA 7470
- Cl, F, SO4 EPA 300 / TDS SM2540C
- Ra-226-228 9315 + 9320

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	Ra-226-228 9315 + 9320	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
7/11/16	15:09	GW		✓	HGWA-4	3	1	1	1	1	001
7/11/16	15:41	GW		✓	HGWA-5	3	1	1	1	2	002
7/11/16	14:30	GW		✓	HGWA-6	4	1	1	2	3	003
7/11/16	15:42	GW		✓	HGWA-1	3	1	1	1	4	004
7/11/16	16:25	GW		✓	HGWA-2	3	1	1	1	5	005

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: Greg Jual, Geologist — DATE/TIME: 7-11-2016 17:45

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: [signature] — DATE/TIME: 7/12/16 08:40

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: [signature] — DATE/TIME: 7/13/16 0840

pH checked: (Yes) No NA — Ice: (Yes) No NA

Temperature: Min 1.7

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 #: AZG-0254

Entered into LIMS: [initials]

Tracking #:

COC Revised 2016-05-17.xlsx

[signature] 7-13-16 0940

Sample Condition Upon Receipt Pittsburgh

30189718

Pace Analytical

Client Name: GA Power Project #

Courier: [X] Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace Other

Tracking #: 681250976320

Custody Seal on Cooler/Box Present: [ ] yes [X] 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: MJV 7-13-16

Comments:	Yes	No	N/A	
Chain of Custody Present:		X		1. received 7-14-16
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				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:	X			10.
-Pace Containers Used:		X		
Containers Intact:	X			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 / 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	

Client Notification/ Resolution:

Person Contacted: Date/Time: Contacted By:

Comments/ Resolution: Bowen / Hammond

1 ½ gal: GWA55R, GWA56, GWA55, GWA53R

HGWA-6 - 2 ½ gals

1 ½ gal each: HGWA-5, HGWA-4, HGWA-2, HGWA-1

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:	8/3/2016
Worklist:	30597
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1116127
MB concentration:	0.524
M/B Counting Uncertainty:	0.366
MB MDC:	0.726
MB Numerical Performance Indicator:	2.81
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS30597	LCSD30597
Count Date:	8/8/2016	8/8/2016
Spike I.D.:	16-025	16-025
Spike Concentration (pCi/mL):	25.987	25.987
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.805	0.814
Target Conc. (pCi/L, g, F):	6.455	6.383
Uncertainty (Calculated):	0.465	0.460
Result (pCi/L, g, F):	6.146	4.668
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.602	0.578
Numerical Performance Indicator:	-0.80	-4.55
Percent Recovery:	95.20%	73.13%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

Duplicate Sample Assessment		
Sample I.D.:	LCS30597	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD30597	
Sample Result (pCi/L, g, F):	6.146	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.602	
Sample Duplicate Result (pCi/L, g, F):	4.668	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.578	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	3.468	
Duplicate RPD:	27.33%	
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:

8/15/16

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	JAL
Date:	8/9/2016
Worklist:	30778
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1122752
MB concentration:	0.218
M/B Counting Uncertainty:	0.222
MB MDC:	0.447
MB Numerical Performance Indicator:	1.93
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS30778	LCSD30778
Count Date:	8/15/2016	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.679	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.507	
Target Conc. (pCi/L, g, F):	8.805	
Uncertainty (Calculated):	0.414	
Result (pCi/L, g, F):	10.843	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.919	
Numerical Performance Indicator:	3.96	
Percent Recovery:	123.15%	
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.:	30189653001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30189653001DUP	
Sample Result (pCi/L, g, F):	1.544	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.448	
Sample Duplicate Result (pCi/L, g, F):	1.624	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.383	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.267	30189653001
Duplicate RPD:	5.07%	30189653001DUP
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:

JM 8/15/16

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:

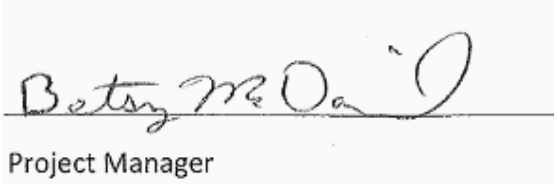
Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: **Mr. Joju Abraham**

Report Number: **AZG0286**
July 20, 2016
Project: CCR Event
Project #:Plant Hammond

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

July 20, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FB-1	AZG0286-01	DI Water	07/12/16 14:00	07/13/16 08:15
FB-2	AZG0286-02	DI Water	07/12/16 14:15	07/13/16 08:15
HGWA-3	AZG0286-03	Ground Water	07/12/16 09:24	07/13/16 08:15
HGWC-14	AZG0286-04	Ground Water	07/12/16 13:55	07/13/16 08:15
HGWC-7	AZG0286-05	Ground Water	07/12/16 10:20	07/13/16 08:15
HGWC-16	AZG0286-06	Ground Water	07/12/16 14:30	07/13/16 08:15
HGWC-13	AZG0286-07	Ground Water	07/12/16 12:20	07/13/16 08:15
HGWC-8	AZG0286-08	Ground Water	07/12/16 10:40	07/13/16 08:15
HGWC-15	AZG0286-09	Ground Water	07/12/16 12:35	07/13/16 08:15
HGWC-10	AZG0286-10	Ground Water	07/12/16 11:21	07/13/16 08:15
Dup-2	AZG0286-11	Ground Water	07/12/16 00:00	07/13/16 08:15
FERB-2	AZG0286-12	DI Water	07/12/16 16:00	07/13/16 08:15
FERB-1	AZG0286-13	DI Water	07/12/16 15:50	07/13/16 08:15
HGWC-9	AZG0286-14	Ground Water	07/12/16 10:05	07/13/16 08:15
Dup-1	AZG0286-15	Ground Water	07/12/16 00:00	07/13/16 08:15
HGWC-11	AZG0286-16	Ground Water	07/12/16 11:35	07/13/16 08:15
HGWC-12	AZG0286-17	Ground Water	07/12/16 12:30	07/13/16 08:15
HGWC-17	AZG0286-18	Ground Water	07/12/16 15:04	07/13/16 08:15
HGWC-18	AZG0286-19	Ground Water	07/12/16 15:21	07/13/16 08:15

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

July 20, 2016

Report No.: AZG0286
Client ID: FB-1
Date/Time Sampled: 7/12/2016 2:00:00PM
Matrix: DI Water

Project: CCR Event
Lab Number ID: AZG0286-01
Date/Time Received: 7/13/2016 8:15:00AM

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	07/15/16 13:50	07/15/16 13:50	6070339	JPT
Inorganic Anions											
Chloride	0.05	0.25	0.01	mg/L	EPA 300.0	J, B-01	1	07/15/16 09:38	07/15/16 13:23	6070333	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	07/15/16 09:38	07/15/16 13:23	6070333	RLC
Sulfate	0.08	1.0	0.05	mg/L	EPA 300.0	J	1	07/15/16 09:38	07/15/16 13:23	6070333	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:01	6070274	CSW
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:01	6070274	CSW
Barium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:01	6070274	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:01	6070274	CSW
Boron	ND	0.100	0.0044	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:01	6070274	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:01	6070274	CSW
Calcium	ND	0.500	0.0126	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:01	6070274	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:01	6070274	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:01	6070274	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:01	6070274	CSW
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:01	6070274	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:01	6070274	CSW
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:01	6070274	CSW
Lithium	ND	0.0500	0.0012	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:01	6070274	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/15/16 08:50	07/15/16 15:35	6070275	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: FB-2
Date/Time Sampled: 7/12/2016 2:15:00PM
Matrix: DI Water

Project: CCR Event
Lab Number ID: AZG0286-02
Date/Time Received: 7/13/2016 8:15:00AM

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	07/15/16 13:50	07/15/16 13:50	6070339	JPT
Inorganic Anions											
Chloride	0.08	0.25	0.01	mg/L	EPA 300.0	J, B-01	1	07/15/16 09:38	07/15/16 13:44	6070333	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	07/15/16 09:38	07/15/16 13:44	6070333	RLC
Sulfate	0.08	1.0	0.05	mg/L	EPA 300.0	J	1	07/15/16 09:38	07/15/16 13:44	6070333	RLC
Metals, Total											
Antimony	0.0008	0.0030	0.0002	mg/L	EPA 6020B	J, B-01	1	07/14/16 09:00	07/15/16 14:31	6070274	CSW
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:31	6070274	CSW
Barium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:31	6070274	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:31	6070274	CSW
Boron	ND	0.100	0.0044	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:31	6070274	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:31	6070274	CSW
Calcium	ND	0.500	0.0126	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:31	6070274	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:31	6070274	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:31	6070274	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:31	6070274	CSW
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:31	6070274	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:31	6070274	CSW
Thallium	0.00008	0.0010	0.00006	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 14:31	6070274	CSW
Lithium	ND	0.0500	0.0012	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:31	6070274	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/15/16 08:50	07/15/16 15:49	6070275	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: HGWA-3
Date/Time Sampled: 7/12/2016 9:24:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0286-03
Date/Time Received: 7/13/2016 8:15:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	249	25	10	mg/L	SM 2540 C		1	07/14/16 13:05	07/14/16 13:05	6070304	JPT
Inorganic Anions											
Chloride	6.2	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/15/16 09:38	07/15/16 14:05	6070333	RLC
Fluoride	0.12	0.30	0.02	mg/L	EPA 300.0	J	1	07/15/16 09:38	07/15/16 14:05	6070333	RLC
Sulfate	44	1.0	0.05	mg/L	EPA 300.0		1	07/15/16 09:38	07/15/16 14:05	6070333	RLC
Metals, Total											
Antimony	0.0003	0.0030	0.0002	mg/L	EPA 6020B	J, B-01	1	07/14/16 09:00	07/15/16 14:37	6070274	CSW
Arsenic	0.0008	0.0050	0.0007	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 14:37	6070274	CSW
Barium	0.115	0.0100	0.0003	mg/L	EPA 6020B	B-01	1	07/14/16 09:00	07/15/16 14:37	6070274	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:37	6070274	CSW
Boron	0.0074	0.100	0.0044	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 14:37	6070274	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:37	6070274	CSW
Calcium	61.5	5.00	0.126	mg/L	EPA 6020B		10	07/14/16 09:00	07/18/16 13:00	6070274	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:37	6070274	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:37	6070274	CSW
Lead	0.0001	0.0050	0.00008	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 14:37	6070274	CSW
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:37	6070274	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:37	6070274	CSW
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:37	6070274	CSW
Lithium	0.0024	0.0500	0.0012	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 14:37	6070274	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/15/16 08:50	07/15/16 15:51	6070275	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: HGWC-14
Date/Time Sampled: 7/12/2016 1:55:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0286-04
Date/Time Received: 7/13/2016 8:15:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	3140	25	10	mg/L	SM 2540 C		1	07/15/16 13:50	07/15/16 13:50	6070339	JPT
Inorganic Anions											
Chloride	620	5.0	0.28	mg/L	EPA 300.0	B-01	20	07/15/16 09:38	07/19/16 19:54	6070333	RLC
Fluoride	0.20	0.30	0.02	mg/L	EPA 300.0	J	1	07/15/16 09:38	07/15/16 15:07	6070333	RLC
Sulfate	1300	50	2.6	mg/L	EPA 300.0		50	07/15/16 09:38	07/20/16 02:06	6070333	RLC
Metals, Total											
Antimony	0.0003	0.0030	0.0002	mg/L	EPA 6020B	B-01, J	1	07/14/16 09:00	07/15/16 14:43	6070274	CSW
Arsenic	0.0059	0.0050	0.0007	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:43	6070274	CSW
Barium	0.0214	0.0100	0.0003	mg/L	EPA 6020B	B-01	1	07/14/16 09:00	07/15/16 14:43	6070274	CSW
Beryllium	0.0005	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 14:43	6070274	CSW
Boron	16.0	1.00	0.0441	mg/L	EPA 6020B		10	07/14/16 09:00	07/18/16 13:11	6070274	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:43	6070274	CSW
Calcium	528	50.0	1.26	mg/L	EPA 6020B		100	07/14/16 09:00	07/18/16 13:06	6070274	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:43	6070274	CSW
Cobalt	0.0232	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:43	6070274	CSW
Lead	0.0015	0.0050	0.00008	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 14:43	6070274	CSW
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:43	6070274	CSW
Selenium	0.0146	0.0100	0.0009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:43	6070274	CSW
Thallium	0.0003	0.0010	0.00006	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 14:43	6070274	CSW
Lithium	ND	0.0500	0.0012	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:43	6070274	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/15/16 08:50	07/15/16 15:53	6070275	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: HGWC-7
Date/Time Sampled: 7/12/2016 10:20:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0286-05
Date/Time Received: 7/13/2016 8:15:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	410	25	10	mg/L	SM 2540 C		1	07/14/16 13:05	07/14/16 13:05	6070304	JPT
Inorganic Anions											
Chloride	50	1.2	0.07	mg/L	EPA 300.0	B-01	5	07/15/16 09:38	07/19/16 20:15	6070333	RLC
Fluoride	0.20	0.30	0.02	mg/L	EPA 300.0	J	1	07/15/16 09:38	07/15/16 15:27	6070333	RLC
Sulfate	100	5.0	0.26	mg/L	EPA 300.0		5	07/15/16 09:38	07/19/16 20:15	6070333	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:49	6070274	CSW
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:49	6070274	CSW
Barium	0.0731	0.0100	0.0003	mg/L	EPA 6020B	B-01	1	07/14/16 09:00	07/15/16 14:49	6070274	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:49	6070274	CSW
Boron	0.857	0.100	0.0044	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:49	6070274	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:49	6070274	CSW
Calcium	88.8	5.00	0.126	mg/L	EPA 6020B		10	07/14/16 09:00	07/18/16 13:17	6070274	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:49	6070274	CSW
Cobalt	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 14:49	6070274	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:49	6070274	CSW
Molybdenum	0.0273	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:49	6070274	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:49	6070274	CSW
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:49	6070274	CSW
Lithium	0.0021	0.0500	0.0012	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 14:49	6070274	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/15/16 08:50	07/15/16 15:56	6070275	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: HGWC-16
Date/Time Sampled: 7/12/2016 2:30:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0286-06
Date/Time Received: 7/13/2016 8:15:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	585	25	10	mg/L	SM 2540 C		1	07/15/16 13:50	07/15/16 13:50	6070339	JPT
Inorganic Anions											
Chloride	34	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/15/16 09:38	07/15/16 15:48	6070333	RLC
Fluoride	0.26	0.30	0.02	mg/L	EPA 300.0	J	1	07/15/16 09:38	07/15/16 15:48	6070333	RLC
Sulfate	220	5.0	0.26	mg/L	EPA 300.0		5	07/15/16 09:38	07/19/16 20:35	6070333	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:54	6070274	CSW
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:54	6070274	CSW
Barium	0.0886	0.0100	0.0003	mg/L	EPA 6020B	B-01	1	07/14/16 09:00	07/15/16 14:54	6070274	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:54	6070274	CSW
Boron	1.62	0.100	0.0044	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:54	6070274	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:54	6070274	CSW
Calcium	142	25.0	0.628	mg/L	EPA 6020B		50	07/14/16 09:00	07/18/16 13:23	6070274	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:54	6070274	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:54	6070274	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:54	6070274	CSW
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:54	6070274	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:54	6070274	CSW
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 14:54	6070274	CSW
Lithium	0.0037	0.0500	0.0012	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 14:54	6070274	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/15/16 08:50	07/15/16 15:58	6070275	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: HGWC-13
Date/Time Sampled: 7/12/2016 12:20:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0286-07
Date/Time Received: 7/13/2016 8:15:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	563	25	10	mg/L	SM 2540 C		1	07/14/16 13:05	07/14/16 13:05	6070304	JPT
Inorganic Anions											
Chloride	78	1.2	0.07	mg/L	EPA 300.0	B-01	5	07/15/16 09:38	07/19/16 20:56	6070333	RLC
Fluoride	0.53	0.30	0.02	mg/L	EPA 300.0		1	07/15/16 09:38	07/15/16 16:09	6070333	RLC
Sulfate	210	5.0	0.26	mg/L	EPA 300.0		5	07/15/16 09:38	07/19/16 20:56	6070333	RLC
Metals, Total											
Antimony	0.0003	0.0030	0.0002	mg/L	EPA 6020B	B-01, J	1	07/14/16 09:00	07/15/16 15:00	6070274	CSW
Arsenic	0.297	0.0050	0.0007	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:00	6070274	CSW
Barium	0.0697	0.0100	0.0003	mg/L	EPA 6020B	B-01	1	07/14/16 09:00	07/15/16 15:00	6070274	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:00	6070274	CSW
Boron	1.91	0.100	0.0044	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:00	6070274	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:00	6070274	CSW
Calcium	101	25.0	0.628	mg/L	EPA 6020B		50	07/14/16 09:00	07/18/16 13:40	6070274	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:00	6070274	CSW
Cobalt	0.0032	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 15:00	6070274	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:00	6070274	CSW
Molybdenum	0.0316	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:00	6070274	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:00	6070274	CSW
Thallium	0.0004	0.0010	0.00006	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 15:00	6070274	CSW
Lithium	0.0366	0.0500	0.0012	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 15:00	6070274	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/15/16 08:50	07/15/16 16:00	6070275	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: HGWC-8
Date/Time Sampled: 7/12/2016 10:40:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0286-08
Date/Time Received: 7/13/2016 8:15:00AM

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	07/14/16 13:05	07/14/16 13:05	6070304	JPT
Inorganic Anions											
Chloride	110	1.2	0.07	mg/L	EPA 300.0	B-01	5	07/15/16 09:38	07/19/16 21:17	6070333	RLC
Fluoride	0.67	0.30	0.02	mg/L	EPA 300.0		1	07/15/16 09:38	07/15/16 16:29	6070333	RLC
Sulfate	230	5.0	0.26	mg/L	EPA 300.0		5	07/15/16 09:38	07/19/16 21:17	6070333	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:06	6070274	CSW
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:06	6070274	CSW
Barium	0.0830	0.0100	0.0003	mg/L	EPA 6020B	B-01	1	07/14/16 09:00	07/15/16 15:06	6070274	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:06	6070274	CSW
Boron	1.43	0.100	0.0044	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:06	6070274	CSW
Cadmium	0.0002	0.0010	0.0001	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 15:06	6070274	CSW
Calcium	127	25.0	0.628	mg/L	EPA 6020B		50	07/14/16 09:00	07/18/16 13:46	6070274	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:06	6070274	CSW
Cobalt	0.0019	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 15:06	6070274	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:06	6070274	CSW
Molybdenum	0.455	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:06	6070274	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:06	6070274	CSW
Thallium	0.00007	0.0010	0.00006	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 15:06	6070274	CSW
Lithium	0.0023	0.0500	0.0012	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 15:06	6070274	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/15/16 08:50	07/15/16 16:03	6070275	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: HGWC-15
Date/Time Sampled: 7/12/2016 12:35:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0286-09
Date/Time Received: 7/13/2016 8:15:00AM

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	07/15/16 13:50	07/15/16 13:50	6070339	JPT
Inorganic Anions											
Chloride	190	5.0	0.28	mg/L	EPA 300.0	B-01	20	07/15/16 09:38	07/19/16 23:00	6070333	RLC
Fluoride	0.09	0.30	0.02	mg/L	EPA 300.0	J	1	07/15/16 09:38	07/15/16 18:13	6070333	RLC
Sulfate	440	20	1.0	mg/L	EPA 300.0		20	07/15/16 09:38	07/19/16 23:00	6070333	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:12	6070274	CSW
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:12	6070274	CSW
Barium	0.0372	0.0100	0.0003	mg/L	EPA 6020B	B-01	1	07/14/16 09:00	07/15/16 15:12	6070274	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:12	6070274	CSW
Boron	1.65	0.100	0.0044	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:12	6070274	CSW
Cadmium	0.0019	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:12	6070274	CSW
Calcium	186	25.0	0.628	mg/L	EPA 6020B		50	07/14/16 09:00	07/18/16 13:52	6070274	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:12	6070274	CSW
Cobalt	0.0393	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:12	6070274	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:12	6070274	CSW
Molybdenum	0.0007	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 15:12	6070274	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:12	6070274	CSW
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:12	6070274	CSW
Lithium	ND	0.0500	0.0012	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:12	6070274	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/15/16 08:50	07/15/16 16:05	6070275	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: HGWC-10
Date/Time Sampled: 7/12/2016 11:21:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0286-10
Date/Time Received: 7/13/2016 8:15:00AM

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	07/14/16 13:05	07/14/16 13:05	6070304	JPT
Inorganic Anions											
Chloride	63	1.2	0.07	mg/L	EPA 300.0	B-01	5	07/15/16 09:38	07/19/16 23:20	6070333	RLC
Fluoride	0.15	0.30	0.02	mg/L	EPA 300.0	J	1	07/15/16 09:38	07/15/16 18:33	6070333	RLC
Sulfate	190	5.0	0.26	mg/L	EPA 300.0		5	07/15/16 09:38	07/19/16 23:20	6070333	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:17	6070274	CSW
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:17	6070274	CSW
Barium	0.0926	0.0100	0.0003	mg/L	EPA 6020B	B-01	1	07/14/16 09:00	07/15/16 15:17	6070274	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:17	6070274	CSW
Boron	0.778	0.100	0.0044	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:17	6070274	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:17	6070274	CSW
Calcium	143	25.0	0.628	mg/L	EPA 6020B		50	07/14/16 09:00	07/18/16 13:58	6070274	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:17	6070274	CSW
Cobalt	0.0006	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 15:17	6070274	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:17	6070274	CSW
Molybdenum	0.0013	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 15:17	6070274	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:17	6070274	CSW
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:17	6070274	CSW
Lithium	ND	0.0500	0.0012	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:17	6070274	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/15/16 08:50	07/15/16 16:07	6070275	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: Dup-2
Date/Time Sampled: 7/12/2016 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0286-11
Date/Time Received: 7/13/2016 8:15:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1190	25	10	mg/L	SM 2540 C		1	07/14/16 13:05	07/14/16 13:05	6070304	JPT
Inorganic Anions											
Chloride	240	5.0	0.28	mg/L	EPA 300.0	B-01	20	07/15/16 09:38	07/19/16 23:41	6070333	RLC
Fluoride	0.05	0.30	0.02	mg/L	EPA 300.0	J	1	07/15/16 09:38	07/15/16 18:54	6070333	RLC
Sulfate	510	20	1.0	mg/L	EPA 300.0		20	07/15/16 09:38	07/19/16 23:41	6070333	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:23	6070274	CSW
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:23	6070274	CSW
Barium	0.0398	0.0100	0.0003	mg/L	EPA 6020B	B-01	1	07/14/16 09:00	07/15/16 15:23	6070274	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:23	6070274	CSW
Boron	1.65	0.100	0.0044	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:23	6070274	CSW
Cadmium	0.0018	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:23	6070274	CSW
Calcium	197	25.0	0.628	mg/L	EPA 6020B		50	07/14/16 09:00	07/18/16 14:03	6070274	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:23	6070274	CSW
Cobalt	0.0394	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:23	6070274	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:23	6070274	CSW
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:23	6070274	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:23	6070274	CSW
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:23	6070274	CSW
Lithium	ND	0.0500	0.0012	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:23	6070274	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/15/16 08:50	07/15/16 16:10	6070275	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: FERB-2
Date/Time Sampled: 7/12/2016 4:00:00PM
Matrix: DI Water

Project: CCR Event
Lab Number ID: AZG0286-12
Date/Time Received: 7/13/2016 8:15:00AM

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	07/15/16 13:50	07/15/16 13:50	6070339	JPT
Inorganic Anions											
Chloride	0.88	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/15/16 09:38	07/15/16 19:15	6070333	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	07/15/16 09:38	07/15/16 19:15	6070333	RLC
Sulfate	2.0	1.0	0.05	mg/L	EPA 300.0		1	07/15/16 09:38	07/15/16 19:15	6070333	RLC
Metals, Total											
Antimony	0.0007	0.0030	0.0002	mg/L	EPA 6020B	B-01, J	1	07/14/16 09:00	07/15/16 15:57	6070274	CSW
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:57	6070274	CSW
Barium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:57	6070274	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:57	6070274	CSW
Boron	ND	0.100	0.0044	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:57	6070274	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:57	6070274	CSW
Calcium	ND	0.500	0.0126	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:57	6070274	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:57	6070274	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:57	6070274	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:57	6070274	CSW
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:57	6070274	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:57	6070274	CSW
Thallium	0.00007	0.0010	0.00006	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 15:57	6070274	CSW
Lithium	ND	0.0500	0.0012	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 15:57	6070274	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/15/16 08:50	07/15/16 16:18	6070275	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: FERB-1
Date/Time Sampled: 7/12/2016 3:50:00PM
Matrix: DI Water

Project: CCR Event
Lab Number ID: AZG0286-13
Date/Time Received: 7/13/2016 8:15:00AM

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	07/15/16 13:50	07/15/16 13:50	6070339	JPT
Inorganic Anions											
Chloride	0.02	0.25	0.01	mg/L	EPA 300.0	B-01, J	1	07/15/16 09:38	07/15/16 19:35	6070333	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	07/15/16 09:38	07/15/16 19:35	6070333	RLC
Sulfate	0.11	1.0	0.05	mg/L	EPA 300.0	J	1	07/15/16 09:38	07/15/16 19:35	6070333	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B	B-01	1	07/14/16 09:00	07/15/16 16:02	6070274	CSW
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:02	6070274	CSW
Barium	0.0013	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 16:02	6070274	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:02	6070274	CSW
Boron	ND	0.100	0.0044	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:02	6070274	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:02	6070274	CSW
Calcium	0.285	0.500	0.0126	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 16:02	6070274	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:02	6070274	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:02	6070274	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:02	6070274	CSW
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:02	6070274	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:02	6070274	CSW
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:02	6070274	CSW
Lithium	ND	0.0500	0.0012	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:02	6070274	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/15/16 08:50	07/15/16 16:20	6070275	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: HGWC-9
Date/Time Sampled: 7/12/2016 10:05:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0286-14
Date/Time Received: 7/13/2016 8:15:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	887	25	10	mg/L	SM 2540 C		1	07/14/16 13:05	07/14/16 13:05	6070304	JPT
Inorganic Anions											
Chloride	160	1.2	0.07	mg/L	EPA 300.0	B-01	5	07/15/16 09:38	07/20/16 00:02	6070333	RLC
Fluoride	0.24	0.30	0.02	mg/L	EPA 300.0	J	1	07/15/16 09:38	07/15/16 19:56	6070333	RLC
Sulfate	230	5.0	0.26	mg/L	EPA 300.0		5	07/15/16 09:38	07/20/16 00:02	6070333	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:08	6070274	CSW
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:08	6070274	CSW
Barium	0.130	0.0100	0.0003	mg/L	EPA 6020B	B-01	1	07/14/16 09:00	07/15/16 16:08	6070274	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:08	6070274	CSW
Boron	1.56	0.100	0.0044	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:08	6070274	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:08	6070274	CSW
Calcium	174	25.0	0.628	mg/L	EPA 6020B		50	07/14/16 09:00	07/18/16 14:09	6070274	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:08	6070274	CSW
Cobalt	0.0006	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 16:08	6070274	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:08	6070274	CSW
Molybdenum	0.0229	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:08	6070274	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:08	6070274	CSW
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:08	6070274	CSW
Lithium	0.0040	0.0500	0.0012	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 16:08	6070274	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/15/16 08:50	07/15/16 16:22	6070275	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: Dup-1
Date/Time Sampled: 7/12/2016 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0286-15
Date/Time Received: 7/13/2016 8:15:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	897	25	10	mg/L	SM 2540 C		1	07/14/16 13:05	07/14/16 13:05	6070304	JPT
Inorganic Anions											
Chloride	71	1.2	0.07	mg/L	EPA 300.0	B-01	5	07/15/16 09:38	07/20/16 00:22	6070333	RLC
Fluoride	0.17	0.30	0.02	mg/L	EPA 300.0	J	1	07/15/16 09:38	07/15/16 20:17	6070333	RLC
Sulfate	100	5.0	0.26	mg/L	EPA 300.0		5	07/15/16 09:38	07/20/16 00:22	6070333	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:14	6070274	CSW
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:14	6070274	CSW
Barium	0.130	0.0100	0.0003	mg/L	EPA 6020B	B-01	1	07/14/16 09:00	07/15/16 16:14	6070274	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:14	6070274	CSW
Boron	1.58	0.100	0.0044	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:14	6070274	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:14	6070274	CSW
Calcium	167	25.0	0.628	mg/L	EPA 6020B		50	07/14/16 09:00	07/18/16 14:15	6070274	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:14	6070274	CSW
Cobalt	0.0006	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 16:14	6070274	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:14	6070274	CSW
Molybdenum	0.0223	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:14	6070274	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:14	6070274	CSW
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:14	6070274	CSW
Lithium	0.0041	0.0500	0.0012	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 16:14	6070274	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/15/16 08:50	07/15/16 16:25	6070275	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: HGWC-11
Date/Time Sampled: 7/12/2016 11:35:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0286-16
Date/Time Received: 7/13/2016 8:15:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	627	25	10	mg/L	SM 2540 C		1	07/15/16 13:50	07/15/16 13:50	6070339	JPT
Inorganic Anions											
Chloride	100	2.5	0.14	mg/L	EPA 300.0	B-01	10	07/15/16 09:38	07/20/16 00:43	6070333	RLC
Fluoride	0.44	0.30	0.02	mg/L	EPA 300.0		1	07/15/16 09:38	07/15/16 20:37	6070333	RLC
Sulfate	390	10	0.51	mg/L	EPA 300.0		10	07/15/16 09:38	07/20/16 00:43	6070333	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:19	6070274	CSW
Arsenic	0.0015	0.0050	0.0007	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 16:19	6070274	CSW
Barium	0.0616	0.0100	0.0003	mg/L	EPA 6020B	B-01	1	07/14/16 09:00	07/15/16 16:19	6070274	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:19	6070274	CSW
Boron	1.17	0.100	0.0044	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:19	6070274	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:19	6070274	CSW
Calcium	124	25.0	0.628	mg/L	EPA 6020B		50	07/14/16 09:00	07/18/16 14:20	6070274	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:19	6070274	CSW
Cobalt	0.0021	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 16:19	6070274	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:19	6070274	CSW
Molybdenum	0.0251	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:19	6070274	CSW
Selenium	0.0057	0.0100	0.0009	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 16:19	6070274	CSW
Thallium	0.00008	0.0010	0.00006	mg/L	EPA 6020B	J	1	07/14/16 09:00	07/15/16 16:19	6070274	CSW
Lithium	ND	0.0500	0.0012	mg/L	EPA 6020B		1	07/14/16 09:00	07/15/16 16:19	6070274	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/15/16 08:50	07/15/16 16:27	6070275	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: HGWC-12
Date/Time Sampled: 7/12/2016 12:30:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0286-17
Date/Time Received: 7/13/2016 8:15:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	909	25	10	mg/L	SM 2540 C		1	07/15/16 13:50	07/15/16 13:50	6070339	JPT
Inorganic Anions											
Chloride	160	2.5	0.14	mg/L	EPA 300.0	B-01	10	07/15/16 09:38	07/20/16 01:04	6070333	RLC
Fluoride	0.31	0.30	0.02	mg/L	EPA 300.0		1	07/15/16 09:38	07/15/16 20:58	6070333	RLC
Sulfate	320	10	0.51	mg/L	EPA 300.0		10	07/15/16 09:38	07/20/16 01:04	6070333	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:20	6070320	KLH
Arsenic	0.0050	0.0050	0.0007	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:20	6070320	KLH
Barium	0.135	0.0100	0.0003	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:20	6070320	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:20	6070320	KLH
Boron	1.98	0.100	0.0044	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:20	6070320	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:20	6070320	KLH
Calcium	181	25.0	0.628	mg/L	EPA 6020B		50	07/15/16 07:55	07/18/16 17:25	6070320	KLH
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:20	6070320	KLH
Cobalt	0.0018	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/15/16 07:55	07/18/16 15:20	6070320	KLH
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:20	6070320	KLH
Molybdenum	0.0484	0.0100	0.0005	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:20	6070320	KLH
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:20	6070320	KLH
Thallium	0.0002	0.0010	0.00006	mg/L	EPA 6020B	J	1	07/15/16 07:55	07/18/16 15:20	6070320	KLH
Lithium	0.0113	0.0500	0.0012	mg/L	EPA 6020B	J	1	07/15/16 07:55	07/18/16 15:20	6070320	KLH
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/18/16 11:30	07/18/16 16:52	6070347	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: HGWC-17
Date/Time Sampled: 7/12/2016 3:04:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0286-18
Date/Time Received: 7/13/2016 8:15:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	976	25	10	mg/L	SM 2540 C		1	07/15/16 13:50	07/15/16 13:50	6070339	JPT
Inorganic Anions											
Chloride	100	2.5	0.14	mg/L	EPA 300.0	B-01	10	07/15/16 09:38	07/20/16 01:24	6070333	RLC
Fluoride	0.09	0.30	0.02	mg/L	EPA 300.0	J	1	07/15/16 09:38	07/15/16 21:19	6070333	RLC
Sulfate	460	10	0.51	mg/L	EPA 300.0		10	07/15/16 09:38	07/20/16 01:24	6070333	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:26	6070320	KLH
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:26	6070320	KLH
Barium	0.0221	0.0100	0.0003	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:26	6070320	KLH
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:26	6070320	KLH
Boron	9.58	1.00	0.0441	mg/L	EPA 6020B		10	07/15/16 07:55	07/18/16 17:37	6070320	KLH
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:26	6070320	KLH
Calcium	199	25.0	0.628	mg/L	EPA 6020B		50	07/15/16 07:55	07/18/16 17:31	6070320	KLH
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:26	6070320	KLH
Cobalt	0.0148	0.0100	0.0003	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:26	6070320	KLH
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:26	6070320	KLH
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:26	6070320	KLH
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:26	6070320	KLH
Thallium	0.0001	0.0010	0.00006	mg/L	EPA 6020B	J	1	07/15/16 07:55	07/18/16 15:26	6070320	KLH
Lithium	ND	0.0500	0.0012	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:26	6070320	KLH
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/18/16 11:30	07/18/16 17:00	6070347	CSW

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

July 20, 2016

Report No.: AZG0286
Client ID: HGWC-18
Date/Time Sampled: 7/12/2016 3:21:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZG0286-19
Date/Time Received: 7/13/2016 8:15:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1950	25	10	mg/L	SM 2540 C		1	07/15/16 13:50	07/15/16 13:50	6070339	JPT
Inorganic Anions											
Chloride	300	5.0	0.28	mg/L	EPA 300.0	B-01	20	07/15/16 09:38	07/20/16 01:45	6070333	RLC
Fluoride	0.54	0.30	0.02	mg/L	EPA 300.0		1	07/15/16 09:38	07/15/16 23:23	6070333	RLC
Sulfate	930	20	1.0	mg/L	EPA 300.0		20	07/15/16 09:38	07/20/16 01:45	6070333	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:32	6070320	KLH
Arsenic	0.0074	0.0050	0.0007	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:32	6070320	KLH
Barium	0.0346	0.0100	0.0003	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:32	6070320	KLH
Beryllium	0.0032	0.0030	0.00009	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:32	6070320	KLH
Boron	11.9	1.00	0.0441	mg/L	EPA 6020B		10	07/15/16 07:55	07/18/16 17:48	6070320	KLH
Cadmium	0.0022	0.0010	0.0001	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:32	6070320	KLH
Calcium	328	25.0	0.628	mg/L	EPA 6020B		50	07/15/16 07:55	07/18/16 17:43	6070320	KLH
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:32	6070320	KLH
Cobalt	0.168	0.0100	0.0003	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:32	6070320	KLH
Lead	0.0012	0.0050	0.00008	mg/L	EPA 6020B	J	1	07/15/16 07:55	07/18/16 15:32	6070320	KLH
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:32	6070320	KLH
Selenium	0.0360	0.0100	0.0009	mg/L	EPA 6020B		1	07/15/16 07:55	07/18/16 15:32	6070320	KLH
Thallium	0.0002	0.0010	0.00006	mg/L	EPA 6020B	J	1	07/15/16 07:55	07/18/16 15:32	6070320	KLH
Lithium	0.0141	0.0500	0.0012	mg/L	EPA 6020B	J	1	07/15/16 07:55	07/18/16 15:32	6070320	KLH
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	07/18/16 11:30	07/18/16 17:03	6070347	CSW

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

July 20, 2016

Report No.: AZG0286

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070304 - SM 2540 C											
Blank (6070304-BLK1)						Prepared & Analyzed: 07/14/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6070304-BS1)						Prepared & Analyzed: 07/14/16					
Total Dissolved Solids	384	25	10	mg/L	400.00		96	84-108			
Duplicate (6070304-DUP1)		**Source: AZG0253-04**				Prepared & Analyzed: 07/14/16					
Total Dissolved Solids	155	25	10	mg/L		149			4	10	
Duplicate (6070304-DUP2)		**Source: AZG0286-03**				Prepared & Analyzed: 07/14/16					
Total Dissolved Solids	244	25	10	mg/L		249			2	10	
Batch 6070339 - SM 2540 C											
Blank (6070339-BLK1)						Prepared & Analyzed: 07/15/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6070339-BS1)						Prepared & Analyzed: 07/15/16					
Total Dissolved Solids	387	25	10	mg/L	400.00		97	84-108			
Duplicate (6070339-DUP1)		**Source: AZG0286-06**				Prepared & Analyzed: 07/15/16					
Total Dissolved Solids	599	25	10	mg/L		585			2	10	
Duplicate (6070339-DUP2)		**Source: AZG0286-17**				Prepared & Analyzed: 07/15/16					
Total Dissolved Solids	942	25	10	mg/L		909			4	10	
Batch 6070351 - SM 2540 C											
Blank (6070351-BLK1)						Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	ND	25	10	mg/L							

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2016

Report No.: AZG0286

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070351 - SM 2540 C											
LCS (6070351-BS1)						Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	395	25	10	mg/L	400.00		99	84-108			
Duplicate (6070351-DUP1)			**Source: AZG0286-07RE1**			Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	572	25	10	mg/L		562			2	10	
Duplicate (6070351-DUP2)			**Source: AZG0286-08RE1**			Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	703	25	10	mg/L		686			2	10	
Duplicate (6070351-DUP3)			**Source: AZG0286-10RE1**			Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	624	25	10	mg/L		647			4	10	
Duplicate (6070351-DUP4)			**Source: AZG0365-02**			Prepared & Analyzed: 07/18/16					
Total Dissolved Solids	142	25	10	mg/L		135			5	10	

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

July 20, 2016

Report No.: AZG0286

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070333 - EPA 300.0											
Blank (6070333-BLK1)						Prepared & Analyzed: 07/15/16					
Chloride	0.09	0.25	0.01	mg/L							J
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
LCS (6070333-BS1)						Prepared & Analyzed: 07/15/16					
Chloride	9.88	0.25	0.01	mg/L	10.010		99	90-110			
Fluoride	10.6	0.30	0.02	mg/L	10.010		106	90-110			
Sulfate	10.1	1.0	0.05	mg/L	10.010		101	90-110			
Matrix Spike (6070333-MS1)		**Source: AZG0286-03**				Prepared & Analyzed: 07/15/16					
Chloride	15.6	0.25	0.01	mg/L	10.010	6.16	94	90-110			
Fluoride	10.3	0.30	0.02	mg/L	10.010	0.12	101	90-110			
Sulfate	49.9	1.0	0.05	mg/L	10.010	44.4	55	90-110			QM-05
Matrix Spike (6070333-MS2)		**Source: AZG0286-18**				Prepared & Analyzed: 07/15/16					
Chloride	91.8	0.25	0.01	mg/L	10.010	91.7	0.9	90-110			QM-05
Fluoride	10.5	0.30	0.02	mg/L	10.010	0.09	104	90-110			
Sulfate	286	1.0	0.05	mg/L	10.010	302	NR	90-110			QM-05
Matrix Spike Dup (6070333-MSD1)		**Source: AZG0286-03**				Prepared & Analyzed: 07/15/16					
Chloride	15.9	0.25	0.01	mg/L	10.010	6.16	98	90-110	2	15	
Fluoride	10.6	0.30	0.02	mg/L	10.010	0.12	105	90-110	3	15	
Sulfate	50.2	1.0	0.05	mg/L	10.010	44.4	58	90-110	0.6	15	QM-05

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

July 20, 2016

Report No.: AZG0286

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070274 - EPA 3005A											
Blank (6070274-BLK1)						Prepared: 07/14/16 Analyzed: 07/15/16					
Antimony	0.0003	0.0030	0.0002	mg/L							J
Arsenic	ND	0.0050	0.0007	mg/L							
Barium	0.0004	0.0100	0.0003	mg/L							J
Beryllium	ND	0.0030	0.00009	mg/L							
Boron	ND	0.100	0.0044	mg/L							
Cadmium	ND	0.0010	0.0001	mg/L							
Calcium	ND	0.500	0.0126	mg/L							
Chromium	ND	0.0100	0.0004	mg/L							
Cobalt	ND	0.0100	0.0003	mg/L							
Copper	ND	0.0250	0.0004	mg/L							
Lead	ND	0.0050	0.00008	mg/L							
Molybdenum	ND	0.0100	0.0005	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Selenium	ND	0.0100	0.0009	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Thallium	ND	0.0010	0.00006	mg/L							
Vanadium	ND	0.0100	0.0016	mg/L							
Zinc	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0012	mg/L							
LCS (6070274-BS1)						Prepared: 07/14/16 Analyzed: 07/15/16					
Antimony	0.108	0.0030	0.0002	mg/L	0.10000		108	80-120			
Arsenic	0.0994	0.0050	0.0007	mg/L	0.10000		99	80-120			
Barium	0.0986	0.0100	0.0003	mg/L	0.10000		99	80-120			
Beryllium	0.102	0.0030	0.00009	mg/L	0.10000		102	80-120			
Boron	0.997	0.100	0.0044	mg/L	1.0000		100	80-120			
Cadmium	0.100	0.0010	0.0001	mg/L	0.10000		100	80-120			
Calcium	1.07	0.500	0.0126	mg/L	1.0000		107	80-120			
Chromium	0.0999	0.0100	0.0004	mg/L	0.10000		100	80-120			
Cobalt	0.0996	0.0100	0.0003	mg/L	0.10000		100	80-120			
Copper	0.100	0.0250	0.0004	mg/L	0.10000		100	80-120			
Lead	0.0973	0.0050	0.00008	mg/L	0.10000		97	80-120			
Molybdenum	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Nickel	0.0965	0.0100	0.0005	mg/L	0.10000		97	80-120			
Selenium	0.100	0.0100	0.0009	mg/L	0.10000		100	80-120			
Silver	0.102	0.0100	0.0002	mg/L	0.10000		102	80-120			
Thallium	0.0989	0.0010	0.00006	mg/L	0.10000		99	80-120			
Vanadium	0.0981	0.0100	0.0016	mg/L	0.10000		98	80-120			
Zinc	0.0989	0.0100	0.0013	mg/L	0.10000		99	80-120			
Lithium	0.0949	0.0500	0.0012	mg/L	0.10000		95	80-120			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2016

Report No.: AZG0286

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070274 - EPA 3005A											
Matrix Spike (6070274-MS1)		**Source: AZG0285-03**			Prepared: 07/14/16 Analyzed: 07/15/16						
Antimony	0.119	0.0030	0.0002	mg/L	0.10000	0.0094	110	75-125			
Arsenic	0.102	0.0050	0.0007	mg/L	0.10000	0.0009	101	75-125			
Barium	0.126	0.0100	0.0003	mg/L	0.10000	0.0246	101	75-125			
Beryllium	0.0972	0.0030	0.00009	mg/L	0.10000	ND	97	75-125			
Boron	0.940	0.100	0.0044	mg/L	1.0000	0.0050	93	75-125			
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000	ND	101	75-125			
Calcium	30.0	2.50	0.0628	mg/L	1.0000	29.6	35	75-125			QM-02
Chromium	0.102	0.0100	0.0004	mg/L	0.10000	ND	102	75-125			
Cobalt	0.0969	0.0100	0.0003	mg/L	0.10000	ND	97	75-125			
Copper	0.0960	0.0250	0.0004	mg/L	0.10000	ND	96	75-125			
Lead	0.0968	0.0050	0.00008	mg/L	0.10000	ND	97	75-125			
Molybdenum	0.109	0.0100	0.0005	mg/L	0.10000	0.0011	108	75-125			
Nickel	0.0982	0.0100	0.0005	mg/L	0.10000	ND	98	75-125			
Selenium	0.0985	0.0100	0.0009	mg/L	0.10000	ND	98	75-125			
Silver	0.101	0.0100	0.0002	mg/L	0.10000	ND	101	75-125			
Thallium	0.0998	0.0010	0.00006	mg/L	0.10000	0.00007	100	75-125			
Vanadium	0.103	0.0100	0.0016	mg/L	0.10000	0.0020	101	75-125			
Zinc	0.105	0.0100	0.0013	mg/L	0.10000	ND	105	75-125			
Lithium	0.0964	0.0500	0.0012	mg/L	0.10000	ND	96	75-125			
Matrix Spike Dup (6070274-MSD1)		**Source: AZG0285-03**			Prepared: 07/14/16 Analyzed: 07/15/16						
Antimony	0.119	0.0030	0.0002	mg/L	0.10000	0.0094	109	75-125	0.04	20	
Arsenic	0.105	0.0050	0.0007	mg/L	0.10000	0.0009	104	75-125	2	20	
Barium	0.126	0.0100	0.0003	mg/L	0.10000	0.0246	102	75-125	0.3	20	
Beryllium	0.100	0.0030	0.00009	mg/L	0.10000	ND	100	75-125	3	20	
Boron	0.975	0.100	0.0044	mg/L	1.0000	0.0050	97	75-125	4	20	
Cadmium	0.0991	0.0010	0.0001	mg/L	0.10000	ND	99	75-125	2	20	
Calcium	29.8	2.50	0.0628	mg/L	1.0000	29.6	11	75-125	0.8	20	QM-02
Chromium	0.103	0.0100	0.0004	mg/L	0.10000	ND	103	75-125	0.4	20	
Cobalt	0.0958	0.0100	0.0003	mg/L	0.10000	ND	96	75-125	1	20	
Copper	0.0973	0.0250	0.0004	mg/L	0.10000	ND	97	75-125	1	20	
Lead	0.0961	0.0050	0.00008	mg/L	0.10000	ND	96	75-125	0.7	20	
Molybdenum	0.108	0.0100	0.0005	mg/L	0.10000	0.0011	107	75-125	0.9	20	
Nickel	0.0944	0.0100	0.0005	mg/L	0.10000	ND	94	75-125	4	20	
Selenium	0.105	0.0100	0.0009	mg/L	0.10000	ND	105	75-125	6	20	
Silver	0.0971	0.0100	0.0002	mg/L	0.10000	ND	97	75-125	4	20	
Thallium	0.0999	0.0010	0.00006	mg/L	0.10000	0.00007	100	75-125	0.09	20	
Vanadium	0.101	0.0100	0.0016	mg/L	0.10000	0.0020	99	75-125	1	20	
Zinc	0.101	0.0100	0.0013	mg/L	0.10000	ND	101	75-125	4	20	
Lithium	0.0963	0.0500	0.0012	mg/L	0.10000	ND	96	75-125	0.09	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

July 20, 2016

Report No.: AZG0286

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070274 - EPA 3005A											
Post Spike (6070274-PS1)		**Source: AZG0285-03**				Prepared: 07/14/16 Analyzed: 07/15/16					
Antimony	109			ug/L	100.00	9.37	100	80-120			
Arsenic	98.8			ug/L	100.00	0.881	98	80-120			
Barium	124			ug/L	100.00	24.6	99	80-120			
Beryllium	103			ug/L	100.00	0.0104	103	80-120			
Boron	976			ug/L	1000.0	5.04	97	80-120			
Cadmium	100			ug/L	100.00	-0.0070	100	80-120			
Calcium	29500			ug/L	1000.0	29600	NR	80-120			QM-02
Chromium	98.3			ug/L	100.00	0.251	98	80-120			
Cobalt	97.0			ug/L	100.00	0.0362	97	80-120			
Copper	94.8			ug/L	100.00	0.211	95	80-120			
Lead	94.8			ug/L	100.00	0.0103	95	80-120			
Molybdenum	108			ug/L	100.00	1.14	107	80-120			
Nickel	94.4			ug/L	100.00	-0.0435	94	80-120			
Selenium	96.4			ug/L	100.00	-0.385	97	80-120			
Silver	99.2			ug/L	100.00	0.0045	99	80-120			
Thallium	97.9			ug/L	100.00	0.0736	98	80-120			
Vanadium	102			ug/L	100.00	2.04	100	80-120			
Zinc	97.9			ug/L	100.00	0.969	97	80-120			
Lithium	98.4			ug/L	100.00	0.445	98	80-120			
Batch 6070275 - EPA 7470A											
Blank (6070275-BLK1)						Prepared & Analyzed: 07/15/16					
Mercury	ND	0.00050	0.00013	mg/L							
LCS (6070275-BS1)						Prepared & Analyzed: 07/15/16					
Mercury	0.00235	0.00050	0.00013	mg/L	2.5000E-3		94	80-120			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2016

Report No.: AZG0286

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070275 - EPA 7470A											
Matrix Spike (6070275-MS1)		**Source: AZG0286-09**				Prepared & Analyzed: 07/15/16					
Mercury	0.00186	0.00050	0.00013	mg/L	2.5000E-3	ND	75	75-125			
Matrix Spike Dup (6070275-MSD1)		**Source: AZG0286-09**				Prepared & Analyzed: 07/15/16					
Mercury	0.00188	0.00050	0.00013	mg/L	2.5000E-3	ND	75	75-125	1	20	
Post Spike (6070275-PS1)		**Source: AZG0286-09**				Prepared & Analyzed: 07/15/16					
Mercury	1.31			ug/L	1.6667	0.0174	78	80-120			QM-05
Batch 6070320 - EPA 3005A											
Blank (6070320-BLK1)						Prepared: 07/15/16 Analyzed: 07/18/16					
Antimony	ND	0.0030	0.0002	mg/L							
Arsenic	ND	0.0050	0.0007	mg/L							
Barium	ND	0.0100	0.0003	mg/L							
Beryllium	ND	0.0030	0.00009	mg/L							
Boron	ND	0.100	0.0044	mg/L							
Cadmium	ND	0.0010	0.0001	mg/L							
Calcium	ND	0.500	0.0126	mg/L							
Chromium	ND	0.0100	0.0004	mg/L							
Cobalt	ND	0.0100	0.0003	mg/L							
Copper	ND	0.0250	0.0004	mg/L							
Lead	ND	0.0050	0.00008	mg/L							
Molybdenum	ND	0.0100	0.0005	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Selenium	ND	0.0100	0.0009	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Thallium	ND	0.0010	0.00006	mg/L							
Vanadium	ND	0.0100	0.0016	mg/L							
Zinc	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0012	mg/L							

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2016

Report No.: AZG0286

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070320 - EPA 3005A											
LCS (6070320-BS1)						Prepared: 07/15/16 Analyzed: 07/18/16					
Antimony	0.107	0.0030	0.0002	mg/L	0.10000		107	80-120			
Arsenic	0.106	0.0050	0.0007	mg/L	0.10000		106	80-120			
Barium	0.102	0.0100	0.0003	mg/L	0.10000		102	80-120			
Beryllium	0.103	0.0030	0.00009	mg/L	0.10000		103	80-120			
Boron	0.967	0.100	0.0044	mg/L	1.0000		97	80-120			
Cadmium	0.104	0.0010	0.0001	mg/L	0.10000		104	80-120			
Calcium	1.03	0.500	0.0126	mg/L	1.0000		103	80-120			
Chromium	0.103	0.0100	0.0004	mg/L	0.10000		103	80-120			
Cobalt	0.102	0.0100	0.0003	mg/L	0.10000		102	80-120			
Copper	0.103	0.0250	0.0004	mg/L	0.10000		103	80-120			
Lead	0.0998	0.0050	0.00008	mg/L	0.10000		100	80-120			
Molybdenum	0.110	0.0100	0.0005	mg/L	0.10000		110	80-120			
Nickel	0.102	0.0100	0.0005	mg/L	0.10000		102	80-120			
Selenium	0.101	0.0100	0.0009	mg/L	0.10000		101	80-120			
Silver	0.108	0.0100	0.0002	mg/L	0.10000		108	80-120			
Thallium	0.102	0.0010	0.00006	mg/L	0.10000		102	80-120			
Vanadium	0.107	0.0100	0.0016	mg/L	0.10000		107	80-120			
Zinc	0.103	0.0100	0.0013	mg/L	0.10000		103	80-120			
Lithium	0.0979	0.0500	0.0012	mg/L	0.10000		98	80-120			
Matrix Spike (6070320-MS1)		**Source: AZG0365-03**				Prepared: 07/15/16 Analyzed: 07/18/16					
Antimony	0.105	0.0030	0.0002	mg/L	0.10000	0.0003	105	75-125			
Arsenic	0.100	0.0050	0.0007	mg/L	0.10000	ND	100	75-125			
Barium	0.124	0.0100	0.0003	mg/L	0.10000	0.0255	98	75-125			
Beryllium	0.0954	0.0030	0.00009	mg/L	0.10000	ND	95	75-125			
Boron	0.949	0.100	0.0044	mg/L	1.0000	0.0047	94	75-125			
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000	ND	101	75-125			
Calcium	13.2	2.50	0.0628	mg/L	1.0000	12.3	90	75-125			
Chromium	0.106	0.0100	0.0004	mg/L	0.10000	0.0029	103	75-125			
Cobalt	0.0977	0.0100	0.0003	mg/L	0.10000	ND	98	75-125			
Copper	0.0995	0.0250	0.0004	mg/L	0.10000	ND	99	75-125			
Lead	0.0940	0.0050	0.00008	mg/L	0.10000	0.0001	94	75-125			
Molybdenum	0.110	0.0100	0.0005	mg/L	0.10000	0.0017	108	75-125			
Nickel	0.0976	0.0100	0.0005	mg/L	0.10000	0.0007	97	75-125			
Selenium	0.0991	0.0100	0.0009	mg/L	0.10000	ND	99	75-125			
Silver	0.102	0.0100	0.0002	mg/L	0.10000	ND	102	75-125			
Thallium	0.0966	0.0010	0.00006	mg/L	0.10000	0.0002	96	75-125			
Vanadium	0.101	0.0100	0.0016	mg/L	0.10000	ND	101	75-125			
Zinc	0.0973	0.0100	0.0013	mg/L	0.10000	0.0031	94	75-125			
Lithium	0.0909	0.0500	0.0012	mg/L	0.10000	ND	91	75-125			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2016

Report No.: AZG0286

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070320 - EPA 3005A											
Matrix Spike Dup (6070320-MSD1)		**Source: AZG0365-03**				Prepared: 07/15/16 Analyzed: 07/18/16					
Antimony	0.102	0.0030	0.0002	mg/L	0.10000	0.0003	102	75-125	3	20	
Arsenic	0.101	0.0050	0.0007	mg/L	0.10000	ND	101	75-125	0.2	20	
Barium	0.122	0.0100	0.0003	mg/L	0.10000	0.0255	97	75-125	1	20	
Beryllium	0.0981	0.0030	0.00009	mg/L	0.10000	ND	98	75-125	3	20	
Boron	0.944	0.100	0.0044	mg/L	1.0000	0.0047	94	75-125	0.5	20	
Cadmium	0.0999	0.0010	0.0001	mg/L	0.10000	ND	100	75-125	0.9	20	
Calcium	12.9	2.50	0.0628	mg/L	1.0000	12.3	59	75-125	2	20	QM-02
Chromium	0.110	0.0100	0.0004	mg/L	0.10000	0.0029	107	75-125	3	20	
Cobalt	0.101	0.0100	0.0003	mg/L	0.10000	ND	101	75-125	3	20	
Copper	0.0993	0.0250	0.0004	mg/L	0.10000	ND	99	75-125	0.1	20	
Lead	0.0964	0.0050	0.00008	mg/L	0.10000	0.0001	96	75-125	2	20	
Molybdenum	0.108	0.0100	0.0005	mg/L	0.10000	0.0017	106	75-125	2	20	
Nickel	0.101	0.0100	0.0005	mg/L	0.10000	0.0007	101	75-125	4	20	
Selenium	0.100	0.0100	0.0009	mg/L	0.10000	ND	100	75-125	1	20	
Silver	0.103	0.0100	0.0002	mg/L	0.10000	ND	103	75-125	1	20	
Thallium	0.0990	0.0010	0.00006	mg/L	0.10000	0.0002	99	75-125	2	20	
Vanadium	0.104	0.0100	0.0016	mg/L	0.10000	ND	104	75-125	3	20	
Zinc	0.115	0.0100	0.0013	mg/L	0.10000	0.0031	112	75-125	17	20	
Lithium	0.0916	0.0500	0.0012	mg/L	0.10000	ND	92	75-125	0.7	20	
Post Spike (6070320-PS1)		**Source: AZG0365-03**				Prepared: 07/15/16 Analyzed: 07/18/16					
Antimony	105			ug/L	100.00	0.256	104	80-120			
Arsenic	101			ug/L	100.00	0.458	101	80-120			
Barium	125			ug/L	100.00	25.5	99	80-120			
Beryllium	95.3			ug/L	100.00	0.0582	95	80-120			
Boron	929			ug/L	1000.0	4.73	92	80-120			
Cadmium	103			ug/L	100.00	0.0426	103	80-120			
Calcium	13200			ug/L	1000.0	12300	93	80-120			
Chromium	109			ug/L	100.00	2.92	106	80-120			
Cobalt	97.5			ug/L	100.00	0.221	97	80-120			
Copper	97.8			ug/L	100.00	0.108	98	80-120			
Lead	95.3			ug/L	100.00	0.101	95	80-120			
Molybdenum	107			ug/L	100.00	1.73	106	80-120			
Nickel	97.6			ug/L	100.00	0.655	97	80-120			
Selenium	99.0			ug/L	100.00	0.403	99	80-120			
Silver	104			ug/L	100.00	0.0019	104	80-120			
Thallium	96.6			ug/L	100.00	0.171	96	80-120			
Vanadium	105			ug/L	100.00	0.730	104	80-120			
Zinc	101			ug/L	100.00	3.06	98	80-120			
Lithium	93.1			ug/L	100.00	0.499	93	80-120			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2016

Report No.: AZG0286

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6070347 - EPA 7470A											
Blank (6070347-BLK1)						Prepared & Analyzed: 07/18/16					
Mercury	ND	0.00050	0.00013	mg/L							
LCS (6070347-BS1)						Prepared & Analyzed: 07/18/16					
Mercury	0.00205	0.00050	0.00013	mg/L	2.5000E-3		82	80-120			
Matrix Spike (6070347-MS1)		**Source: AZG0286-17**				Prepared & Analyzed: 07/18/16					
Mercury	0.00182	0.00050	0.00013	mg/L	2.5000E-3	ND	73	75-125			QM-05
Matrix Spike Dup (6070347-MSD1)		**Source: AZG0286-17**				Prepared & Analyzed: 07/18/16					
Mercury	0.00178	0.00050	0.00013	mg/L	2.5000E-3	ND	71	75-125	2	20	QM-05
Post Spike (6070347-PS1)		**Source: AZG0286-17**				Prepared & Analyzed: 07/18/16					
Mercury	1.22			ug/L	1.6667	-0.0299	75	80-120			QM-05

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

July 20, 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.

CHAIN OF CUSTODY RECORD

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

PAGE: 1 OF 2

CLIENT NAME: Southern Company Services
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd. SE B10185 Atlanta, GA 30308 404-506-7239
REPORT TO: Joju Abraham
CC: Heath McCorkle, Maria Padilla
REQUESTED COMPLETION DATE:
PO #:
PROJECT NAME/STATE: Plant Hammond AP GW CCR
PROJECT #:

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III & IV	EPA 6020 + 7470	Cl, F, SO4 EPA 300	TDS SM2540C	Ra - SW - 846 9315 + 9320	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:		P	P	P				
					PRESERVATION:		3	7	3				
7/12/2016	14:00	W		✓	FB-1	3	1		1	1		1	
7/12/2016	14:15	W		✓	FB-2	3	1		1	1		2	
7/12/2016	09:24	GW		✓	HGWA-3	3	1		1	1		3	
7/12/2016	13:55	GW		✓	HGWC-14	3	1		1	1		4	
7/12/2016	10:20	GW		✓	HGWC-7	3	1		1	1		5	
7/12/2016	14:30	GW		✓	HGWC-16	3	1		1	1		6	
7/12/2016	12:20	GW		✓	HGWC-13	3	1		1	1		7	
7/12/2016	10:40	GW		✓	HGWC-8	3	1		1	1		8	
7/12/2016	12:35	GW		✓	HGWC-15	3	1		1	1		9	
7/12/2016	11:21	GW		✓	HGWC-10	3	1		1	1		10	
7/12/2016	—	GW		✓	DUP-2	3	1		1	1		11	
7/12/2016	16:00	W		✓	FERB-2	3	1		1	1		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: Greg Wade, Geologist
DATE/TIME: 7/12/2016 16:45
RELINQUISHED BY:
DATE/TIME: 7/13/16 08:12
RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:
RECEIVED BY LAB: Rahman
DATE/TIME: 07/13/16 0815
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
pH checked: 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 #: AZG0286
Entered into LIMS:
Tracking #:

CHAIN OF CUSTODY RECORD

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

PAGE: 2 OF 9

CLIENT NAME: Southern Company Services
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd. SE B10185 Atlanta, GA 30308
REPORT TO: Joji Abraham
CC: Heath Mclorkle, Maria Padilla
REQUESTED COMPLETION DATE:
PO #:
PROJECT NAME/STATE: Plant Hammond AP GW LCR
PROJECT #:

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	Ra-Sw-846 9315 & 9320	LAB ID NUMBER
7/12/2016	15:50	W		✓	FERB-1	3	1	1	1	13
7/12/2016	10:05	GW		✓	H6WC-9	3	1	1	1	14
7/12/2016	—	GW		✓	DUP-1	3	1	1	1	15
7/12/2016	11:35	GW		✓	H6WC-11	3	1	1	1	16
7/12/2016	12:30	GW		✓	H6WC-12	4	1	1	2	17
7/12/2016	15:04	GW		✓	H6WC-17	3	1	1	1	18
7/12/2016	15:21	GW		✓	H6WC-18	3	1	1	1	19

ANALYSIS REQUESTED
CONTAINER TYPE: P P P
PRESERVATION: 3 7 3

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: Greg Stack, Geologist
DATE/TIME: 7/12/2016 16:45
RELINQUISHED BY:
DATE/TIME: 7/13/16 08:15
RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:
RECEIVED BY LAB:
DATE/TIME: 07/13/16 08:15
FOR LAB USE ONLY
LAB #: AZG0286
Entered into LIMS: MR
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
Tracking #:
Packed: Yes No NA
Ice: Yes No NA
Temperature: 1°C Min: 1°C Max:
Custody Seal: Intact Broken N/A Not Present
# of Coolers:
Cooler ID:

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: 7/20/2016 5:17:20PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 07/13/16 08:15

Work Order: AZG0286
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 19 **#Containers:** 58

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

August 16, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Hammond AP GW CCR
Pace Project No.: 30189722

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on July 14, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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 Hammond AP GW CCR
Pace Project No.: 30189722

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 Hammond AP GW CCR
Pace Project No.: 30189722

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30189722001	**FB-1**	Water	07/12/16 14:00	07/14/16 10:00
30189722002	**FB-2**	Water	07/12/16 14:15	07/14/16 10:00
30189722003	**HGWA-3**	Water	07/12/16 09:24	07/14/16 10:00
30189722004	**HGWC-14**	Water	07/12/16 13:55	07/14/16 10:00
30189722005	**HGWC-7**	Water	07/12/16 10:20	07/14/16 10:00
30189722006	**HGWC-16**	Water	07/12/16 14:30	07/14/16 10:00
30189722007	**HGWC-13**	Water	07/12/16 12:20	07/14/16 10:00
30189722008	**HGWC-8**	Water	07/12/16 10:40	07/14/16 10:00
30189722009	**HGWC-15**	Water	07/12/16 12:35	07/14/16 10:00
30189722010	**HGWC-10**	Water	07/12/16 11:21	07/14/16 10:00
30189722011	**DUP-2**	Water	07/12/16 00:01	07/14/16 10:00
30189722012	**FERB-2**	Water	07/12/16 16:00	07/14/16 10:00
30189722013	**FERB-1**	Water	07/12/16 15:50	07/14/16 10:00
30189722014	**HGWC-9**	Water	07/12/16 10:05	07/14/16 10:00
30189722015	**DUP-1**	Water	07/12/16 00:01	07/14/16 10:00
30189722016	**HGWC-11**	Water	07/12/16 11:35	07/14/16 10:00
30189722017	**HGWC-12**	Water	07/12/16 12:30	07/14/16 10:00
30189722018	**HGWC-17**	Water	07/12/16 15:04	07/14/16 10:00
30189722019	**HGWC-18**	Water	07/12/16 15:21	07/14/16 10:00

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

SAMPLE ANALYTE COUNT

Project: Plant Hammond AP GW CCR
Pace Project No.: 30189722

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30189722001	**FB-1**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722002	**FB-2**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722003	**HGWA-3**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722004	**HGWC-14**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722005	**HGWC-7**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722006	**HGWC-16**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722007	**HGWC-13**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722008	**HGWC-8**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722009	**HGWC-15**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722010	**HGWC-10**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722011	**DUP-2**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722012	**FERB-2**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722013	**FERB-1**	EPA 9315	JAL	1

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

SAMPLE ANALYTE COUNT

Project: Plant Hammond AP GW CCR
Pace Project No.: 30189722

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722014	**HGWC-9**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722015	**DUP-1**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722016	**HGWC-11**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722017	**HGWC-12**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722018	**HGWC-17**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30189722019	**HGWC-18**	EPA 9315	JAL	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 Hammond AP GW CCR
Pace Project No.: 30189722

Sample: FB-1 **Lab ID: 30189722001** Collected: 07/12/16 14:00 Received: 07/14/16 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	**0.137 ± 0.123 (0.235) C:95% T:NA**	pCi/L	08/14/16 13:58	13982-63-3	
Radium-228	EPA 9320	**0.401 ± 0.385 (0.768) C:69% T:77%**	pCi/L	08/09/16 02:08	15262-20-1	
Total Radium	Total Radium Calculation	**0.538 ± 0.508 (1.00)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: FB-2 **Lab ID: 30189722002** Collected: 07/12/16 14:15 Received: 07/14/16 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	**0.209 ± 0.151 (0.275) C:95% T:NA**	pCi/L	08/14/16 13:58	13982-63-3	
Radium-228	EPA 9320	**0.863 ± 0.388 (0.628) C:75% T:77%**	pCi/L	08/09/16 02:08	15262-20-1	
Total Radium	Total Radium Calculation	**1.07 ± 0.539 (0.903)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: HGWA-3 **Lab ID: 30189722003** Collected: 07/12/16 09:24 Received: 07/14/16 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	**0.000983 ± 0.0570 (0.160) C:92% T:NA**	pCi/L	08/14/16 16:52	13982-63-3	
Radium-228	EPA 9320	**0.498 ± 0.288 (0.505) C:74% T:87%**	pCi/L	08/09/16 02:08	15262-20-1	
Total Radium	Total Radium Calculation	**0.499 ± 0.345 (0.665)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: HGWC-14 **Lab ID: 30189722004** Collected: 07/12/16 13:55 Received: 07/14/16 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	**0.526 ± 0.201 (0.257) C:99% T:NA**	pCi/L	08/14/16 16:52	13982-63-3	
Radium-228	EPA 9320	**0.784 ± 0.351 (0.569) C:76% T:84%**	pCi/L	08/09/16 02:09	15262-20-1	
Total Radium	Total Radium Calculation	**1.31 ± 0.552 (0.826)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: HGWC-7 **Lab ID: 30189722005** Collected: 07/12/16 10:20 Received: 07/14/16 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	**0.159 ± 0.128 (0.224) C:73% T:NA**	pCi/L	08/14/16 16:53	13982-63-3	
Radium-228	EPA 9320	**0.124 ± 0.255 (0.563) C:85% T:84%**	pCi/L	08/10/16 11:54	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 Hammond AP GW CCR
Pace Project No.: 30189722

Sample: HGWC-7 **Lab ID: 30189722005** Collected: 07/12/16 10:20 Received: 07/14/16 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	**0.283 ± 0.383 (0.787)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: HGWC-16 **Lab ID: 30189722006** Collected: 07/12/16 14:30 Received: 07/14/16 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	**0.0608 ± 0.100 (0.223) C:92% T:NA**	pCi/L	08/14/16 16:53	13982-63-3	
Radium-228	EPA 9320	**0.121 ± 0.266 (0.591) C:78% T:85%**	pCi/L	08/10/16 11:54	15262-20-1	
Total Radium	Total Radium Calculation	**0.182 ± 0.366 (0.814)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: HGWC-13 **Lab ID: 30189722007** Collected: 07/12/16 12:20 Received: 07/14/16 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	**0.145 ± 0.138 (0.268) C:75% T:NA**	pCi/L	08/14/16 16:53	13982-63-3	
Radium-228	EPA 9320	**0.333 ± 0.334 (0.686) C:76% T:81%**	pCi/L	08/10/16 11:54	15262-20-1	
Total Radium	Total Radium Calculation	**0.478 ± 0.472 (0.954)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: HGWC-8 **Lab ID: 30189722008** Collected: 07/12/16 10:40 Received: 07/14/16 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	**0.178 ± 0.112 (0.172) C:100% T:NA**	pCi/L	08/14/16 16:53	13982-63-3	
Radium-228	EPA 9320	**0.458 ± 0.307 (0.577) C:75% T:90%**	pCi/L	08/10/16 11:54	15262-20-1	
Total Radium	Total Radium Calculation	**0.636 ± 0.419 (0.749)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: HGWC-15 **Lab ID: 30189722009** Collected: 07/12/16 12:35 Received: 07/14/16 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	**0.0764 ± 0.113 (0.246) C:93% T:NA**	pCi/L	08/14/16 16:53	13982-63-3	
Radium-228	EPA 9320	**0.535 ± 0.306 (0.536) C:75% T:87%**	pCi/L	08/10/16 11:54	15262-20-1	
Total Radium	Total Radium Calculation	**0.611 ± 0.419 (0.782)**	pCi/L	08/15/16 14:32	7440-14-4	

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 Hammond AP GW CCR
Pace Project No.: 30189722

Sample: HGWC-10 **Lab ID: 30189722010** Collected: 07/12/16 11:21 Received: 07/14/16 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	**0.192 ± 0.126 (0.205) C:91% T:NA**	pCi/L	08/14/16 16:53	13982-63-3	
Radium-228	EPA 9320	**0.663 ± 0.325 (0.543) C:80% T:89%**	pCi/L	08/10/16 11:55	15262-20-1	
Total Radium	Total Radium Calculation	**0.855 ± 0.451 (0.748)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: DUP-2 **Lab ID: 30189722011** Collected: 07/12/16 00:01 Received: 07/14/16 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	**0.0238 ± 0.0789 (0.193) C:99% T:NA**	pCi/L	08/14/16 16:53	13982-63-3	
Radium-228	EPA 9320	**0.525 ± 0.354 (0.673) C:78% T:83%**	pCi/L	08/10/16 11:55	15262-20-1	
Total Radium	Total Radium Calculation	**0.549 ± 0.433 (0.866)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: FERB-2 **Lab ID: 30189722012** Collected: 07/12/16 16:00 Received: 07/14/16 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	**0.0935 ± 0.0931 (0.175) C:95% T:NA**	pCi/L	08/14/16 16:53	13982-63-3	
Radium-228	EPA 9320	**0.504 ± 0.326 (0.605) C:77% T:83%**	pCi/L	08/10/16 11:55	15262-20-1	
Total Radium	Total Radium Calculation	**0.598 ± 0.419 (0.780)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: FERB-1 **Lab ID: 30189722013** Collected: 07/12/16 15:50 Received: 07/14/16 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	**0.155 ± 0.121 (0.215) C:97% T:NA**	pCi/L	08/14/16 16:53	13982-63-3	
Radium-228	EPA 9320	**0.125 ± 0.252 (0.558) C:77% T:82%**	pCi/L	08/10/16 11:55	15262-20-1	
Total Radium	Total Radium Calculation	**0.280 ± 0.373 (0.773)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: HGWC-9 **Lab ID: 30189722014** Collected: 07/12/16 10:05 Received: 07/14/16 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	**0.131 ± 0.114 (0.208) C:88% T:NA**	pCi/L	08/14/16 16:54	13982-63-3	
Radium-228	EPA 9320	**0.380 ± 0.293 (0.570) C:80% T:86%**	pCi/L	08/10/16 11:55	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 Hammond AP GW CCR
Pace Project No.: 30189722

Sample: HGWC-9 **Lab ID: 30189722014** Collected: 07/12/16 10:05 Received: 07/14/16 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	**0.511 ± 0.407 (0.778)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: DUP-1 **Lab ID: 30189722015** Collected: 07/12/16 00:01 Received: 07/14/16 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	**0.241 ± 0.132 (0.192) C:95% T:NA**	pCi/L	08/14/16 16:54	13982-63-3	
Radium-228	EPA 9320	**0.425 ± 0.314 (0.604) C:78% T:84%**	pCi/L	08/10/16 11:55	15262-20-1	
Total Radium	Total Radium Calculation	**0.666 ± 0.446 (0.796)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: HGWC-11 **Lab ID: 30189722016** Collected: 07/12/16 11:35 Received: 07/14/16 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	**0.0873 ± 0.103 (0.213) C:95% T:NA**	pCi/L	08/14/16 16:54	13982-63-3	
Radium-228	EPA 9320	**0.697 ± 0.388 (0.702) C:74% T:89%**	pCi/L	08/10/16 11:55	15262-20-1	
Total Radium	Total Radium Calculation	**0.784 ± 0.491 (0.915)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: HGWC-12 **Lab ID: 30189722017** Collected: 07/12/16 12:30 Received: 07/14/16 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	**0.406 ± 0.179 (0.243) C:94% T:NA**	pCi/L	08/14/16 16:54	13982-63-3	
Radium-228	EPA 9320	**1.20 ± 0.430 (0.605) C:80% T:87%**	pCi/L	08/10/16 11:55	15262-20-1	
Total Radium	Total Radium Calculation	**1.61 ± 0.609 (0.848)**	pCi/L	08/15/16 14:32	7440-14-4	

Sample: HGWC-17 **Lab ID: 30189722018** Collected: 07/12/16 15:04 Received: 07/14/16 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	**0.180 ± 0.123 (0.208) C:95% T:NA**	pCi/L	08/14/16 16:54	13982-63-3	
Radium-228	EPA 9320	**0.687 ± 0.338 (0.569) C:74% T:94%**	pCi/L	08/10/16 11:55	15262-20-1	
Total Radium	Total Radium Calculation	**0.867 ± 0.461 (0.777)**	pCi/L	08/15/16 14:32	7440-14-4	

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 Hammond AP GW CCR
Pace Project No.: 30189722

Sample: HGWC-18 **Lab ID: 30189722019** Collected: 07/12/16 15:21 Received: 07/14/16 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	**0.619 ± 0.208 (0.216) C:95% T:NA**	pCi/L	08/14/16 16:54	13982-63-3	
Radium-228	EPA 9320	**1.14 ± 0.442 (0.662) C:77% T:84%**	pCi/L	08/10/16 11:55	15262-20-1	
Total Radium	Total Radium Calculation	**1.76 ± 0.650 (0.878)**	pCi/L	08/15/16 14:32	7440-14-4	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond AP GW CCR
Pace Project No.: 30189722

QC Batch: 227859 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30189722005, 30189722006, 30189722007, 30189722008, 30189722009, 30189722010, 30189722011, 30189722012, 30189722013, 30189722014, 30189722015, 30189722016, 30189722017, 30189722018, 30189722019

METHOD BLANK: 1116128 Matrix: Water
Associated Lab Samples: 30189722005, 30189722006, 30189722007, 30189722008, 30189722009, 30189722010, 30189722011, 30189722012, 30189722013, 30189722014, 30189722015, 30189722016, 30189722017, 30189722018, 30189722019

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.218 ± 0.257 (0.540) C:84% T:95%	pCi/L	08/10/16 11:54	

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

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond AP GW CCR
Pace Project No.: 30189722

QC Batch: 227858 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30189722001, 30189722002, 30189722003, 30189722004

METHOD BLANK: 1116127 Matrix: Water
Associated Lab Samples: 30189722001, 30189722002, 30189722003, 30189722004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.524 ± 0.378 (0.726) C:74% T:84%	pCi/L	08/08/16 21:20	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond AP GW CCR
Pace Project No.: 30189722

QC Batch: 229106 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30189722001, 30189722002, 30189722003, 30189722004, 30189722005, 30189722006, 30189722007, 30189722008, 30189722009, 30189722010, 30189722011, 30189722012, 30189722013, 30189722014, 30189722015, 30189722016, 30189722017, 30189722018, 30189722019

METHOD BLANK: 1122751 Matrix: Water
Associated Lab Samples: 30189722001, 30189722002, 30189722003, 30189722004, 30189722005, 30189722006, 30189722007, 30189722008, 30189722009, 30189722010, 30189722011, 30189722012, 30189722013, 30189722014, 30189722015, 30189722016, 30189722017, 30189722018, 30189722019

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0309 ± 0.0993 (0.238) C:95% T:NA	pCi/L	08/14/16 13:58	

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

QUALIFIERS

Project: Plant Hammond AP GW CCR
Pace Project No.: 30189722

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#:30189722

760

CHAIN OF CUSTODY RECORD

Pace Analytical®
www.pacelabs.com

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

CLIENT NAME: Southern Company Services

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

REPORT TO: Joju Abraham

CC: Heath McCorkle, Marla Pacheco

REQUESTED COMPLETION DATE:

PO #:

PROJECT NAME/STATE: Plant Hammond AP GW CCR

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III + IV	EPA 6020 + EPA 9470	Cl, F, SO4 EPA 300	TDS SM2540C	Ra - 226 - 9315 + 9320	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:		P	P	P				
					PRESERVATION:		3	7	3				
7/12/2016	14:00	W		✓	FB-1	3	1	1	1			1	001
7/12/2016	14:15	W		✓	FB-2	3	1	1	1			2	002
7/12/2016	09:24	GW		✓	HGWA-3	3	1	1	1			3	003
7/12/2016	13:55	GW		✓	HGWC-14	3	1	1	1			4	004
7/12/2016	10:20	GW		✓	HGWC-7	3	1	1	1			5	005
7/12/2016	14:30	GW		✓	HGWC-16	3	1	1	1			6	006
7/12/2016	12:20	GW		✓	HGWC-13	3	1	1	1			7	007
7/12/2016	10:40	GW		✓	HGWC-8	3	1	1	1			8	008
7/12/2016	12:35	GW		✓	HGWC-15	3	1	1	1			9	009
7/12/2016	11:21	GW		✓	HGWC-10	3	1	1	1			10	010
7/12/2016	—	GW		✓	DUP-2	3	1	1	1			11	011
7/12/2016	16:00	W		✓	FERB-2	3	1	1	1			12	012

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: Greg Jack, Geologist

DATE/TIME: 7/12/2016 16:45

RELINQUISHED BY:

DATE/TIME: 7/13/16 08:12

RECEIVED BY: Karen E. Hill

DATE/TIME: 7/14/16 1000

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY LAB: Mahman

DATE/TIME: 07/13/16 0815

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 #:

30189722 2759

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

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

PAGE: 2 OF 4

CLIENT NAME: Southern Company Services

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd. SE B10185
Atlanta, GA 30308

REPORT TO: Jojin Abraham
CC: Heath McCorkle, Marin Padilla

REQUESTED COMPLETION DATE:
PO #:

PROJECT NAME/STATE: Plant Hammond AP GW CCR

PROJECT #:

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 EPA300 TDS SM2540C	Ra-226 + Ra-228 9315 + 9320	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
					CONTAINER TYPE:		P	P	P		
					PRESERVATION:		3	7	3		
7/12/2016	15:50	W		✓	FERB-1	3	1	1	1	13	013
7/12/2016	10:05	GW		✓	HGWC-9	3	1	1	1	14	014
7/12/2016	—	GW		✓	DUP-1	3	1	1	1	15	015
7/12/2016	11:35	GW		✓	HGWC-11	3	1	1	1	16	016
7/12/2016	12:30	GW		✓	HGWC-12	4	1	1	2	17	017
7/12/2016	15:04	GW		✓	HGWC-17	3	1	1	1	18	018
7/12/2016	15:21	GW		✓	HGWC-18	3	1	1	1	19	019

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: Greg Strack, Geologist
DATE/TIME: 7/12/2016 16:45

RELINQUISHED BY:
DATE/TIME: 7/13/16 08:15

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB:
DATE/TIME: 07/13/16 0815

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 N/A Not Present
# of Coolers:
Cooler ID:

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

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: ~~Southern Company Services~~ Pace GA NW 7-14-16

30189722

Project # _____

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

Tracking #: 681250976628

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 7/14/16

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 KH / Date/time of preservation / Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	14.
Trip Blank Present:			✓	15.
Trip Blank Custody Seals Present			✓	

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)

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JLW
Date:	8/3/2016
Worklist:	30598
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1116128
MB concentration:	0.218
M/B Counting Uncertainty:	0.254
MB MDC:	0.540
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)?	Y
	LCS30598	LCSD30598
Count Date:	8/10/2016	8/10/2016
Spike I.D.:	16-025	16-025
Spike Concentration (pCi/mL):	25.974	25.974
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.802	0.812
Target Conc. (pCi/L, g, F):	6.480	6.394
Uncertainty (Calculated):	0.467	0.460
Result (pCi/L, g, F):	6.626	6.010
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.705	0.678
Numerical Performance Indicator:	0.34	-0.92
Percent Recovery:	102.26%	94.00%
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.:	LCS30598	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD30598	
Sample Result (pCi/L, g, F):	6.626	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.705	
Sample Duplicate Result (pCi/L, g, F):	6.010	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.678	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	1.235	
Duplicate RPD:	9.76%	
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:

8/15/16

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:	8/3/2016
Worklist:	30597
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1116127
MB concentration:	0.524
M/B Counting Uncertainty:	0.366
MB MDC:	0.726
MB Numerical Performance Indicator:	2.81
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS30597	LCSD30597
Count Date:	8/8/2016	8/8/2016
Spike I.D.:	16-025	16-025
Spike Concentration (pCi/mL):	25.987	25.987
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.805	0.814
Target Conc. (pCi/L, g, F):	6.455	6.383
Uncertainty (Calculated):	0.465	0.460
Result (pCi/L, g, F):	6.146	4.668
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.602	0.578
Numerical Performance Indicator:	-0.80	-4.55
Percent Recovery:	95.20%	73.13%
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.:	LCS30597	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD30597	
Sample Result (pCi/L, g, F):	6.146	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.602	
Sample Duplicate Result (pCi/L, g, F):	4.668	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.578	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	3.468	
Duplicate RPD:	27.33%	
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:

JW 8/15/16

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	JAL
Date:	8/9/2016
Worklist:	30777
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1122751
MB concentration:	0.031
M/B Counting Uncertainty:	0.099
MB MDC:	0.238
MB Numerical Performance Indicator:	0.61
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS30777	LCSD30777
Count Date:	8/14/2016	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.679	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.507	
Target Conc. (pCi/L, g, F):	8.816	
Uncertainty (Calculated):	0.415	
Result (pCi/L, g, F):	6.958	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.587	
Numerical Performance Indicator:	-5.07	
Percent Recovery:	78.92%	
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.:	30189588006	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30189588006DUP	
Sample Result (pCi/L, g, F):	0.092	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.104	
Sample Duplicate Result (pCi/L, g, F):	0.475	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.167	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-3.816	30189588006
Duplicate RPD:	134.84%	30189588006DUP
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: Sample result < MDC

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

8/15/16

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

July 26, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Hammond CCR
Pace Project No.: 30187991

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on June 28, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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: Hammond CCR
Pace Project No.: 30187991

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: Hammond CCR
Pace Project No.: 30187991

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30187991001	**HGWA-1**	Water	05/19/16 09:30	06/28/16 10:30
30187991002	**HGWA-2**	Water	05/19/16 11:26	06/28/16 10:30
30187991003	**HGWA-4**	Water	05/19/16 17:37	06/28/16 10:30
30187991004	**HGWA-3**	Water	05/19/16 16:05	06/28/16 10:30
30187991005	**DUP-1**	Water	05/19/16 00:01	06/28/16 10:30
30187991006	**HGWA-5**	Water	05/19/16 10:27	06/28/16 10:30

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

SAMPLE ANALYTE COUNT

Project: Hammond CCR
Pace Project No.: 30187991

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30187991001	**HGWA-1**	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30187991002	**HGWA-2**	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30187991003	**HGWA-4**	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30187991004	**HGWA-3**	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30187991005	**DUP-1**	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30187991006	**HGWA-5**	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond CCR
Pace Project No.: 30187991

Sample: HGWA-1 **Lab ID: 30187991001** Collected: 05/19/16 09:30 Received: 06/28/16 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	**-0.0205 ± 0.0409 (0.124) C:93% T:NA**	pCi/L	07/24/16 14:47	13982-63-3	
Radium-228	EPA 9320	**0.417 ± 0.374 (0.764) C:86% T:89%**	pCi/L	07/25/16 16:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.397 ± 0.415 (0.888)**	pCi/L	07/26/16 14:48	7440-14-4	

Sample: HGWA-2 **Lab ID: 30187991002** Collected: 05/19/16 11:26 Received: 06/28/16 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	**0.178 ± 0.0949 (0.141) C:92% T:NA**	pCi/L	07/24/16 14:47	13982-63-3	
Radium-228	EPA 9320	**0.449 ± 0.335 (0.659) C:90% T:87%**	pCi/L	07/25/16 16:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.627 ± 0.430 (0.800)**	pCi/L	07/26/16 14:48	7440-14-4	

Sample: HGWA-4 **Lab ID: 30187991003** Collected: 05/19/16 17:37 Received: 06/28/16 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	**0.0703 ± 0.110 (0.243) C:95% T:NA**	pCi/L	07/25/16 07:49	13982-63-3	
Radium-228	EPA 9320	**0.592 ± 0.366 (0.682) C:84% T:84%**	pCi/L	07/25/16 16:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.662 ± 0.476 (0.925)**	pCi/L	07/26/16 14:48	7440-14-4	

Sample: HGWA-3 **Lab ID: 30187991004** Collected: 05/19/16 16:05 Received: 06/28/16 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 ± 0.112 (0.202) C:95% T:NA**	pCi/L	07/25/16 07:49	13982-63-3	
Radium-228	EPA 9320	**0.212 ± 0.272 (0.576) C:87% T:88%**	pCi/L	07/25/16 16:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.342 ± 0.384 (0.778)**	pCi/L	07/26/16 14:48	7440-14-4	

Sample: DUP-1 **Lab ID: 30187991005** Collected: 05/19/16 00:01 Received: 06/28/16 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	**0.0709 ± 0.0699 (0.134) C:93% T:NA**	pCi/L	07/24/16 14:47	13982-63-3	
Radium-228	EPA 9320	**0.634 ± 0.329 (0.564) C:85% T:88%**	pCi/L	07/25/16 16:53	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: Hammond CCR
Pace Project No.: 30187991

Sample: DUP-1 **Lab ID: 30187991005** Collected: 05/19/16 00:01 Received: 06/28/16 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.705 ± 0.399 (0.698)**	pCi/L	07/26/16 14:48	7440-14-4	

Sample: HGWA-5 **Lab ID: 30187991006** Collected: 05/19/16 10:27 Received: 06/28/16 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	**0.183 ± 0.149 (0.266) C:96% T:NA**	pCi/L	07/21/16 09:14	13982-63-3	
Radium-228	EPA 9320	**0.502 ± 0.323 (0.592) C:81% T:83%**	pCi/L	07/25/16 21:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.685 ± 0.472 (0.858)**	pCi/L	07/26/16 14:48	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: Hammond CCR
Pace Project No.: 30187991

QC Batch: 226713 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30187991001, 30187991002, 30187991003, 30187991004, 30187991005, 30187991006

METHOD BLANK: 1110829 Matrix: Water
Associated Lab Samples: 30187991001, 30187991002, 30187991003, 30187991004, 30187991005, 30187991006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.547 ± 0.363 (0.688) C:86% T:81%	pCi/L	07/25/16 12:44	

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: Hammond CCR
Pace Project No.: 30187991

QC Batch: 226340 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30187991001, 30187991002, 30187991003, 30187991004, 30187991005, 30187991006

METHOD BLANK: 1108957 Matrix: Water
Associated Lab Samples: 30187991001, 30187991002, 30187991003, 30187991004, 30187991005, 30187991006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00738 ± 0.0837 (0.222) C:95% T:NA	pCi/L	07/25/16 07:48	

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

QUALIFIERS

Project: Hammond CCR
Pace Project No.: 30187991

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#:30187991

Environmental Laboratory
2480 Maner Road, Bin 39110
Atlanta, Georgia 30339

Phone: (404) 799-2100 Fax: (404) 799-2141

TRANSFER OF SAMPLES

GEORGIA POWER
A SOUTHERN COMPANY

Sample Delivery Group No. 103534

Lab Contact: Jolynn Locke	Project Name: Hammond CCR
Email Results To: joklocke@southernco.com	
Turnaound Time: (or expected date of results) 21 days	
Rush Charges Authorized: Yes No x Signature:	

Vendor Laboratory Name and Address
Pace Analytical Services, Inc.
110 Technology Parkway
Peachtree Corners, GA 30092
770-734-4203

Date of Sample Transfer
6/24/2016

Sample Date	Sample Time	No. of Containers	Project ID#	Laboratory ID#	Analysis Requested	Remarks
5/19/2016	9:30	1	HGWA-1	103534001	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	001
5/19/2016	11:26	1	HGWA-2	103534002	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	002
5/19/2016	17:37	1	HGWA-4	103534003	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	003
5/19/2016	16:05	1	HGWA-3	103534004	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	004
5/19/2016		1	DUP-1	103534005	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	005
5/19/2016	10:27	1	HGWA-5	103534006	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	006

Transfer By (Signature): Linda Paxton

Received By:

Comments: Samples preserved with HNO3 to <2 pH

Date / Time: 6-28-16 1030

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

30187991

Client Name: GA Power Project #

Courier: [X] Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace Other

Tracking #: 681250972931

Custody Seal on Cooler/Box Present: [ ] yes [X] 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: MTV 6-28-16

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:		X		4.
Sample Labels match COC:	X			5.
-Includes date/time/ID/Analysis Matrix: WT				
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 MTV 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	

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)

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	RMK
Date:	7/20/2016
Worklist:	30360
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1108957
MB concentration:	0.007
M/B Counting Uncertainty:	0.084
MB MDC:	0.222
MB Numerical Performance Indicator:	0.17
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	Y
	LCS30360	LCSD30360
Count Date:	7/25/2016	7/25/2016
Spike I.D.:	16-001	16-001
Spike Concentration (pCi/mL):	47.784	47.784
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.503	0.504
Target Conc. (pCi/L, g, F):	9.491	9.472
Uncertainty (Calculated):	0.446	0.446
Result (pCi/L, g, F):	7.688	7.338
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.645	0.621
Numerical Performance Indicator:	-4.51	-5.47
Percent Recovery:	81.00%	77.47%
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.:	LCS30360
Duplicate Sample I.D.	LCSD30360
Sample Result (pCi/L, g, F):	7.688
Sample Result Counting Uncertainty (pCi/L, g, F):	0.645
Sample Duplicate Result (pCi/L, g, F):	7.338
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.621
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	0.766
Duplicate RPD:	4.66%
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:

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	7/21/2016
Worklist:	30408
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1110829
MB concentration:	0.547
M/B Counting Uncertainty:	0.349
MB MDC:	0.688
MB Numerical Performance Indicator:	3.07
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	Y
	LCS30408	LCSD30408
Count Date:	7/25/2016	7/25/2016
Spike I.D.:	16-025	16-025
Spike Concentration (pCi/mL):	26.111	26.111
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.808	0.802
Target Conc. (pCi/L, g, F):	6.462	6.511
Uncertainty (Calculated):	0.465	0.469
Result (pCi/L, g, F):	4.536	4.917
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.607	0.644
Numerical Performance Indicator:	-4.94	-3.92
Percent Recovery:	70.18%	75.52%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

Duplicate Sample Assessment

Sample I.D.:	LCS30408
Duplicate Sample I.D.	LCSD30408
Sample Result (pCi/L, g, F):	4.536
Sample Result Counting Uncertainty (pCi/L, g, F):	0.607
Sample Duplicate Result (pCi/L, g, F):	4.917
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.644
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	-0.844
Duplicate RPD:	8.06%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

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

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:	

Comments:

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

July 26, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Hammond CCR
Pace Project No.: 30187992

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on June 28, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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: Hammond CCR
Pace Project No.: 30187992

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: Hammond CCR
Pace Project No.: 30187992

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30187992001	**HGWA-7**	Water	05/20/16 09:05	06/28/16 10:30
30187992002	**HGWA-8**	Water	05/20/16 09:09	06/28/16 10:30
30187992003	**HGWA-6**	Water	05/20/16 09:23	06/28/16 10:30

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

SAMPLE ANALYTE COUNT

Project: Hammond CCR
Pace Project No.: 30187992

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30187992001	**HGWA-7**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30187992002	**HGWA-8**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30187992003	**HGWA-6**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond CCR
Pace Project No.: 30187992

Sample: HGWA-7 **Lab ID: 30187992001** Collected: 05/20/16 09:05 Received: 06/28/16 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	**0.163 ± 0.117 (0.179) C:97% T:NA**	pCi/L	07/25/16 09:22	13982-63-3	
Radium-228	EPA 9320	**0.457 ± 0.304 (0.564) C:84% T:84%**	pCi/L	07/25/16 21:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.620 ± 0.421 (0.743)**	pCi/L	07/26/16 14:48	7440-14-4	

Sample: HGWA-8 **Lab ID: 30187992002** Collected: 05/20/16 09:09 Received: 06/28/16 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	**0.198 ± 0.133 (0.221) C:104% T:NA**	pCi/L	07/25/16 09:22	13982-63-3	
Radium-228	EPA 9320	**0.362 ± 0.344 (0.698) C:83% T:76%**	pCi/L	07/25/16 21:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.560 ± 0.477 (0.919)**	pCi/L	07/26/16 14:48	7440-14-4	

Sample: HGWA-6 **Lab ID: 30187992003** Collected: 05/20/16 09:23 Received: 06/28/16 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	**0.0233 ± 0.101 (0.256) C:95% T:NA**	pCi/L	07/25/16 09:22	13982-63-3	
Radium-228	EPA 9320	**0.820 ± 0.393 (0.663) C:79% T:89%**	pCi/L	07/25/16 20:55	15262-20-1	
Total Radium	Total Radium Calculation	**0.843 ± 0.494 (0.919)**	pCi/L	07/26/16 14:48	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: Hammond CCR
Pace Project No.: 30187992

QC Batch: 226713 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30187992001, 30187992002, 30187992003

METHOD BLANK: 1110829 Matrix: Water
Associated Lab Samples: 30187992001, 30187992002, 30187992003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.547 ± 0.363 (0.688) C:86% T:81%	pCi/L	07/25/16 12:44	

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: Hammond CCR
Pace Project No.: 30187992

QC Batch: 226873 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30187992001, 30187992002, 30187992003

METHOD BLANK: 1111681 Matrix: Water
Associated Lab Samples: 30187992001, 30187992002, 30187992003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0742 ± 0.0894 (0.291) C:97% T:NA	pCi/L	07/25/16 09:22	

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.

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

QUALIFIERS

Project: Hammond CCR
Pace Project No.: 30187992

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# : 30187992

Environmental Laboratory
2480 Maner Road, Bin 39110
Atlanta, Georgia 30339

Phone: (404) 799-2100 Fax: (404) 799-2141

TRANSFER OF SAMPLES

GEORGIA POWER
A SOUTHERN COMPANY

Sample Delivery Group No. 103519

Lab Contact: Jolynn Locke	Project Name: Hammond CCR
Email Results To: joklocke@southernco.com	
Turnaound Time: (or expected date of results) 21 days	
Rush Charges Authorized: Yes No x Signature:	

Vendor Laboratory Name and Address
Pace Analytical Services, Inc.
110 Technology Parkway
Peachtree Corners, GA 30092
770-734-4203

Date of Sample Transfer
6/24/2016

Sample Date	Sample Time	No. of Containers	Project ID#	Laboratory ID#	Analysis Requested	Remarks
5/20/2016	9:05	1	HGWC-7	103519001	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	001
5/20/2016	9:09	1	HGWC-8	103519002	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	002
5/20/2016	9:23	1	HGWA-6	103519003	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	003

Transfer By (Signature): Linda Fenton

Received By:

Comments: Samples preserved with HNO3 to <2 pH

Date / Time: 6-28-16 1030

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: GA Power Project # 30187992

Courier: [X] Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace Other _____

Tracking #: 681250972931

Custody Seal on Cooler/Box Present: [ ] yes [X] 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: NJV 6-28-16

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 NJV / 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	

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)

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	JAL
Date:	7/20/2016
Worklist:	30421
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1111681
MB concentration:	-0.074
M/B Counting Uncertainty:	0.089
MB MDC:	0.291
MB Numerical Performance Indicator:	-1.64
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	Y
	LCS30421	**LCSD30421**
Count Date:	7/25/2016	7/25/2016
Spike I.D.:	16-001	16-001
Spike Concentration (pCi/mL):	47.784	47.784
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.504	0.507
Target Conc. (pCi/L, g, F):	9.488	9.424
Uncertainty (Calculated):	0.446	0.443
Result (pCi/L, g, F):	7.756	7.493
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.672	0.637
Numerical Performance Indicator:	-4.21	-4.88
Percent Recovery:	81.75%	79.51%
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.:	LCS30421
Duplicate Sample I.D.	LCSD30421
Sample Result (pCi/L, g, F):	7.756
Sample Result Counting Uncertainty (pCi/L, g, F):	0.672
Sample Duplicate Result (pCi/L, g, F):	7.493
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.637
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	0.558
Duplicate RPD:	3.46%
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:

Quality Control Sample Performance Assessment

Test: Ra-228
Analyst: JLW
Date: 7/21/2016
Worklist: 30408
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1110829
MB concentration:	0.547
M/B Counting Uncertainty:	0.349
MB MDC:	0.688
MB Numerical Performance Indicator:	3.07
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS30408	LCSD30408
Count Date:	7/25/2016	7/25/2016
Spike I.D.:	16-025	16-025
Spike Concentration (pCi/mL):	26.111	26.111
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.808	0.802
Target Conc. (pCi/L, g, F):	6.462	6.511
Uncertainty (Calculated):	0.465	0.469
Result (pCi/L, g, F):	4.536	4.917
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.607	0.644
Numerical Performance Indicator:	-4.94	-3.92
Percent Recovery:	70.18%	75.52%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

Duplicate Sample Assessment		
Sample I.D.:	LCS30408	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD30408	
Sample Result (pCi/L, g, F):	4.536	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.607	
Sample Duplicate Result (pCi/L, g, F):	4.917	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.644	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-0.844	
Duplicate RPD:	8.06%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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

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:	

Comments:

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

August 09, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Hammond AP CCR GW
Pace Project No.: 30188809

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory between June 28, 2016 and July 05, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Report reissued 8/9/16 to include the Ra-226 that were missing from the initial 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 Hammond AP CCR GW
Pace Project No.: 30188809

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 Hammond AP CCR GW
Pace Project No.: 30188809

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30188809001	**HGWC-16**	Water	07/01/16 11:05	07/05/16 10:00
30188809002	**HGWC-11**	Water	05/23/16 12:10	06/28/16 10:30
30188809003	**HGWC-12**	Water	05/23/16 13:51	06/28/16 10:30
30188809004	**DUP-2**	Water	05/23/16 00:01	06/28/16 10:30
30188809005	**HGWC-14**	Water	05/23/16 12:28	07/01/16 15:06
30188809006	**HGWC-15**	Water	05/23/16 13:59	06/28/16 10:30
30188809007	**FB-1**	Water	05/23/16 09:00	06/28/16 10:30
30188809008	**FB-2**	Water	05/23/16 09:30	06/28/16 10:30
30188809009	**FERB-1**	Water	05/23/16 16:30	06/28/16 10:30
30188809010	**FERB-2**	Water	05/23/16 17:00	06/28/16 10:30
30188809011	**HGWC-9**	Water	05/23/16 12:00	06/28/16 10:30
30188809012	**HGWC-10**	Water	05/23/16 14:06	06/28/16 10:30
30188809013	**HGWC-17**	Water	05/23/16 16:21	06/28/16 10:30
30188809014	**HGWC-13**	Water	05/23/16 15:15	06/28/16 10:30

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

SAMPLE ANALYTE COUNT

Project: Plant Hammond AP CCR GW
Pace Project No.: 30188809

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30188809001	**HGWC-16**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30188809002	**HGWC-11**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30188809003	**HGWC-12**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30188809004	**DUP-2**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30188809005	**HGWC-14**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30188809006	**HGWC-15**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30188809007	**FB-1**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30188809008	**FB-2**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30188809009	**FERB-1**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30188809010	**FERB-2**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30188809011	**HGWC-9**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30188809012	**HGWC-10**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30188809013	**HGWC-17**	EPA 9315	JAL	1

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

SAMPLE ANALYTE COUNT

Project: Plant Hammond AP CCR GW
Pace Project No.: 30188809

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30188809014	**HGWC-13**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Hammond AP CCR GW
Pace Project No.: 30188809

Sample: HGWC-16 **Lab ID: 30188809001** Collected: 07/01/16 11:05 Received: 07/05/16 10:00 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Sample received without a lid on 6/28. Received additional volume on 7/5.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.242 ± 0.191 (0.357) C:90% T:NA**	pCi/L	08/08/16 06:45	13982-63-3	
Radium-228	EPA 9320	**-0.374 ± 0.597 (1.48) C:71% T:81%**	pCi/L	07/29/16 15:38	15262-20-1	
Total Radium	Total Radium Calculation	**0.000 ± 0.788 (1.84)**	pCi/L	08/08/16 14:00	7440-14-4	

Sample: HGWC-11 **Lab ID: 30188809002** Collected: 05/23/16 12:10 Received: 06/28/16 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	**0.257 ± 0.160 (0.232) C:90% T:NA**	pCi/L	08/08/16 06:45	13982-63-3	
Radium-228	EPA 9320	**0.252 ± 0.369 (0.796) C:78% T:83%**	pCi/L	07/29/16 11:40	15262-20-1	
Total Radium	Total Radium Calculation	**0.509 ± 0.529 (1.03)**	pCi/L	08/08/16 14:00	7440-14-4	

Sample: HGWC-12 **Lab ID: 30188809003** Collected: 05/23/16 13:51 Received: 06/28/16 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	**0.190 ± 0.156 (0.282) C:92% T:NA**	pCi/L	08/08/16 06:45	13982-63-3	
Radium-228	EPA 9320	**0.925 ± 0.450 (0.771) C:76% T:78%**	pCi/L	07/29/16 11:40	15262-20-1	
Total Radium	Total Radium Calculation	**1.12 ± 0.606 (1.05)**	pCi/L	08/08/16 14:00	7440-14-4	

Sample: DUP-2 **Lab ID: 30188809004** Collected: 05/23/16 00:01 Received: 06/28/16 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	**0.226 ± 0.166 (0.285) C:88% T:NA**	pCi/L	08/08/16 06:45	13982-63-3	
Radium-228	EPA 9320	**0.0371 ± 0.374 (0.862) C:71% T:79%**	pCi/L	07/29/16 11:40	15262-20-1	
Total Radium	Total Radium Calculation	**0.263 ± 0.540 (1.15)**	pCi/L	08/08/16 14:00	7440-14-4	

Sample: HGWC-14 **Lab ID: 30188809005** Collected: 05/23/16 12:28 Received: 07/01/16 15:06 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.398 ± 0.188 (0.228) C:98% T:NA**	pCi/L	08/08/16 06:45	13982-63-3	

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 Hammond AP CCR GW
Pace Project No.: 30188809

Sample: HGWC-14 **Lab ID: 30188809005** Collected: 05/23/16 12:28 Received: 07/01/16 15:06 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-228	EPA 9320	**0.170 ± 0.426 (0.949) C:76% T:72%**	pCi/L	08/01/16 12:37	15262-20-1	
Total Radium	Total Radium Calculation	**0.568 ± 0.614 (1.18)**	pCi/L	08/08/16 14:20	7440-14-4	

Sample: HGWC-15 **Lab ID: 30188809006** Collected: 05/23/16 13:59 Received: 06/28/16 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	**0.0280 ± 0.124 (0.310) C:94% T:NA**	pCi/L	08/08/16 06:45	13982-63-3	
Radium-228	EPA 9320	**0.143 ± 0.387 (0.869) C:73% T:69%**	pCi/L	07/29/16 11:40	15262-20-1	
Total Radium	Total Radium Calculation	**0.171 ± 0.511 (1.18)**	pCi/L	08/08/16 14:00	7440-14-4	

Sample: FB-1 **Lab ID: 30188809007** Collected: 05/23/16 09:00 Received: 06/28/16 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	**0.0900 ± 0.118 (0.248) C:95% T:NA**	pCi/L	08/08/16 06:45	13982-63-3	
Radium-228	EPA 9320	**-0.318 ± 0.327 (0.823) C:71% T:88%**	pCi/L	07/29/16 11:40	15262-20-1	
Total Radium	Total Radium Calculation	**0.000 ± 0.445 (1.07)**	pCi/L	08/08/16 14:00	7440-14-4	

Sample: FB-2 **Lab ID: 30188809008** Collected: 05/23/16 09:30 Received: 06/28/16 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	**0.0634 ± 0.112 (0.254) C:94% T:NA**	pCi/L	08/08/16 06:45	13982-63-3	
Radium-228	EPA 9320	**0.0228 ± 0.350 (0.811) C:71% T:82%**	pCi/L	07/29/16 11:40	15262-20-1	
Total Radium	Total Radium Calculation	**0.0862 ± 0.462 (1.07)**	pCi/L	08/08/16 14:00	7440-14-4	

Sample: FERB-1 **Lab ID: 30188809009** Collected: 05/23/16 16:30 Received: 06/28/16 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	**0.0431 ± 0.0957 (0.227) C:94% T:NA**	pCi/L	08/08/16 06:45	13982-63-3	
Radium-228	EPA 9320	**0.0285 ± 0.356 (0.819) C:76% T:86%**	pCi/L	07/29/16 15:37	15262-20-1	
Total Radium	Total Radium Calculation	**0.0716 ± 0.452 (1.05)**	pCi/L	08/08/16 14:00	7440-14-4	

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 Hammond AP CCR GW
Pace Project No.: 30188809

Sample: FERB-2 **Lab ID: 30188809010** Collected: 05/23/16 17:00 Received: 06/28/16 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	**0.0251 ± 0.108 (0.276) C:92% T:NA**	pCi/L	08/08/16 06:45	13982-63-3	
Radium-228	EPA 9320	**0.258 ± 0.401 (0.869) C:69% T:86%**	pCi/L	07/29/16 15:37	15262-20-1	
Total Radium	Total Radium Calculation	**0.283 ± 0.509 (1.15)**	pCi/L	08/08/16 14:00	7440-14-4	

Sample: HGWC-9 **Lab ID: 30188809011** Collected: 05/23/16 12:00 Received: 06/28/16 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	**0.209 ± 0.151 (0.234) C:92% T:NA**	pCi/L	08/08/16 06:45	13982-63-3	
Radium-228	EPA 9320	**0.617 ± 0.429 (0.829) C:74% T:83%**	pCi/L	07/29/16 15:37	15262-20-1	
Total Radium	Total Radium Calculation	**0.826 ± 0.580 (1.06)**	pCi/L	08/08/16 14:00	7440-14-4	

Sample: HGWC-10 **Lab ID: 30188809012** Collected: 05/23/16 14:06 Received: 06/28/16 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	**0.0343 ± 0.0999 (0.246) C:92% T:NA**	pCi/L	08/08/16 06:45	13982-63-3	
Radium-228	EPA 9320	**0.385 ± 0.451 (0.950) C:69% T:83%**	pCi/L	07/29/16 15:37	15262-20-1	
Total Radium	Total Radium Calculation	**0.419 ± 0.551 (1.20)**	pCi/L	08/08/16 14:00	7440-14-4	

Sample: HGWC-17 **Lab ID: 30188809013** Collected: 05/23/16 16:21 Received: 06/28/16 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	**0.129 ± 0.139 (0.278) C:90% T:NA**	pCi/L	08/08/16 06:45	13982-63-3	
Radium-228	EPA 9320	**0.489 ± 0.410 (0.819) C:75% T:79%**	pCi/L	07/29/16 15:38	15262-20-1	
Total Radium	Total Radium Calculation	**0.618 ± 0.549 (1.10)**	pCi/L	08/08/16 14:00	7440-14-4	

Sample: HGWC-13 **Lab ID: 30188809014** Collected: 05/23/16 15:15 Received: 06/28/16 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	**0.287 ± 0.189 (0.305) C:83% T:NA**	pCi/L	08/08/16 06:46	13982-63-3	
Radium-228	EPA 9320	**0.338 ± 0.385 (0.805) C:70% T:81%**	pCi/L	07/29/16 15:38	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 Hammond AP CCR GW
Pace Project No.: 30188809

Sample: HGWC-13 **Lab ID: 30188809014** Collected: 05/23/16 15:15 Received: 06/28/16 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.625 ± 0.574 (1.11)**	pCi/L	08/08/16 14:00	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 Hammond AP CCR GW
Pace Project No.: 30188809

QC Batch: 227761 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30188809005

METHOD BLANK: 1115859 Matrix: Water
Associated Lab Samples: 30188809005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.173 ± 0.364 (0.804) C:77% T:80%	pCi/L	08/01/16 12:37	

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.

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond AP CCR GW
Pace Project No.: 30188809

QC Batch: 228461 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30188809001, 30188809002, 30188809003, 30188809004, 30188809005, 30188809006, 30188809007, 30188809008, 30188809009, 30188809010, 30188809011, 30188809012, 30188809013, 30188809014

METHOD BLANK: 1119234 Matrix: Water
Associated Lab Samples: 30188809001, 30188809002, 30188809003, 30188809004, 30188809005, 30188809006, 30188809007, 30188809008, 30188809009, 30188809010, 30188809011, 30188809012, 30188809013, 30188809014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.104 ± 0.103 (0.181) C:95% T:NA	pCi/L	08/08/16 06:45	

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 Hammond AP CCR GW
Pace Project No.: 30188809

QC Batch: 227033 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30188809001, 30188809002, 30188809003, 30188809004, 30188809006, 30188809007, 30188809008, 30188809009, 30188809010, 30188809011, 30188809012, 30188809013, 30188809014

METHOD BLANK: 1112335 Matrix: Water
Associated Lab Samples: 30188809001, 30188809002, 30188809003, 30188809004, 30188809006, 30188809007, 30188809008, 30188809009, 30188809010, 30188809011, 30188809012, 30188809013, 30188809014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.351 ± 0.393 (0.824) C:73% T:79%	pCi/L	07/29/16 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.

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

QUALIFIERS

Project: Plant Hammond AP CCR GW
Pace Project No.: 30188809

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.

Custody Seal ID: 20160701-01

2755

CHAIN OF CUSTODY RECORD

Pace Analytical®
www.pacelabs.com

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

PAGE: 1 OF 1

CLIENT NAME: Southern Company Services

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

REPORT TO: Soju Abraham
CC:

REQUESTED COMPLETION DATE: Standard TAT
PO #:

PROJECT NAME/STATE: Plant Hammond AP CCR GW

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	CONTAINER TYPE:	PRESERVATION:	SW-846 9315 + 9320 (Radiologicals)	LAB ID NUMBER
7/1/16	1105	GW		X	HGWC-16	1	P	N	X	001

WO#:30188809

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: Will Pace / Engr — DATE/TIME: 7/1/16 1506

RELINQUISHED BY: — DATE/TIME: 7/1/16 1506

RECEIVED BY: Pace — DATE/TIME: 7/5/16 1000

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY/LAB: — DATE/TIME: 7/1/16 1506

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

pH checked: Yes No NA — Ice: Yes No NA — Temperature: 25°C Min: 25°C 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 #30188809

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

Tracking #: 6812 5097 4658

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 7/5/16

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. No ID on bottle.
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 7/5/16 RTB; 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	

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)

WO#:30188809

PM: JAC Due Date: 07/27/16
CLIENT: GAPOWER

Environmental Laboratory
2480 Maner Road, Bin 39110
Atlanta, Georgia 30339

Phone: (404) 799-2100 Fax: (404) 799-2141

TRANSFER OF SAMPLES

GEORGIA POWER
A SOUTHERN COMPANY

Sample Delivery Group No. 103564

Lab Contact: Jolynn Locke	Project Name: Hammond CCR
Email Results To: joklocke@southernco.com	Vendor Laboratory Name and Address: Pace Analytical Services, Inc. 110 Technology Parkway Peachtree Corners, GA 30092 770-734-4203
Turnaround Time: (or expected date of results) 21 days	
Rush Charges Authorized: Yes No x Signature:	Date of Sample Transfer 6/24/2016

Sample Date	Sample Time	No. of Containers	Project ID#	Laboratory ID#	Analysis Requested	Remarks
5/23/2016	12:10	1	HGWC-11	103564001	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	002 001
5/23/2016	13:51	1	HGWC-12	103564002	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	003 002
5/23/2016		1	DUP-2	103564003	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	004 003
5/23/2016	12:28	1	HGWC-14	103564004	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	005 004
5/23/2016	13:59	1	HGWC-15	103564005	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	006 005
5/23/2016	15:25	1	HGWC-16	103564006	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	001 006
5/23/2016	9:00	1	FB-1	103564007	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	007 007
5/23/2016	9:30	1	FB-2	103564008	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	008 008
5/23/2016	16:30	1	FERB-1	103564009	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	009 009
5/23/2016	17:00	1	FERB-2	103564010	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	010 010
5/23/2016	12:00	1	HGWC-9	103564011	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	011 011
5/23/2016	14:06	1	HGWC-10	103564012	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	012 012
5/23/2016	16:21	1	HGWC-17	103564013	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	013 013
5/23/2016	15:15	1	HGWC-13	103564014	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	014 014

Transfer By (Signature):	Received By: 7/6/16
Comments: Samples preserved with HNO3 to <2 pH	Date / Time: 6-28-16 1030

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: GA Power

WO#: 30188809

PM: JAC Due Date: 07/27/16
CLIENT: GAPOWER

Courier: [X] Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace [ ] Other

Tracking #: 681250972931

Custody Seal on Cooler/Box Present: [ ] yes [X] 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: NTV 6-28-16

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. 006 low vol
Correct Containers Used:	X			10.
-Pace Containers Used:		X		
Containers Intact:	X	X		11. 006 had lid off - only ≈ 1L left
Filtered volume received for Dissolved tests	NA 6286		X	12. extra volume received 7/5/16
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 NTV 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	

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)

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	JAL
Date:	8/5/2016
Worklist:	30675
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1119234
MB concentration:	0.104
M/B Counting Uncertainty:	0.102
MB MDC:	0.181
MB Numerical Performance Indicator:	2.01
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	Y
	LCS30675	LCSD30675
Count Date:	8/8/2016	8/8/2016
Spike I.D.:	16-026	16-026
Spike Concentration (pCi/mL):	44.679	44.679
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.505	0.510
Target Conc. (pCi/L, g, F):	8.841	8.760
Uncertainty (Calculated):	0.416	0.412
Result (pCi/L, g, F):	6.687	7.872
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.660	0.713
Numerical Performance Indicator:	-5.41	-2.11
Percent Recovery:	75.63%	89.86%
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.:	LCS30675
Duplicate Sample I.D.	LCSD30675
Sample Result (pCi/L, g, F):	6.687
Sample Result Counting Uncertainty (pCi/L, g, F):	0.660
Sample Duplicate Result (pCi/L, g, F):	7.872
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.713
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	-2.391
Duplicate RPD:	16.28%
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:

8/8/16

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	7/26/2016
Worklist:	30471
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1112335
MB concentration:	0.351
M/B Counting Uncertainty:	0.388
MB MDC:	0.824
MB Numerical Performance Indicator:	1.77
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	Y
	LCS30471	LCSD30471
Count Date:	7/29/2016	7/29/2016
Spike I.D.:	16-025	16-025
Spike Concentration (pCi/mL):	26.077	26.077
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.805	0.805
Target Conc. (pCi/L, g, F):	6.480	6.476
Uncertainty (Calculated):	0.467	0.466
Result (pCi/L, g, F):	4.275	6.743
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.707	0.776
Numerical Performance Indicator:	-5.10	0.58
Percent Recovery:	65.97%	104.12%
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.:	LCS30471
Duplicate Sample I.D.	LCSD30471
Sample Result (pCi/L, g, F):	4.275
Sample Result Counting Uncertainty (pCi/L, g, F):	0.707
Sample Duplicate Result (pCi/L, g, F):	6.743
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.776
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	-4.608
Duplicate RPD:	44.79%
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.

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.

8/8/16

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	8/1/2016
Worklist:	30471
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	
MB concentration:	
M/B Counting Uncertainty:	
MB MDC:	
MB Numerical Performance Indicator:	
MB Status vs Numerical Indicator:	
MB Status vs. MDC:	

Laboratory Control Sample Assessment

	LCSD (Y or N)?	Y
	LCS30471	LCSD30471
Count Date:	8/3/2016	8/3/2016
Spike I.D.:	16-025	16-025
Spike Concentration (pCi/mL):	26.033	26.033
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.805	0.805
Target Conc. (pCi/L, g, F):	6.469	6.465
Uncertainty (Calculated):	0.466	0.465
Result (pCi/L, g, F):	7.541	7.936
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.949	0.838
Numerical Performance Indicator:	1.99	3.01
Percent Recovery:	116.57%	122.75%
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.:	LCS30471	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD30471	
Sample Result (pCi/L, g, F):	7.541	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.949	
Sample Duplicate Result (pCi/L, g, F):	7.936	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.838	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-0.612	
Duplicate RPD:	5.11%	
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:

8/8/16

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	7/28/2016
Worklist:	30562
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1115859
MB concentration:	0.173
M/B Counting Uncertainty:	0.362
MB MDC:	0.804
MB Numerical Performance Indicator:	0.94
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	Y
	LCS30562	LCSD30562
Count Date:	8/1/2016	8/1/2016
Spike I.D.:	16-025	16-025
Spike Concentration (pCi/mL):	26.051	26.051
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.807	0.801
Target Conc. (pCi/L, g, F):	6.460	6.501
Uncertainty (Calculated):	0.465	0.468
Result (pCi/L, g, F):	6.058	6.086
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.728	0.749
Numerical Performance Indicator:	-0.91	-0.92
Percent Recovery:	93.78%	93.62%
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.:	LCS30562	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD30562	
Sample Result (pCi/L, g, F):	6.058	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.728	
Sample Duplicate Result (pCi/L, g, F):	6.086	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.749	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-0.052	
Duplicate RPD:	0.46%	
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:

8/8/16

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

July 28, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Hammond CCR
Pace Project No.: 30188011

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on June 28, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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: Hammond CCR
Pace Project No.: 30188011

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: Hammond CCR
Pace Project No.: 30188011

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30188011001	**HGWC-18**	Water	05/24/16 10:24	06/28/16 10:30

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

SAMPLE ANALYTE COUNT

Project: Hammond CCR
Pace Project No.: 30188011

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30188011001	**HGWC-18**	EPA 9315	JAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hammond CCR
Pace Project No.: 30188011

Sample: HGWC-18 **Lab ID: 30188011001** Collected: 05/24/16 10:24 Received: 06/28/16 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	**0.631 ± 0.216 (0.186) C:101% T:NA**	pCi/L	07/25/16 12:28	13982-63-3	
Radium-228	EPA 9320	**1.19 ± 0.480 (0.716) C:84% T:67%**	pCi/L	07/27/16 12:30	15262-20-1	
Total Radium	Total Radium Calculation	**1.82 ± 0.696 (0.902)**	pCi/L	07/28/16 12:53	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: Hammond CCR
Pace Project No.: 30188011

QC Batch: 226716 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30188011001

METHOD BLANK: 1110832 Matrix: Water
Associated Lab Samples: 30188011001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.331 ± 0.308 (0.624) C:89% T:79%	pCi/L	07/27/16 12:30	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Hammond CCR
Pace Project No.: 30188011

QC Batch: 226875 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30188011001

METHOD BLANK: 1111688 Matrix: Water
Associated Lab Samples: 30188011001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0115 ± 0.0865 (0.226) C:95% T:NA	pCi/L	07/25/16 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, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: Hammond CCR
Pace Project No.: 30188011

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#:30188011

Environmental Laboratory
2480 Maner Road, Bin 39110
Atlanta, Georgia 30339

Phone: (404) 799-2100 Fax: (404) 799-2141

TRANSFER OF SAMPLES

GEORGIA POWER
A SOUTHERN COMPANY

Sample Delivery Group No. 103585

Lab Contact: Jolynn Locke / Project Name: Hammond CCR	Vendor Laboratory Name and Address Pace Analytical Services, Inc. 110 Technology Parkway Peachtree Corners, GA 30092 770-734-4203
Email Results To: joklocke@southernco.com Turnaound Time: (or expected date of results) 21 days Rush Charges Authorized: Yes No x Signature:	Date of Sample Transfer 6/24/2016

Sample Date	Sample Time	No. of Containers	Project ID#	Laboratory ID#	Analysis Requested	Remarks
5/24/2016	10:24	1	HGWC-18	103585001	Radium 226 EPA 903.1/Radium 228 EPA 904.0/Ra Combined	001

Transfer By (Signature): [signature]

Received By: [signature]

Comments: Samples preserved with HNO3 to <2 pH

Date / Time: 6-28-16 1030

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: GA Power Project # 30188011

Courier: [X] Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace Other _____

Tracking #: 681250972931

Custody Seal on Cooler/Box Present: [ ] yes [X] 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: NJV 6-28-16

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 NJV 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	

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)

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	JAL
Date:	7/20/2016
Worklist:	30422
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1111688
MB concentration:	0.011
M/B Counting Uncertainty:	0.086
MB MDC:	0.226
MB Numerical Performance Indicator:	0.26
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS30422	LCSD30422
Count Date:	7/26/2016	7/26/2016
Spike I.D.:	16-001	16-001
Spike Concentration (pCi/mL):	47.784	47.784
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.514	0.510
Target Conc. (pCi/L, g, F):	9.302	9.375
Uncertainty (Calculated):	0.438	0.441
Result (pCi/L, g, F):	7.454	7.582
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.614	0.629
Numerical Performance Indicator:	-4.81	-4.58
Percent Recovery:	80.12%	80.88%
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.:	LCS30422	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD30422	
Sample Result (pCi/L, g, F):	7.454	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.614	
Sample Duplicate Result (pCi/L, g, F):	7.582	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.629	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-0.287	
Duplicate RPD:	1.71%	
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:

7/28/16

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JLW
Date:	7/21/2016
Worklist:	30411
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1110832
MB concentration:	0.331
M/B Counting Uncertainty:	0.302
MB MDC:	0.624
MB Numerical Performance Indicator:	2.15
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS30411	LCSD30411
Count Date:	7/27/2016	7/27/2016
Spike I.D.:	16-025	16-025
Spike Concentration (pCi/mL):	26.094	26.094
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.810	0.818
Target Conc. (pCi/L, g, F):	6.447	6.379
Uncertainty (Calculated):	0.464	0.459
Result (pCi/L, g, F):	6.658	6.024
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.796	0.765
Numerical Performance Indicator:	0.45	-0.78
Percent Recovery:	103.27%	94.44%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

Duplicate Sample Assessment		
Sample I.D.:	LCS30411	Enter Duplicate
Duplicate Sample I.D.	LCSD30411	sample IDs if
Sample Result (pCi/L, g, F):	6.658	other than
Sample Result Counting Uncertainty (pCi/L, g, F):	0.796	LCS/LCSD in
Sample Duplicate Result (pCi/L, g, F):	6.024	the space below.
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.765	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	1.125	
Duplicate RPD:	9.99%	
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:

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:

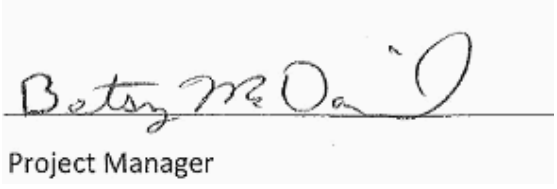
Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: **Mr. Joju Abraham**

Report Number: **AZH0981**
September 08, 2016
Project: CCR Event
Project #:Plant Hammond

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
HGWA-5	AZH0981-01	Ground Water	08/30/16 11:21	08/31/16 13:00
HGWA-6	AZH0981-02	Ground Water	08/30/16 12:10	08/31/16 13:00
HGWA-1	AZH0981-03	Ground Water	08/30/16 12:35	08/31/16 13:00
HGWA-2	AZH0981-04	Ground Water	08/30/16 13:40	08/31/16 13:00
HGWA-3	AZH0981-05	Ground Water	08/30/16 14:39	08/31/16 13:00
HGWA-4	AZH0981-06	Ground Water	08/30/16 14:35	08/31/16 13:00

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.: AZH0981
Client ID: HGWA-5
Date/Time Sampled: 8/30/2016 11:21:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZH0981-01
Date/Time Received: 8/31/2016 1:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	141	25	10	mg/L	SM 2540 C		1	09/01/16 12:00	09/01/16 12:00	6090007	JPT
Inorganic Anions											
Chloride	2.0	0.25	0.01	mg/L	EPA 300.0		1	09/01/16 10:00	09/02/16 08:30	6090013	RLC
Fluoride	0.08	0.30	0.02	mg/L	EPA 300.0	J	1	09/01/16 10:00	09/02/16 08:30	6090013	RLC
Sulfate	23	1.0	0.05	mg/L	EPA 300.0		1	09/01/16 10:00	09/02/16 08:30	6090013	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 12:49	6090039	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:21	6090039	CSW
Barium	0.0548	0.0100	0.0004	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:21	6090039	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:21	6090039	CSW
Boron	0.0068	0.100	0.0064	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 18:21	6090039	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 12:49	6090039	CSW
Calcium	28.0	2.50	0.155	mg/L	EPA 6020B		5	09/02/16 10:10	09/03/16 15:18	6090039	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:21	6090039	CSW
Cobalt	0.0010	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 18:21	6090039	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:21	6090039	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:21	6090039	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:21	6090039	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:21	6090039	CSW
Lithium	0.0030	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 18:21	6090039	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/02/16 08:45	09/02/16 13:04	6090041	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.: AZH0981
Client ID: HGWA-6
Date/Time Sampled: 8/30/2016 12:10:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZH0981-02
Date/Time Received: 8/31/2016 1:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	232	25	10	mg/L	SM 2540 C		1	09/01/16 12:00	09/01/16 12:00	6090007	JPT
Inorganic Anions											
Chloride	1.6	0.25	0.01	mg/L	EPA 300.0		1	09/01/16 10:00	09/02/16 10:16	6090013	RLC
Fluoride	0.07	0.30	0.02	mg/L	EPA 300.0	J	1	09/01/16 10:00	09/02/16 10:16	6090013	RLC
Sulfate	36	1.0	0.05	mg/L	EPA 300.0		1	09/01/16 10:00	09/02/16 10:16	6090013	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 12:53	6090039	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:27	6090039	CSW
Barium	0.212	0.0100	0.0004	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:27	6090039	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:27	6090039	CSW
Boron	0.0140	0.100	0.0064	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 18:27	6090039	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 12:53	6090039	CSW
Calcium	53.9	5.00	0.311	mg/L	EPA 6020B		10	09/02/16 10:10	09/03/16 15:24	6090039	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:27	6090039	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:27	6090039	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:27	6090039	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:27	6090039	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:27	6090039	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:27	6090039	CSW
Lithium	0.0095	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 18:27	6090039	CSW
Mercury	0.000044	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	09/02/16 08:45	09/02/16 13:06	6090041	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.: AZH0981
Client ID: HGWA-1
Date/Time Sampled: 8/30/2016 12:35:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZH0981-03
Date/Time Received: 8/31/2016 1:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	330	25	10	mg/L	SM 2540 C		1	09/01/16 12:00	09/01/16 12:00	6090007	JPT
Inorganic Anions											
Chloride	6.0	0.25	0.01	mg/L	EPA 300.0		1	09/01/16 10:00	09/02/16 10:37	6090013	RLC
Fluoride	0.09	0.30	0.02	mg/L	EPA 300.0	J	1	09/01/16 10:00	09/02/16 10:37	6090013	RLC
Sulfate	36	1.0	0.05	mg/L	EPA 300.0		1	09/01/16 10:00	09/02/16 10:37	6090013	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 12:57	6090039	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:32	6090039	CSW
Barium	0.0293	0.0100	0.0004	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:32	6090039	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:32	6090039	CSW
Boron	0.0074	0.100	0.0064	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 18:32	6090039	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 12:57	6090039	CSW
Calcium	97.5	5.00	0.311	mg/L	EPA 6020B		10	09/02/16 10:10	09/03/16 15:30	6090039	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:32	6090039	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:32	6090039	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:32	6090039	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:32	6090039	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:32	6090039	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:32	6090039	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:32	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 13:08	6090041	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.: AZH0981
Client ID: HGWA-2
Date/Time Sampled: 8/30/2016 1:40:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZH0981-04
Date/Time Received: 8/31/2016 1:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	168	25	10	mg/L	SM 2540 C		1	09/01/16 12:00	09/01/16 12:00	6090007	JPT
Inorganic Anions											
Chloride	6.2	0.25	0.01	mg/L	EPA 300.0		1	09/01/16 10:00	09/02/16 10:58	6090013	RLC
Fluoride	0.06	0.30	0.02	mg/L	EPA 300.0	J	1	09/01/16 10:00	09/02/16 10:58	6090013	RLC
Sulfate	42	1.0	0.05	mg/L	EPA 300.0		1	09/01/16 10:00	09/02/16 10:58	6090013	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 13:02	6090039	CSW
Arsenic	0.0017	0.0050	0.0016	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 18:52	6090039	CSW
Barium	0.131	0.0100	0.0004	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:52	6090039	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 13:02	6090039	CSW
Boron	0.0173	0.100	0.0064	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 18:52	6090039	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 13:02	6090039	CSW
Calcium	26.4	2.50	0.155	mg/L	EPA 6020B		5	09/02/16 10:10	09/03/16 15:35	6090039	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:52	6090039	CSW
Cobalt	0.0280	0.0100	0.0005	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:52	6090039	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:52	6090039	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:52	6090039	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:52	6090039	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:52	6090039	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:52	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 13:11	6090041	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.: AZH0981
Client ID: HGWA-3
Date/Time Sampled: 8/30/2016 2:39:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZH0981-05
Date/Time Received: 8/31/2016 1:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	254	25	10	mg/L	SM 2540 C		1	09/01/16 12:00	09/01/16 12:00	6090007	JPT
Inorganic Anions											
Chloride	6.4	0.25	0.01	mg/L	EPA 300.0		1	09/01/16 10:00	09/02/16 11:20	6090013	RLC
Fluoride	0.09	0.30	0.02	mg/L	EPA 300.0	J	1	09/01/16 10:00	09/02/16 11:20	6090013	RLC
Sulfate	40	1.0	0.05	mg/L	EPA 300.0		1	09/01/16 10:00	09/02/16 11:20	6090013	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 13:06	6090039	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:58	6090039	CSW
Barium	0.113	0.0100	0.0004	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:58	6090039	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 13:06	6090039	CSW
Boron	ND	0.100	0.0064	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:58	6090039	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 13:06	6090039	CSW
Calcium	65.1	5.00	0.311	mg/L	EPA 6020B		10	09/02/16 10:10	09/03/16 15:41	6090039	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:58	6090039	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:58	6090039	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:58	6090039	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:58	6090039	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:58	6090039	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:58	6090039	CSW
Lithium	0.0025	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 18:58	6090039	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/02/16 08:45	09/02/16 13:13	6090041	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.: AZH0981
Client ID: HGWA-4
Date/Time Sampled: 8/30/2016 2:35:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZH0981-06
Date/Time Received: 8/31/2016 1:00:00PM

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	09/01/16 12:00	09/01/16 12:00	6090007	JPT
Inorganic Anions											
Chloride	4.9	0.25	0.01	mg/L	EPA 300.0		1	09/01/16 10:00	09/02/16 11:41	6090013	RLC
Fluoride	0.06	0.30	0.02	mg/L	EPA 300.0	J	1	09/01/16 10:00	09/02/16 11:41	6090013	RLC
Sulfate	6.8	1.0	0.05	mg/L	EPA 300.0		1	09/01/16 10:00	09/02/16 11:41	6090013	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 13:11	6090039	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:03	6090039	CSW
Barium	0.0310	0.0100	0.0004	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:03	6090039	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 13:11	6090039	CSW
Boron	0.0072	0.100	0.0064	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 19:03	6090039	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 13:11	6090039	CSW
Calcium	85.7	5.00	0.311	mg/L	EPA 6020B		10	09/02/16 10:10	09/03/16 16:11	6090039	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:03	6090039	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:03	6090039	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:03	6090039	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:03	6090039	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:03	6090039	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 19:03	6090039	CSW
Lithium	0.0027	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 19:03	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 13:15	6090041	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.: AZH0981

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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	

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.: AZH0981

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090013 - EPA 300.0											
Blank (6090013-BLK1)						Prepared: 09/01/16 Analyzed: 09/02/16					
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 (6090013-BS1)						Prepared: 09/01/16 Analyzed: 09/02/16					
Chloride	10.1	0.25	0.01	mg/L	10.010		101	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 (6090013-MS1)			**Source: AZH0961-03**			Prepared: 09/01/16 Analyzed: 09/02/16					
Chloride	31.1	0.25	0.01	mg/L	10.010	23.0	81	90-110			QM-05
Fluoride	13.8	0.30	0.02	mg/L	10.010	0.14	137	90-110			QM-05
Sulfate	157	1.0	0.05	mg/L	10.010	164	NR	90-110			QM-05
Matrix Spike (6090013-MS2)			**Source: AZH0983-03**			Prepared: 09/01/16 Analyzed: 09/02/16					
Chloride	12.3	0.25	0.01	mg/L	10.010	1.97	103	90-110			
Fluoride	10.9	0.30	0.02	mg/L	10.010	0.20	107	90-110			
Sulfate	22.6	1.0	0.05	mg/L	10.010	13.6	90	90-110			
Matrix Spike Dup (6090013-MSD1)			**Source: AZH0961-03**			Prepared: 09/01/16 Analyzed: 09/02/16					
Chloride	30.4	0.25	0.01	mg/L	10.010	23.0	74	90-110	2	15	QM-05
Fluoride	12.8	0.30	0.02	mg/L	10.010	0.14	126	90-110	8	15	QM-05
Sulfate	156	1.0	0.05	mg/L	10.010	164	NR	90-110	0.7	15	QM-05

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.: AZH0981

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			

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.: AZH0981

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	

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.: AZH0981

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			

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.: AZH0981

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			

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

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.

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 Hammond AP 1&2

PROJECT #: 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	
8/30/16	11:21	GW		X	HGWA-5	3	1	1	1	1
8/30/16	12:10	GW		X	HGWA-6	3	1	1	1	2
8/30/16	12:35	GW		X	HGWA-1	3	1	1	1	3
8/30/16	13:40	GW		X	HGWA-2	3	1	1	1	4
8/30/16	14:39	GW		X	HGWA-3	3	1	1	1	5
8/30/16	14:35	GW		X	HGWA-4	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:

DATE/TIME: 8/30/2016

RELINQUISHED BY:

DATE/TIME: 8/31/16 1300

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY LAB: MZaltman

DATE/TIME: 08/31/16 1300

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

Custody Seal: Intact Broken N/A

# of Coolers:

Cooler ID:

pH checked: Yes No NA

Ice: Yes No NA

Temperature: 2° Min: 2° Max: 2°

FOR LAB USE ONLY

LAB #: AZH0981

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: 9/8/2016 2:30:23PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 08/31/16 13:00

Work Order: AZH0981
Logged In By: Charles Hawks

OBSERVATIONS

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

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

September 27, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Hammond AP 1&2
Pace Project No.: 30194833

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 Hammond AP 1&2
Pace Project No.: 30194833

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 Hammond AP 1&2
Pace Project No.: 30194833

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30194833001	**HGWA-5**	Water	08/30/16 11:21	09/01/16 10:00
30194833002	**HGWA-6**	Water	08/30/16 12:10	09/01/16 10:00
30194833003	**HGWA-1**	Water	08/30/16 12:35	09/01/16 10:00
30194833004	**HGWA-2**	Water	08/30/16 13:40	09/01/16 10:00
30194833005	**HGWA-3**	Water	08/30/16 14:39	09/01/16 10:00
30194833006	**HGWA-4**	Water	08/30/16 14:35	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 Hammond AP 1&2
Pace Project No.: 30194833

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30194833001	**HGWA-5**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194833002	**HGWA-6**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194833003	**HGWA-1**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194833004	**HGWA-2**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194833005	**HGWA-3**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194833006	**HGWA-4**	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 Hammond AP 1&2
Pace Project No.: 30194833

Sample: HGWA-5 **Lab ID: 30194833001** Collected: 08/30/16 11:21 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	**1.97 ± 0.546 (0.418) C:89% T:NA**	pCi/L	09/10/16 11:07	13982-63-3	
Radium-228	EPA 9320	**0.450 ± 0.399 (0.788) C:77% T:67%**	pCi/L	09/14/16 02:38	15262-20-1	
Total Radium	Total Radium Calculation	**2.42 ± 0.945 (1.21)**	pCi/L	09/20/16 10:15	7440-14-4	

Sample: HGWA-6 **Lab ID: 30194833002** Collected: 08/30/16 12:10 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	**0.107 ± 0.156 (0.335) C:87% T:NA**	pCi/L	09/10/16 11:07	13982-63-3	
Radium-228	EPA 9320	**0.839 ± 0.520 (0.964) C:77% T:59%**	pCi/L	09/14/16 02:38	15262-20-1	
Total Radium	Total Radium Calculation	**0.946 ± 0.676 (1.30)**	pCi/L	09/20/16 10:15	7440-14-4	

Sample: HGWA-1 **Lab ID: 30194833003** Collected: 08/30/16 12:35 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	**0.0200 ± 0.128 (0.341) C:89% T:NA**	pCi/L	09/10/16 11:07	13982-63-3	
Radium-228	EPA 9320	**0.561 ± 0.450 (0.872) C:69% T:68%**	pCi/L	09/14/16 02:53	15262-20-1	
Total Radium	Total Radium Calculation	**0.581 ± 0.578 (1.21)**	pCi/L	09/20/16 10:15	7440-14-4	

Sample: HGWA-2 **Lab ID: 30194833004** Collected: 08/30/16 13:40 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	**0.428 ± 0.279 (0.453) C:81% T:NA**	pCi/L	09/10/16 11:07	13982-63-3	
Radium-228	EPA 9320	**0.624 ± 0.362 (0.652) C:73% T:81%**	pCi/L	09/14/16 02:38	15262-20-1	
Total Radium	Total Radium Calculation	**1.05 ± 0.641 (1.11)**	pCi/L	09/20/16 10:15	7440-14-4	

Sample: HGWA-3 **Lab ID: 30194833005** Collected: 08/30/16 14:39 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	**-0.0517 ± 0.107 (0.360) C:91% T:NA**	pCi/L	09/10/16 11:08	13982-63-3	
Radium-228	EPA 9320	**0.976 ± 0.559 (1.00) C:76% T:50%**	pCi/L	09/16/16 11:14	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 Hammond AP 1&2
Pace Project No.: 30194833

Sample: HGWA-3 **Lab ID: 30194833005** Collected: 08/30/16 14:39 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
Total Radium	Total Radium Calculation	**0.976 ± 0.666 (1.36)**	pCi/L	09/20/16 10:15	7440-14-4	

Sample: HGWA-4 **Lab ID: 30194833006** Collected: 08/30/16 14:35 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	**0.464 ± 0.373 (0.661) C:87% T:NA**	pCi/L	09/10/16 11:03	13982-63-3	
Radium-228	EPA 9320	**0.383 ± 0.471 (0.977) C:70% T:65%**	pCi/L	09/16/16 10:56	15262-20-1	
Total Radium	Total Radium Calculation	**0.847 ± 0.844 (1.64)**	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 Hammond AP 1&2
Pace Project No.: 30194833

QC Batch: 232325 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30194833001, 30194833002, 30194833003, 30194833004, 30194833005, 30194833006

METHOD BLANK: 1138696 Matrix: Water
Associated Lab Samples: 30194833001, 30194833002, 30194833003, 30194833004, 30194833005, 30194833006

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.

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 Hammond AP 1&2
Pace Project No.: 30194833

QC Batch: 232397 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30194833001, 30194833002, 30194833003, 30194833004, 30194833005, 30194833006

METHOD BLANK: 1138978 Matrix: Water
Associated Lab Samples: 30194833001, 30194833002, 30194833003, 30194833004, 30194833005, 30194833006

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 Hammond AP 1&2
Pace Project No.: 30194833

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: 30194833001

[1] The sampler's name and signature were not listed on the COC.

Sample: 30194833006

[1] Low volume, container was 1/2 full. Client advised.

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 Hammond AP 1&2

PROJECT #: 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	11:21	GW		X	HGWA-5	3		1	1	1		001
8/30/16	12:10	GW		X	HGWA-6	3		1	1	1		002
8/30/16	12:35	GW		X	HGWA-1	3		1	1	1		003
8/30/16	13:40	GW		X	HGWA-2	3		1	1	1		004
8/30/16	14:39	GW		X	HGWA-3	3		1	1	1		005
8/30/16	14:35	GW		X	HGWA-4	3		1	1	1		006

WO#:30194833

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: DATE/TIME: 8/30/2016

RELINQUISHED BY: DATE/TIME: 8/31/16 1300

RECEIVED BY: DATE/TIME:

RELINQUISHED BY: DATE/TIME:

RECEIVED BY LAB: Malinan DATE/TIME: 08/31/16 1300

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

pH checked: Yes No NA

Ice: Yes No NA

Temperature: 2° Min: 2° Max:

Custody Seal: Intact Broken N/A Not Present

# of Coolers:

Cooler ID:

FOR LAB USE ONLY

LAB #:

Entered into LIMS:

Tracking #:

Recieved time/date 9-1-16 1000

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Georgia Power Project # 30194833

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.
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. low volume HGWA-4
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. 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: BLM 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: 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 9/21

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:	9/9/2016
Worklist:	31262
Matrix:	DW

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: AZI0077
September 14, 2016
Project: CCR Event
Project #:Plant Hammond

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 14, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWC-7	AZI0077-01	Ground Water	09/01/16 09:20	09/02/16 12:40
HGWC-8	AZI0077-02	Ground Water	09/01/16 08:50	09/02/16 12:40
HGWC-9	AZI0077-03	Ground Water	09/01/16 09:32	09/02/16 12:40
HGWC-10	AZI0077-04	Ground Water	09/01/16 10:18	09/02/16 12:40
HGWC-11	AZI0077-05	Ground Water	09/01/16 10:48	09/02/16 12:40
HGWC-12	AZI0077-06	Ground Water	09/01/16 11:34	09/02/16 12:40
HGWC-13	AZI0077-07	Ground Water	09/01/16 11:20	09/02/16 12:40
HGWC-14	AZI0077-08	Ground Water	09/01/16 12:07	09/02/16 12:40
HGWC-15	AZI0077-09	Ground Water	09/01/16 12:58	09/02/16 12:40
HGWC-16	AZI0077-10	Ground Water	09/01/16 12:50	09/02/16 12:40
HGWC-17	AZI0077-11	Ground Water	09/01/16 14:45	09/02/16 12:40
HGWC-18	AZI0077-12	Ground Water	09/01/16 14:32	09/02/16 12:40
FB-1	AZI0077-13	DI Water	09/01/16 09:21	09/02/16 12:40
FB-2	AZI0077-14	DI Water	09/01/16 12:18	09/02/16 12:40
FERB-1	AZI0077-15	DI Water	09/01/16 14:00	09/02/16 12:40
FERB-2	AZI0077-16	DI Water	09/01/16 15:28	09/02/16 12:40
Dup-1	AZI0077-17	Ground Water	09/01/16 00:00	09/02/16 12:40
Dup-2	AZI0077-18	Ground Water	09/01/16 00:00	09/02/16 12:40

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 14, 2016

Report No.: AZI0077
Client ID: HGWC-7
Date/Time Sampled: 9/1/2016 9:20:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0077-01
Date/Time Received: 9/2/2016 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	484	25	10	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	50	1.2	0.07	mg/L	EPA 300.0		5	09/08/16 09:25	09/11/16 16:25	6090177	RLC
Fluoride	0.51	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 13:32	6090177	RLC
Sulfate	100	5.0	0.26	mg/L	EPA 300.0		5	09/08/16 09:25	09/11/16 16:25	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:39	6090121	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:39	6090121	KLH
Barium	0.0747	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:39	6090121	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:39	6090121	KLH
Boron	0.904	0.100	0.0064	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:39	6090121	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:39	6090121	KLH
Calcium	96.3	25.0	1.55	mg/L	EPA 6020B		50	09/07/16 08:35	09/12/16 17:38	6090121	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:39	6090121	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:39	6090121	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:39	6090121	KLH
Molybdenum	0.0274	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:39	6090121	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:39	6090121	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:39	6090121	KLH
Lithium	0.0025	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 20:39	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 17:41	6090124	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 14, 2016

Report No.: AZI0077
Client ID: HGWC-8
Date/Time Sampled: 9/1/2016 8:50:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0077-02
Date/Time Received: 9/2/2016 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	763	25	10	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	110	1.2	0.07	mg/L	EPA 300.0		5	09/08/16 09:25	09/11/16 16:46	6090177	RLC
Fluoride	0.94	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 13:54	6090177	RLC
Sulfate	230	5.0	0.26	mg/L	EPA 300.0		5	09/08/16 09:25	09/11/16 16:46	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:45	6090121	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:45	6090121	KLH
Barium	0.0829	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:45	6090121	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:45	6090121	KLH
Boron	1.91	1.00	0.0642	mg/L	EPA 6020B		10	09/07/16 08:35	09/13/16 13:33	6090121	KLH
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 20:45	6090121	KLH
Calcium	135	25.0	1.55	mg/L	EPA 6020B		50	09/07/16 08:35	09/12/16 12:57	6090121	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:45	6090121	KLH
Cobalt	0.0023	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 20:45	6090121	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:45	6090121	KLH
Molybdenum	0.481	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:45	6090121	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:45	6090121	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:45	6090121	KLH
Lithium	0.0029	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 20:45	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 17:44	6090124	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 14, 2016

Report No.: AZI0077
Client ID: HGWC-9
Date/Time Sampled: 9/1/2016 9:32:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0077-03
Date/Time Received: 9/2/2016 12:40:00PM

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	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	160	1.2	0.07	mg/L	EPA 300.0		5	09/08/16 09:25	09/11/16 18:29	6090177	RLC
Fluoride	0.46	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 14:15	6090177	RLC
Sulfate	230	5.0	0.26	mg/L	EPA 300.0		5	09/08/16 09:25	09/11/16 18:29	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:50	6090121	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:50	6090121	KLH
Barium	0.130	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:50	6090121	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:50	6090121	KLH
Boron	2.00	1.00	0.0642	mg/L	EPA 6020B		10	09/07/16 08:35	09/13/16 13:39	6090121	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:50	6090121	KLH
Calcium	170	25.0	1.55	mg/L	EPA 6020B		50	09/07/16 08:35	09/12/16 13:02	6090121	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:50	6090121	KLH
Cobalt	0.0007	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 20:50	6090121	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:50	6090121	KLH
Molybdenum	0.0239	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:50	6090121	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:50	6090121	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:50	6090121	KLH
Lithium	0.0044	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 20:50	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 17:46	6090124	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 14, 2016

Report No.: AZI0077
Client ID: HGWC-10
Date/Time Sampled: 9/1/2016 10:18:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0077-04
Date/Time Received: 9/2/2016 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	769	25	10	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	77	1.2	0.07	mg/L	EPA 300.0		5	09/08/16 09:25	09/11/16 18:50	6090177	RLC
Fluoride	0.50	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 14:36	6090177	RLC
Sulfate	190	5.0	0.26	mg/L	EPA 300.0		5	09/08/16 09:25	09/11/16 18:50	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:56	6090121	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:56	6090121	KLH
Barium	0.0994	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:56	6090121	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:56	6090121	KLH
Boron	0.786	0.100	0.0064	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:56	6090121	KLH
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 20:56	6090121	KLH
Calcium	156	25.0	1.55	mg/L	EPA 6020B		50	09/07/16 08:35	09/12/16 13:08	6090121	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:56	6090121	KLH
Cobalt	0.0007	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 20:56	6090121	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:56	6090121	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:56	6090121	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:56	6090121	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:56	6090121	KLH
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 20:56	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 16:50	6090109	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 14, 2016

Report No.: AZI0077
Client ID: HGWC-11
Date/Time Sampled: 9/1/2016 10:48:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0077-05
Date/Time Received: 9/2/2016 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	656	25	10	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	58	1.2	0.07	mg/L	EPA 300.0		5	09/08/16 09:25	09/11/16 19:11	6090177	RLC
Fluoride	0.67	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 16:44	6090177	RLC
Sulfate	240	5.0	0.26	mg/L	EPA 300.0		5	09/08/16 09:25	09/11/16 19:11	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:02	6090121	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:02	6090121	KLH
Barium	0.0497	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:02	6090121	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:02	6090121	KLH
Boron	1.49	0.100	0.0064	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:02	6090121	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:02	6090121	KLH
Calcium	107	25.0	1.55	mg/L	EPA 6020B		50	09/07/16 08:35	09/12/16 13:14	6090121	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:02	6090121	KLH
Cobalt	0.0025	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:02	6090121	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:02	6090121	KLH
Molybdenum	0.0259	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:02	6090121	KLH
Selenium	0.0057	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:02	6090121	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:02	6090121	KLH
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:02	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 16:52	6090109	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 14, 2016

Report No.: AZI0077
Client ID: HGWC-12
Date/Time Sampled: 9/1/2016 11:34:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0077-06
Date/Time Received: 9/2/2016 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1480	25	10	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	140	2.5	0.14	mg/L	EPA 300.0		10	09/08/16 09:25	09/11/16 19:31	6090177	RLC
Fluoride	0.62	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 17:48	6090177	RLC
Sulfate	300	10	0.51	mg/L	EPA 300.0		10	09/08/16 09:25	09/11/16 19:31	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:08	6090121	KLH
Arsenic	0.0043	0.0050	0.0016	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:08	6090121	KLH
Barium	0.123	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:08	6090121	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:08	6090121	KLH
Boron	2.28	1.00	0.0642	mg/L	EPA 6020B		10	09/07/16 08:35	09/13/16 13:45	6090121	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:08	6090121	KLH
Calcium	179	25.0	1.55	mg/L	EPA 6020B		50	09/07/16 08:35	09/12/16 13:19	6090121	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:08	6090121	KLH
Cobalt	0.0016	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:08	6090121	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:08	6090121	KLH
Molybdenum	0.0474	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:08	6090121	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:08	6090121	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:08	6090121	KLH
Lithium	0.0118	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:08	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 16:54	6090109	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 14, 2016

Report No.: AZI0077
Client ID: HGWC-13
Date/Time Sampled: 9/1/2016 11:20:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0077-07
Date/Time Received: 9/2/2016 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	702	25	10	mg/L	SM 2540 C		1	09/07/16 21:25	09/07/16 21:25	6090136	JPT
Inorganic Anions											
Chloride	100	2.5	0.14	mg/L	EPA 300.0		10	09/08/16 09:25	09/11/16 19:52	6090177	RLC
Fluoride	0.74	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 18:09	6090177	RLC
Sulfate	190	10	0.51	mg/L	EPA 300.0		10	09/08/16 09:25	09/11/16 19:52	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:13	6090121	KLH
Arsenic	0.314	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:13	6090121	KLH
Barium	0.0700	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:13	6090121	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:13	6090121	KLH
Boron	2.30	1.00	0.0642	mg/L	EPA 6020B		10	09/07/16 08:35	09/13/16 13:50	6090121	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:13	6090121	KLH
Calcium	120	25.0	1.55	mg/L	EPA 6020B		50	09/07/16 08:35	09/12/16 13:25	6090121	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:13	6090121	KLH
Cobalt	0.0033	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:13	6090121	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:13	6090121	KLH
Molybdenum	0.0336	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:13	6090121	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:13	6090121	KLH
Thallium	0.0004	0.0010	0.0002	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:13	6090121	KLH
Lithium	0.0400	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:13	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 16:57	6090109	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 14, 2016

Report No.: AZI0077
Client ID: HGWC-14
Date/Time Sampled: 9/1/2016 12:07:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0077-08
Date/Time Received: 9/2/2016 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	3200	25	10	mg/L	SM 2540 C		1	09/07/16 21:25	09/07/16 21:25	6090136	JPT
Inorganic Anions											
Chloride	510	25	1.4	mg/L	EPA 300.0		100	09/08/16 09:25	09/11/16 20:13	6090177	RLC
Fluoride	0.08	0.30	0.02	mg/L	EPA 300.0	J	1	09/08/16 09:25	09/08/16 18:30	6090177	RLC
Sulfate	1300	100	5.1	mg/L	EPA 300.0		100	09/08/16 09:25	09/11/16 20:13	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:19	6090121	KLH
Arsenic	0.0056	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:19	6090121	KLH
Barium	0.0208	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:19	6090121	KLH
Beryllium	0.0005	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:19	6090121	KLH
Boron	12.3	1.00	0.0642	mg/L	EPA 6020B		10	09/07/16 08:35	09/13/16 13:56	6090121	KLH
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:19	6090121	KLH
Calcium	586	50.0	3.11	mg/L	EPA 6020B		100	09/07/16 08:35	09/12/16 13:31	6090121	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:19	6090121	KLH
Cobalt	0.0248	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:19	6090121	KLH
Lead	0.0016	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:19	6090121	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:19	6090121	KLH
Selenium	0.0137	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:19	6090121	KLH
Thallium	0.0003	0.0010	0.0002	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:19	6090121	KLH
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:19	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 16:59	6090109	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 14, 2016

Report No.: AZI0077
Client ID: HGWC-15
Date/Time Sampled: 9/1/2016 12:58:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0077-09
Date/Time Received: 9/2/2016 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1180	25	10	mg/L	SM 2540 C		1	09/07/16 21:25	09/07/16 21:25	6090136	JPT
Inorganic Anions											
Chloride	200	2.5	0.14	mg/L	EPA 300.0		10	09/08/16 09:25	09/11/16 20:33	6090177	RLC
Fluoride	0.22	0.30	0.02	mg/L	EPA 300.0	J	1	09/08/16 09:25	09/08/16 18:51	6090177	RLC
Sulfate	440	10	0.51	mg/L	EPA 300.0		10	09/08/16 09:25	09/11/16 20:33	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:25	6090121	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:25	6090121	KLH
Barium	0.0364	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:25	6090121	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:25	6090121	KLH
Boron	1.93	1.00	0.0642	mg/L	EPA 6020B		10	09/07/16 08:35	09/13/16 14:08	6090121	KLH
Cadmium	0.0017	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:25	6090121	KLH
Calcium	189	25.0	1.55	mg/L	EPA 6020B		50	09/07/16 08:35	09/12/16 13:37	6090121	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:25	6090121	KLH
Cobalt	0.0450	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:25	6090121	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:25	6090121	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:25	6090121	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:25	6090121	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:25	6090121	KLH
Lithium	0.0021	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:25	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 17:06	6090109	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 14, 2016

Report No.: AZI0077
Client ID: HGWC-16
Date/Time Sampled: 9/1/2016 12:50:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0077-10
Date/Time Received: 9/2/2016 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	625	25	10	mg/L	SM 2540 C		1	09/07/16 21:25	09/07/16 21:25	6090136	JPT
Inorganic Anions											
Chloride	34	0.25	0.01	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 19:12	6090177	RLC
Fluoride	0.42	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 19:12	6090177	RLC
Sulfate	220	10	0.51	mg/L	EPA 300.0		10	09/08/16 09:25	09/11/16 20:54	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:31	6090121	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:31	6090121	KLH
Barium	0.0934	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:31	6090121	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:31	6090121	KLH
Boron	1.31	0.100	0.0064	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:31	6090121	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:31	6090121	KLH
Calcium	141	25.0	1.55	mg/L	EPA 6020B		50	09/07/16 08:35	09/12/16 13:54	6090121	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:31	6090121	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:31	6090121	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:31	6090121	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:31	6090121	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:31	6090121	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:31	6090121	KLH
Lithium	0.0033	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:31	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 17:09	6090109	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 14, 2016

Report No.: AZI0077
Client ID: HGWC-17
Date/Time Sampled: 9/1/2016 2:45:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0077-11
Date/Time Received: 9/2/2016 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1060	25	10	mg/L	SM 2540 C		1	09/07/16 21:25	09/07/16 21:25	6090136	JPT
Inorganic Anions											
Chloride	95	2.5	0.14	mg/L	EPA 300.0		10	09/08/16 09:25	09/11/16 21:15	6090177	RLC
Fluoride	0.03	0.30	0.02	mg/L	EPA 300.0	J	1	09/08/16 09:25	09/08/16 19:55	6090177	RLC
Sulfate	430	10	0.51	mg/L	EPA 300.0		10	09/08/16 09:25	09/11/16 21:15	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:48	6090121	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:48	6090121	KLH
Barium	0.0227	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:48	6090121	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:48	6090121	KLH
Boron	5.76	1.00	0.0642	mg/L	EPA 6020B		10	09/07/16 08:35	09/13/16 14:13	6090121	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:48	6090121	KLH
Calcium	213	25.0	1.55	mg/L	EPA 6020B		50	09/07/16 08:35	09/12/16 14:00	6090121	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:48	6090121	KLH
Cobalt	0.0151	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:48	6090121	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:48	6090121	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:48	6090121	KLH
Selenium	0.0014	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:48	6090121	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:48	6090121	KLH
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:48	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 17:11	6090109	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 14, 2016

Report No.: AZI0077
Client ID: HGWC-18
Date/Time Sampled: 9/1/2016 2:32:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0077-12
Date/Time Received: 9/2/2016 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	2000	25	10	mg/L	SM 2540 C		1	09/07/16 21:25	09/07/16 21:25	6090136	JPT
Inorganic Anions											
Chloride	270	25	1.4	mg/L	EPA 300.0		100	09/08/16 09:25	09/11/16 21:35	6090177	RLC
Fluoride	0.49	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 21:41	6090177	RLC
Sulfate	890	100	5.1	mg/L	EPA 300.0		100	09/08/16 09:25	09/11/16 21:35	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:54	6090121	KLH
Arsenic	0.0073	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:54	6090121	KLH
Barium	0.0336	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:54	6090121	KLH
Beryllium	0.0034	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:54	6090121	KLH
Boron	8.80	1.00	0.0642	mg/L	EPA 6020B		10	09/07/16 08:35	09/13/16 14:19	6090121	KLH
Cadmium	0.0024	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:54	6090121	KLH
Calcium	379	25.0	1.55	mg/L	EPA 6020B		50	09/07/16 08:35	09/12/16 14:05	6090121	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:54	6090121	KLH
Cobalt	0.180	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:54	6090121	KLH
Lead	0.0014	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:54	6090121	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:54	6090121	KLH
Selenium	0.0347	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:54	6090121	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:54	6090121	KLH
Lithium	0.0158	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:54	6090121	KLH
Mercury	0.00006	0.00050	0.000041	mg/L	EPA 7470A	J	1	09/06/16 11:30	09/06/16 17:13	6090109	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 14, 2016

Report No.: AZI0077
Client ID: FB-1
Date/Time Sampled: 9/1/2016 9:21:00AM
Matrix: DI Water

Project: CCR Event
Lab Number ID: AZI0077-13
Date/Time Received: 9/2/2016 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	12	25	10	mg/L	SM 2540 C	J	1	09/07/16 21:25	09/07/16 21:25	6090136	JPT
Inorganic Anions											
Chloride	0.05	0.25	0.01	mg/L	EPA 300.0	J	1	09/08/16 09:25	09/08/16 22:02	6090177	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 22:02	6090177	RLC
Sulfate	0.15	1.0	0.05	mg/L	EPA 300.0	J	1	09/08/16 09:25	09/08/16 22:02	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:59	6090121	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:59	6090121	KLH
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:59	6090121	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:59	6090121	KLH
Boron	0.0423	0.100	0.0064	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:59	6090121	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:59	6090121	KLH
Calcium	0.0407	0.500	0.0311	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 21:59	6090121	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:59	6090121	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:59	6090121	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:59	6090121	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:59	6090121	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:59	6090121	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:59	6090121	KLH
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 21:59	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 17:16	6090109	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 14, 2016

Report No.: AZI0077
Client ID: FB-2
Date/Time Sampled: 9/1/2016 12:18:00PM
Matrix: DI Water

Project: CCR Event
Lab Number ID: AZI0077-14
Date/Time Received: 9/2/2016 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	32	25	10	mg/L	SM 2540 C		1	09/07/16 21:25	09/07/16 21:25	6090136	JPT
Inorganic Anions											
Chloride	0.07	0.25	0.01	mg/L	EPA 300.0	J	1	09/08/16 09:25	09/08/16 22:24	6090177	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 22:24	6090177	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	09/08/16 09:25	09/08/16 22:24	6090177	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 22:05	6090121	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 22:05	6090121	KLH
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 22:05	6090121	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 22:05	6090121	KLH
Boron	0.0221	0.100	0.0064	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 22:05	6090121	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 22:05	6090121	KLH
Calcium	0.0317	0.500	0.0311	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 22:05	6090121	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 22:05	6090121	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 22:05	6090121	KLH
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 22:05	6090121	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 22:05	6090121	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 22:05	6090121	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 22:05	6090121	KLH
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 22:05	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 17:18	6090109	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 14, 2016

Report No.: AZI0077
Client ID: FERB-1
Date/Time Sampled: 9/1/2016 2:00:00PM
Matrix: DI Water

Project: CCR Event
Lab Number ID: AZI0077-15
Date/Time Received: 9/2/2016 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	29	25	10	mg/L	SM 2540 C		1	09/07/16 21:25	09/07/16 21:25	6090136	JPT
Inorganic Anions											
Chloride	0.05	0.25	0.01	mg/L	EPA 300.0	J	1	09/08/16 19:50	09/10/16 18:14	6090212	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 19:50	09/10/16 18:14	6090212	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	09/08/16 19:50	09/10/16 18:14	6090212	RLC
Metals, Total											
Antimony	0.0014	0.0030	0.0008	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 18:35	6090169	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:35	6090169	CSW
Barium	0.0012	0.0100	0.0004	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 18:35	6090169	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:35	6090169	CSW
Boron	0.0105	0.100	0.0064	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 18:35	6090169	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:35	6090169	CSW
Calcium	0.0345	0.500	0.0311	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 18:35	6090169	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:35	6090169	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:35	6090169	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:35	6090169	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:35	6090169	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:35	6090169	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:35	6090169	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:35	6090169	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 17:21	6090109	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 14, 2016

Report No.: AZI0077
Client ID: FERB-2
Date/Time Sampled: 9/1/2016 3:28:00PM
Matrix: DI Water

Project: CCR Event
Lab Number ID: AZI0077-16
Date/Time Received: 9/2/2016 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	46	25	10	mg/L	SM 2540 C		1	09/07/16 21:25	09/07/16 21:25	6090136	JPT
Inorganic Anions											
Chloride	0.03	0.25	0.01	mg/L	EPA 300.0	J	1	09/08/16 19:50	09/10/16 18:34	6090212	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 19:50	09/10/16 18:34	6090212	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	09/08/16 19:50	09/10/16 18:34	6090212	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:41	6090169	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:41	6090169	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:41	6090169	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:41	6090169	CSW
Boron	ND	0.100	0.0064	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:41	6090169	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:41	6090169	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:41	6090169	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:41	6090169	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:41	6090169	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:41	6090169	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:41	6090169	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:41	6090169	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:41	6090169	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:41	6090169	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 17:23	6090109	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 14, 2016

Report No.: AZI0077
Client ID: Dup-1
Date/Time Sampled: 9/1/2016 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0077-17
Date/Time Received: 9/2/2016 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	481	25	10	mg/L	SM 2540 C		1	09/07/16 21:25	09/07/16 21:25	6090136	JPT
Inorganic Anions											
Chloride	50	1.2	0.07	mg/L	EPA 300.0		5	09/08/16 19:50	09/11/16 13:40	6090212	RLC
Fluoride	0.46	0.30	0.02	mg/L	EPA 300.0		1	09/08/16 19:50	09/10/16 18:55	6090212	RLC
Sulfate	100	5.0	0.26	mg/L	EPA 300.0		5	09/08/16 19:50	09/11/16 13:40	6090212	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:47	6090169	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:47	6090169	CSW
Barium	0.0759	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:47	6090169	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:47	6090169	CSW
Boron	0.888	0.100	0.0064	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:47	6090169	CSW
Cadmium	0.0004	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 18:47	6090169	CSW
Calcium	95.9	5.00	0.311	mg/L	EPA 6020B		10	09/08/16 10:40	09/12/16 17:32	6090169	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:47	6090169	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:47	6090169	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:47	6090169	CSW
Molybdenum	0.0266	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:47	6090169	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:47	6090169	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:47	6090169	CSW
Lithium	0.0024	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 18:47	6090169	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 17:25	6090109	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 14, 2016

Report No.: AZI0077
Client ID: Dup-2
Date/Time Sampled: 9/1/2016 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0077-18
Date/Time Received: 9/2/2016 12:40:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	3190	25	10	mg/L	SM 2540 C		1	09/07/16 21:25	09/07/16 21:25	6090136	JPT
Inorganic Anions											
Chloride	520	12	0.70	mg/L	EPA 300.0		50	09/08/16 19:50	09/12/16 04:28	6090212	RLC
Fluoride	0.07	0.30	0.02	mg/L	EPA 300.0	J	1	09/08/16 19:50	09/10/16 19:16	6090212	RLC
Sulfate	1400	50	2.6	mg/L	EPA 300.0		50	09/08/16 19:50	09/12/16 04:28	6090212	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:52	6090169	CSW
Arsenic	0.0055	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:52	6090169	CSW
Barium	0.0213	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:52	6090169	CSW
Beryllium	0.0005	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 18:52	6090169	CSW
Boron	12.4	1.00	0.0642	mg/L	EPA 6020B		10	09/08/16 10:40	09/14/16 11:46	6090169	CSW
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 18:52	6090169	CSW
Calcium	547	50.0	3.11	mg/L	EPA 6020B		100	09/08/16 10:40	09/12/16 16:18	6090169	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:52	6090169	CSW
Cobalt	0.0250	0.0100	0.0005	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:52	6090169	CSW
Lead	0.0017	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 18:52	6090169	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:52	6090169	CSW
Selenium	0.0117	0.0100	0.0010	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:52	6090169	CSW
Thallium	0.0003	0.0010	0.0002	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 18:52	6090169	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 18:52	6090169	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 17:28	6090109	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 14, 2016

Report No.: AZI0077

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090135 - SM 2540 C											
Blank (6090135-BLK1)						Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6090135-BS1)						Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	336	25	10	mg/L	400.00		84	84-108			
Duplicate (6090135-DUP1)		**Source: AZI0058-08**				Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	580	25	10	mg/L		539			7	10	
Duplicate (6090135-DUP2)		**Source: AZI0077-04**				Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	691	25	10	mg/L		769			11	10	QR-03
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	

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 14, 2016

Report No.: AZI0077

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
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							

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 14, 2016

Report No.: AZI0077

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											
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

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 14, 2016

Report No.: AZI0077

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 6090121 - EPA 3005A											
Blank (6090121-BLK1)						Prepared: 09/07/16 Analyzed: 09/08/16					
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							

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 14, 2016

Report No.: AZI0077

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090121 - EPA 3005A											
LCS (6090121-BS1)						Prepared: 09/07/16 Analyzed: 09/08/16					
Antimony	0.109	0.0030	0.0008	mg/L	0.10000		109	80-120			
Arsenic	0.0983	0.0050	0.0016	mg/L	0.10000		98	80-120			
Barium	0.0965	0.0100	0.0004	mg/L	0.10000		96	80-120			
Beryllium	0.0979	0.0030	0.00008	mg/L	0.10000		98	80-120			
Boron	0.990	0.100	0.0064	mg/L	1.0000		99	80-120			
Cadmium	0.100	0.0010	0.00007	mg/L	0.10000		100	80-120			
Calcium	0.942	0.500	0.0311	mg/L	1.0000		94	80-120			
Chromium	0.100	0.0100	0.0009	mg/L	0.10000		100	80-120			
Cobalt	0.0969	0.0100	0.0005	mg/L	0.10000		97	80-120			
Copper	0.0966	0.0050	0.0005	mg/L	0.10000		97	80-120			
Lead	0.0985	0.0050	0.0001	mg/L	0.10000		98	80-120			
Molybdenum	0.102	0.0100	0.0017	mg/L	0.10000		102	80-120			
Nickel	0.0957	0.0050	0.0006	mg/L	0.10000		96	80-120			
Selenium	0.0999	0.0100	0.0010	mg/L	0.10000		100	80-120			
Silver	0.0964	0.0050	0.0005	mg/L	0.10000		96	80-120			
Thallium	0.0983	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	0.103	0.0100	0.0021	mg/L	0.10000		103	80-120			
Lithium	0.0971	0.0500	0.0021	mg/L	0.10000		97	80-120			
Matrix Spike (6090121-MS1)		**Source: AZI0059-01**				Prepared: 09/07/16 Analyzed: 09/08/16					
Antimony	0.110	0.0030	0.0008	mg/L	0.10000	ND	110	75-125			
Arsenic	0.0984	0.0050	0.0016	mg/L	0.10000	ND	98	75-125			
Barium	0.112	0.0100	0.0004	mg/L	0.10000	0.0142	98	75-125			
Beryllium	0.0935	0.0030	0.00008	mg/L	0.10000	ND	93	75-125			
Boron	0.952	0.100	0.0064	mg/L	1.0000	ND	95	75-125			
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125			
Calcium	4.12	0.500	0.0311	mg/L	1.0000	3.30	82	75-125			
Chromium	0.117	0.0100	0.0009	mg/L	0.10000	0.0147	102	75-125			
Cobalt	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125			
Copper	0.0970	0.0050	0.0005	mg/L	0.10000	ND	97	75-125			
Lead	0.0973	0.0050	0.0001	mg/L	0.10000	0.0001	97	75-125			
Molybdenum	0.103	0.0100	0.0017	mg/L	0.10000	ND	103	75-125			
Nickel	0.103	0.0050	0.0006	mg/L	0.10000	0.0035	100	75-125			
Selenium	0.0978	0.0100	0.0010	mg/L	0.10000	ND	98	75-125			
Silver	0.0973	0.0050	0.0005	mg/L	0.10000	ND	97	75-125			
Thallium	0.0984	0.0010	0.0002	mg/L	0.10000	ND	98	75-125			
Vanadium	0.111	0.0100	0.0071	mg/L	0.10000	ND	111	75-125			
Zinc	0.109	0.0100	0.0021	mg/L	0.10000	0.0062	103	75-125			
Lithium	0.0988	0.0500	0.0021	mg/L	0.10000	0.0030	96	75-125			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 14, 2016

Report No.: AZI0077

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090121 - EPA 3005A											
Matrix Spike Dup (6090121-MSD1)		**Source: AZI0059-01**			Prepared: 09/07/16 Analyzed: 09/08/16						
Antimony	0.109	0.0030	0.0008	mg/L	0.10000	ND	109	75-125	0.06	20	
Arsenic	0.0992	0.0050	0.0016	mg/L	0.10000	ND	99	75-125	0.8	20	
Barium	0.113	0.0100	0.0004	mg/L	0.10000	0.0142	99	75-125	1	20	
Beryllium	0.0946	0.0030	0.00008	mg/L	0.10000	ND	95	75-125	1	20	
Boron	0.904	0.100	0.0064	mg/L	1.0000	ND	90	75-125	5	20	
Cadmium	0.104	0.0010	0.00007	mg/L	0.10000	ND	104	75-125	3	20	
Calcium	4.13	0.500	0.0311	mg/L	1.0000	3.30	82	75-125	0.2	20	
Chromium	0.110	0.0100	0.0009	mg/L	0.10000	0.0147	95	75-125	6	20	
Cobalt	0.0972	0.0100	0.0005	mg/L	0.10000	ND	97	75-125	4	20	
Copper	0.0961	0.0050	0.0005	mg/L	0.10000	ND	96	75-125	1	20	
Lead	0.0989	0.0050	0.0001	mg/L	0.10000	0.0001	99	75-125	2	20	
Molybdenum	0.103	0.0100	0.0017	mg/L	0.10000	ND	103	75-125	0.4	20	
Nickel	0.103	0.0050	0.0006	mg/L	0.10000	0.0035	100	75-125	0.4	20	
Selenium	0.101	0.0100	0.0010	mg/L	0.10000	ND	101	75-125	3	20	
Silver	0.0994	0.0050	0.0005	mg/L	0.10000	ND	99	75-125	2	20	
Thallium	0.0996	0.0010	0.0002	mg/L	0.10000	ND	100	75-125	1	20	
Vanadium	0.108	0.0100	0.0071	mg/L	0.10000	ND	108	75-125	3	20	
Zinc	0.108	0.0100	0.0021	mg/L	0.10000	0.0062	102	75-125	1	20	
Lithium	0.0985	0.0500	0.0021	mg/L	0.10000	0.0030	96	75-125	0.3	20	
Post Spike (6090121-PS1)		**Source: AZI0059-01**			Prepared: 09/07/16 Analyzed: 09/08/16						
Antimony	95.5			ug/L	100.00	0.627	95	80-120			
Arsenic	100			ug/L	100.00	0.162	100	80-120			
Barium	113			ug/L	100.00	14.2	98	80-120			
Beryllium	102			ug/L	100.00	0.0291	102	80-120			
Boron	956			ug/L	1000.0	5.64	95	80-120			
Cadmium	104			ug/L	100.00	0.0253	103	80-120			
Calcium	4230			ug/L	1000.0	3300	93	80-120			
Chromium	115			ug/L	100.00	14.7	101	80-120			
Cobalt	101			ug/L	100.00	0.235	101	80-120			
Copper	100			ug/L	100.00	0.237	100	80-120			
Lead	101			ug/L	100.00	0.130	101	80-120			
Molybdenum	103			ug/L	100.00	0.0836	102	80-120			
Nickel	103			ug/L	100.00	3.46	100	80-120			
Selenium	103			ug/L	100.00	0.602	103	80-120			
Silver	98.7			ug/L	100.00	0.0071	99	80-120			
Thallium	100			ug/L	100.00	0.0246	100	80-120			
Vanadium	109			ug/L	100.00	4.25	105	80-120			
Zinc	110			ug/L	100.00	6.19	104	80-120			
Lithium	103			ug/L	100.00	2.97	100	80-120			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 14, 2016

Report No.: AZI0077

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090124 - EPA 7470A											
Blank (6090124-BLK1)						Prepared & Analyzed: 09/07/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6090124-BS1)						Prepared & Analyzed: 09/07/16					
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3		96	80-120			
Matrix Spike (6090124-MS1)			**Source: AZI0058-10**			Prepared & Analyzed: 09/07/16					
Mercury	0.00225	0.00050	0.000041	mg/L	2.5000E-3	ND	90	75-125			
Matrix Spike Dup (6090124-MSD1)			**Source: AZI0058-10**			Prepared & Analyzed: 09/07/16					
Mercury	0.00222	0.00050	0.000041	mg/L	2.5000E-3	ND	89	75-125	1	20	
Post Spike (6090124-PS1)			**Source: AZI0058-10**			Prepared & Analyzed: 09/07/16					
Mercury	1.63			ug/L	1.6667	0.0124	97	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							

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 14, 2016

Report No.: AZI0077

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			

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 14, 2016

Report No.: AZI0077

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			

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 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

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 Hammond AP 1&2
PROJECT #: 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	
09/01/16	09:20	GW		X	HGWC-7	4	1	1	2	1
09/01/16	08:50	GW		X	HGWC-8	3	1	1	1	2
09/01/16	09:32	GW		X	HGWC-9	3	1	1	1	3
09/01/16	10:18	GW		X	HGWC-10	3	1	1	1	4
09/01/16	10:48	GW		X	HGWC-11	3	1	1	1	5
09/01/16	11:34	GW		X	HGWC-12	3	1	1	1	6
09/01/16	11:20	GW		X	HGWC-13	3	1	1	1	7
09/01/16	12:07	GW		X	HGWC-14	3	1	1	1	8
09/01/16	12:58	GW		X	HGWC-15	3	1	1	1	9
09/01/16	12:50	GW		X	HGWC-16	3	1	1	1	10
09/01/16	14:45	GW		X	HGWC-17	3	1	1	1	11
09/01/16	14:32	GW		X	HGWC-18	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: ERM-M.R.; M/T: EMSERVICES-T.W.
DATE/TIME: 09/01/16 16:00
RELINQUISHED BY:
DATE/TIME: 09/02/16 1240
RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:
RECEIVED BY / LAB: M Laliman
DATE/TIME: 09/02/16 1240
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 #: AZI0077
Entered into LIMS: MR
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: Joju Abraham
CC: Maria Padilla, Heath McCorkle
REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Hammond AP 1&2
PROJECT #: 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) P 3	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C) P 7	Radium 226 & 228 (SW-846 9315/9320) P 3	LAB ID NUMBER
09/01/16	09:21	W		X	FB-1			3	1	1	1	13
09/01/16	12:18	W		X	FB-2			3	1	1	1	14
09/01/16	14:00	W		X	FERB-1			3	1	1	1	15
09/01/16	15:28	W		X	FERB-2			3	1	1	1	16
09/01/16	-	GW		X	DUP-1			3	1	1	1	17
09/01/16	-	GW		X	DUP-2			3	1	1	1	18

CONTAINER TYPE / PRESERVATION

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

*MATRIX CODES:

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

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: ERM - M.R.; M.T.; EM SERVICES - T.W.
DATE/TIME: 09/01/16 16:00
RELINQUISHED BY:
DATE/TIME: 09/02/16 1240

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

RECEIVED BY LAB: M Lawman
DATE/TIME: 09/02/16 1240

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 #: AET0077
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 1:46:17PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 09/02/16 12:40

Work Order: AZI0077
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 18 **#Containers:** 56

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, 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: **AZJ0580**
October 31, 2016

Project: CCR Event

Project #:Plant Hammond

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

October 31, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWA-1	AZJ0580-01	Ground Water	10/19/16 11:15	10/20/16 11:40
HGWA-2	AZJ0580-02	Ground Water	10/19/16 13:25	10/20/16 11:40
HGWA-3	AZJ0580-03	Ground Water	10/19/16 15:10	10/20/16 11:40
HGWA-4	AZJ0580-04	Ground Water	10/19/16 15:22	10/20/16 11:40

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 31, 2016

Report No.: AZJ0580
Client ID: HGWA-1
Date/Time Sampled: 10/19/2016 11:15:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0580-01
Date/Time Received: 10/20/2016 11:40:00AM

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	10/24/16 12:53	10/24/16 12:53	6100605	JPT
Inorganic Anions											
Chloride	5.8	0.25	0.01	mg/L	EPA 300.0		1	10/21/16 11:14	10/22/16 22:08	6100567	RLC
Fluoride	0.10	0.30	0.02	mg/L	EPA 300.0	J	1	10/21/16 11:14	10/22/16 22:08	6100567	RLC
Sulfate	46	1.0	0.05	mg/L	EPA 300.0		1	10/21/16 11:14	10/22/16 22:08	6100567	RLC
Metals, Total											
Antimony	0.0014	0.0030	0.0008	mg/L	EPA 6020B	J	1	10/21/16 09:35	10/21/16 13:52	6100552	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 13:52	6100552	CSW
Barium	0.0293	0.0100	0.0004	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 13:52	6100552	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 13:52	6100552	CSW
Boron	0.0224	0.100	0.0064	mg/L	EPA 6020B	J	1	10/21/16 09:35	10/21/16 13:52	6100552	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 13:52	6100552	CSW
Calcium	99.2	25.0	1.55	mg/L	EPA 6020B		50	10/21/16 09:35	10/25/16 14:00	6100552	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 13:52	6100552	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 13:52	6100552	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 13:52	6100552	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 13:52	6100552	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 13:52	6100552	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 13:52	6100552	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 13:52	6100552	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/24/16 10:30	10/24/16 14:38	6100578	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

October 31, 2016

Report No.: AZJ0580
Client ID: HGWA-2
Date/Time Sampled: 10/19/2016 1:25:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0580-02
Date/Time Received: 10/20/2016 11:40:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	176	25	10	mg/L	SM 2540 C		1	10/24/16 12:53	10/24/16 12:53	6100605	JPT
Inorganic Anions											
Chloride	6.1	0.25	0.01	mg/L	EPA 300.0		1	10/21/16 11:14	10/23/16 00:12	6100567	RLC
Fluoride	0.04	0.30	0.02	mg/L	EPA 300.0	J	1	10/21/16 11:14	10/23/16 00:12	6100567	RLC
Sulfate	44	1.0	0.05	mg/L	EPA 300.0		1	10/21/16 11:14	10/23/16 00:12	6100567	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:23	6100552	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:23	6100552	CSW
Barium	0.111	0.0100	0.0004	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:23	6100552	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	10/21/16 09:35	10/21/16 15:23	6100552	CSW
Boron	0.0341	0.100	0.0064	mg/L	EPA 6020B	J	1	10/21/16 09:35	10/21/16 15:23	6100552	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:23	6100552	CSW
Calcium	21.7	2.50	0.155	mg/L	EPA 6020B		5	10/21/16 09:35	10/25/16 14:06	6100552	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:23	6100552	CSW
Cobalt	0.0201	0.0100	0.0005	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:23	6100552	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:23	6100552	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:23	6100552	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:23	6100552	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:23	6100552	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:23	6100552	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/24/16 10:30	10/24/16 14:41	6100578	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

October 31, 2016

Report No.: AZJ0580
Client ID: HGWA-3
Date/Time Sampled: 10/19/2016 3:10:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0580-03
Date/Time Received: 10/20/2016 11:40:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	357	25	10	mg/L	SM 2540 C		1	10/24/16 12:53	10/24/16 12:53	6100605	JPT
Inorganic Anions											
Chloride	6.5	0.25	0.01	mg/L	EPA 300.0		1	10/21/16 11:14	10/23/16 00:33	6100567	RLC
Fluoride	0.10	0.30	0.02	mg/L	EPA 300.0	J	1	10/21/16 11:14	10/23/16 00:33	6100567	RLC
Sulfate	43	1.0	0.05	mg/L	EPA 300.0		1	10/21/16 11:14	10/23/16 00:33	6100567	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:29	6100552	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:29	6100552	CSW
Barium	0.123	0.0100	0.0004	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:29	6100552	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:29	6100552	CSW
Boron	0.0085	0.100	0.0064	mg/L	EPA 6020B	J	1	10/21/16 09:35	10/21/16 15:29	6100552	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:29	6100552	CSW
Calcium	73.2	5.00	0.311	mg/L	EPA 6020B		10	10/21/16 09:35	10/25/16 14:11	6100552	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:29	6100552	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:29	6100552	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:29	6100552	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:29	6100552	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:29	6100552	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:29	6100552	CSW
Lithium	0.0030	0.0500	0.0021	mg/L	EPA 6020B	J	1	10/21/16 09:35	10/21/16 15:29	6100552	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/24/16 10:30	10/24/16 14:43	6100578	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

October 31, 2016

Report No.: AZJ0580
Client ID: HGWA-4
Date/Time Sampled: 10/19/2016 3:22:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0580-04
Date/Time Received: 10/20/2016 11:40:00AM

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	10/24/16 12:53	10/24/16 12:53	6100605	JPT
Inorganic Anions											
Chloride	4.6	0.25	0.01	mg/L	EPA 300.0		1	10/21/16 11:14	10/23/16 00:53	6100567	RLC
Fluoride	0.07	0.30	0.02	mg/L	EPA 300.0	J	1	10/21/16 11:14	10/23/16 00:53	6100567	RLC
Sulfate	11	1.0	0.05	mg/L	EPA 300.0		1	10/21/16 11:14	10/23/16 00:53	6100567	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:35	6100552	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:35	6100552	CSW
Barium	0.0332	0.0100	0.0004	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:35	6100552	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:35	6100552	CSW
Boron	0.0180	0.100	0.0064	mg/L	EPA 6020B	J	1	10/21/16 09:35	10/21/16 15:35	6100552	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:35	6100552	CSW
Calcium	89.7	5.00	0.311	mg/L	EPA 6020B		10	10/21/16 09:35	10/25/16 14:17	6100552	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:35	6100552	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:35	6100552	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:35	6100552	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:35	6100552	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:35	6100552	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/21/16 09:35	10/21/16 15:35	6100552	CSW
Lithium	0.0042	0.0500	0.0021	mg/L	EPA 6020B	J	1	10/21/16 09:35	10/21/16 15:35	6100552	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/24/16 10:30	10/24/16 14:45	6100578	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

October 31, 2016

Report No.: AZJ0580

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100605 - SM 2540 C											
Blank (6100605-BLK1)						Prepared & Analyzed: 10/24/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6100605-BS1)						Prepared & Analyzed: 10/24/16					
Total Dissolved Solids	397	25	10	mg/L	400.00		99	84-108			
Duplicate (6100605-DUP1)			**Source: AZJ0580-03**			Prepared & Analyzed: 10/24/16					
Total Dissolved Solids	296	25	10	mg/L		357			19	10	QR-03
Duplicate (6100605-DUP2)			**Source: AZJ0582-01**			Prepared & Analyzed: 10/24/16					
Total Dissolved Solids	238	25	10	mg/L		272			13	10	QR-03
Batch 6100666 - SM 2540 C											
Blank (6100666-BLK1)						Prepared & Analyzed: 10/26/16					
Total Dissolved Solids	ND	10	10	mg/L							
LCS (6100666-BS1)						Prepared & Analyzed: 10/26/16					
Total Dissolved Solids	400	10	10	mg/L	400.00		100	84-108			
Duplicate (6100666-DUP1)			**Source: AZJ0580-03RE1**			Prepared & Analyzed: 10/26/16					
Total Dissolved Solids	298	10	10	mg/L		282			6	10	
Duplicate (6100666-DUP2)			**Source: AZJ0582-01RE1**			Prepared & Analyzed: 10/26/16					
Total Dissolved Solids	281	10	10	mg/L		268			5	10	

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 31, 2016

Report No.: AZJ0580

Inorganic Anions - Quality Control

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

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 31, 2016

Report No.: AZJ0580

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100552 - EPA 3005A											
Blank (6100552-BLK1)						Prepared & Analyzed: 10/21/16					
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 (6100552-BS1)						Prepared & Analyzed: 10/21/16					
Antimony	0.103	0.0030	0.0008	mg/L	0.10000		103	80-120			
Arsenic	0.104	0.0050	0.0016	mg/L	0.10000		104	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	1.07	0.100	0.0064	mg/L	1.0000		107	80-120			
Cadmium	0.106	0.0010	0.00007	mg/L	0.10000		106	80-120			
Calcium	1.09	0.500	0.0311	mg/L	1.0000		109	80-120			
Chromium	0.107	0.0100	0.0009	mg/L	0.10000		107	80-120			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000		102	80-120			
Copper	0.101	0.0050	0.0005	mg/L	0.10000		101	80-120			
Lead	0.103	0.0050	0.0001	mg/L	0.10000		103	80-120			
Molybdenum	0.104	0.0100	0.0017	mg/L	0.10000		104	80-120			
Nickel	0.103	0.0050	0.0006	mg/L	0.10000		103	80-120			
Selenium	0.104	0.0100	0.0010	mg/L	0.10000		104	80-120			
Silver	0.108	0.0050	0.0005	mg/L	0.10000		108	80-120			
Thallium	0.101	0.0010	0.0002	mg/L	0.10000		101	80-120			
Vanadium	0.108	0.0100	0.0071	mg/L	0.10000		108	80-120			
Zinc	0.106	0.0100	0.0021	mg/L	0.10000		106	80-120			
Lithium	0.106	0.0500	0.0021	mg/L	0.10000		106	80-120			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 31, 2016

Report No.: AZJ0580

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100552 - EPA 3005A											
Matrix Spike (6100552-MS1)		**Source: AZJ0580-01**			Prepared & Analyzed: 10/21/16						
Antimony	0.100	0.0030	0.0008	mg/L	0.10000	0.0014	99	75-125			
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000	ND	102	75-125			
Barium	0.127	0.0100	0.0004	mg/L	0.10000	0.0293	97	75-125			
Beryllium	0.0950	0.0030	0.00008	mg/L	0.10000	ND	95	75-125			
Boron	1.01	0.100	0.0064	mg/L	1.0000	0.0224	99	75-125			
Cadmium	0.0981	0.0010	0.00007	mg/L	0.10000	ND	98	75-125			
Calcium	106	25.0	1.55	mg/L	1.0000	99.2	694	75-125			QM-02
Chromium	0.103	0.0100	0.0009	mg/L	0.10000	ND	103	75-125			
Cobalt	0.0992	0.0100	0.0005	mg/L	0.10000	ND	99	75-125			
Copper	0.0972	0.0050	0.0005	mg/L	0.10000	ND	97	75-125			
Lead	0.0971	0.0050	0.0001	mg/L	0.10000	ND	97	75-125			
Molybdenum	0.102	0.0100	0.0017	mg/L	0.10000	ND	102	75-125			
Nickel	0.0995	0.0050	0.0006	mg/L	0.10000	ND	99	75-125			
Selenium	0.101	0.0100	0.0010	mg/L	0.10000	ND	101	75-125			
Silver	0.0997	0.0050	0.0005	mg/L	0.10000	ND	100	75-125			
Thallium	0.0988	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	0.105	0.0100	0.0021	mg/L	0.10000	ND	105	75-125			
Lithium	0.0943	0.0500	0.0021	mg/L	0.10000	ND	94	75-125			
Matrix Spike Dup (6100552-MSD1)		**Source: AZJ0580-01**			Prepared & Analyzed: 10/21/16						
Antimony	0.103	0.0030	0.0008	mg/L	0.10000	0.0014	102	75-125	2	20	
Arsenic	0.105	0.0050	0.0016	mg/L	0.10000	ND	105	75-125	3	20	
Barium	0.127	0.0100	0.0004	mg/L	0.10000	0.0293	97	75-125	0.002	20	
Beryllium	0.0979	0.0030	0.00008	mg/L	0.10000	ND	98	75-125	3	20	
Boron	1.03	0.100	0.0064	mg/L	1.0000	0.0224	101	75-125	2	20	
Cadmium	0.0983	0.0010	0.00007	mg/L	0.10000	ND	98	75-125	0.2	20	
Calcium	94.2	25.0	1.55	mg/L	1.0000	99.2	NR	75-125	12	20	QM-02
Chromium	0.102	0.0100	0.0009	mg/L	0.10000	ND	102	75-125	0.3	20	
Cobalt	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125	1	20	
Copper	0.0965	0.0050	0.0005	mg/L	0.10000	ND	97	75-125	0.7	20	
Lead	0.0985	0.0050	0.0001	mg/L	0.10000	ND	99	75-125	1	20	
Molybdenum	0.106	0.0100	0.0017	mg/L	0.10000	ND	106	75-125	4	20	
Nickel	0.0992	0.0050	0.0006	mg/L	0.10000	ND	99	75-125	0.2	20	
Selenium	0.102	0.0100	0.0010	mg/L	0.10000	ND	102	75-125	0.1	20	
Silver	0.102	0.0050	0.0005	mg/L	0.10000	ND	102	75-125	2	20	
Thallium	0.0981	0.0010	0.0002	mg/L	0.10000	ND	98	75-125	0.8	20	
Vanadium	0.106	0.0100	0.0071	mg/L	0.10000	ND	106	75-125	1	20	
Zinc	0.105	0.0100	0.0021	mg/L	0.10000	ND	105	75-125	0.03	20	
Lithium	0.0958	0.0500	0.0021	mg/L	0.10000	ND	96	75-125	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

October 31, 2016

Report No.: AZJ0580

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100552 - EPA 3005A											
Post Spike (6100552-PS1)		**Source: AZJ0580-01**				Prepared & Analyzed: 10/21/16					
Antimony	88.2			ug/L	100.00	1.39	87	80-120			
Arsenic	103			ug/L	100.00	0.604	103	80-120			
Barium	123			ug/L	100.00	29.3	94	80-120			
Beryllium	98.3			ug/L	100.00	0.0275	98	80-120			
Boron	1040			ug/L	1000.0	22.4	102	80-120			
Cadmium	98.1			ug/L	100.00	-0.0185	98	80-120			
Calcium	99300			ug/L	1000.0	99200	14	80-120			QM-02
Chromium	101			ug/L	100.00	0.158	101	80-120			
Cobalt	99.2			ug/L	100.00	0.285	99	80-120			
Copper	95.0			ug/L	100.00	0.0671	95	80-120			
Lead	97.5			ug/L	100.00	0.0318	97	80-120			
Molybdenum	98.8			ug/L	100.00	0.295	99	80-120			
Nickel	99.9			ug/L	100.00	0.122	100	80-120			
Selenium	105			ug/L	100.00	0.192	105	80-120			
Silver	97.3			ug/L	100.00	0.0256	97	80-120			
Thallium	99.8			ug/L	100.00	0.106	100	80-120			
Vanadium	108			ug/L	100.00	0.275	107	80-120			
Zinc	106			ug/L	100.00	0.602	105	80-120			
Lithium	97.7			ug/L	100.00	1.07	97	80-120			
Batch 6100578 - EPA 7470A											
Blank (6100578-BLK1)						Prepared & Analyzed: 10/24/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6100578-BS1)						Prepared & Analyzed: 10/24/16					
Mercury	0.00249	0.00050	0.000041	mg/L	2.5000E-3		100	80-120			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 31, 2016

Report No.: AZJ0580

Metals, Total - Quality Control

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

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 31, 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-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.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 31, 2016

Report Notes

The unpreserved 1 qt squat collected on 10/19/16 at 1522 was labeled HGWA-22 instead of HGWA-4 as listed on the COC. The COC was used for login purposes. CFH

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 Hammond - AP 1&2
PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Part 257 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
10/19/16	11:15	GW		x	HGWA-1	3	1	1	1	1	
10/19/16	13:25	GW		x	HGWA-2	3	1	1	1	2	
10/19/16	15:10	GW		x	HGWA-3	4	1	1	2	3	Extra Radium volume collected for Lab QA/QC
10/19/16	15:22	GW		x	HGWA-4	3	1	1	1	4	Unpres. Squat Labeled HGWA-22 TH 10/20/16

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: A.Shoredits AS M.Rogers MR
DATE/TIME: 10/19/16 1522
RELINQUISHED BY: Jill Vinod (ERM)
DATE/TIME: 10/20/16 0600
RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:
RECEIVED BY LAB:
DATE/TIME: 10/20/16 1140
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS
pH checked: Yes No NA
Ice: Yes No NA
Temperature: 2°C 2°C
Custody Seal: Intact Broken Not Present
# of Coolers: 4
Cooler ID:

FOR LAB USE ONLY
LAB #: AZJ0580
Entered into LIMS: CH
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: 10/31/2016 5:23:27PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 10/20/16 11:40

Work Order: AZJ0580
Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 4 **#Containers:** 13

Minimum Temp(C): 2.0 **Maximum Temp(C):** 2.0 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	NO
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 unpreserved 1 qt squat collected on 10/19/16 at 1522 was labeled HGWA-22 instead of HGWA-4 as listed on the COC. The COC was used for login purposes. CFH

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

November 23, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Hammond
Pace Project No.: 30200042

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on October 21, 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 Hammond
Pace Project No.: 30200042

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 Hammond
Pace Project No.: 30200042

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30200042001	**HGWA-1**	Water	10/19/16 11:15	10/21/16 10:40
30200042002	**HGWA-2**	Water	10/19/16 13:25	10/21/16 10:40
30200042003	**HGWA-3**	Water	10/19/16 15:10	10/21/16 10:40
30200042004	**HGWA-4**	Water	10/19/16 15:22	10/21/16 10:40

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: Plant Hammond
Pace Project No.: 30200042

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30200042001	**HGWA-1**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200042002	**HGWA-2**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200042003	**HGWA-3**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200042004	**HGWA-4**	EPA 9315	JC2	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 Hammond
Pace Project No.: 30200042

Sample: HGWA-1 **Lab ID: 30200042001** Collected: 10/19/16 11:15 Received: 10/21/16 10:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0805 ± 0.118 (0.252) C:86% T:NA**	pCi/L	11/05/16 18:42	13982-63-3	
Radium-228	EPA 9320	**0.132 ± 0.587 (1.26) C:58% T:78%**	pCi/L	11/19/16 19:44	15262-20-1	
Total Radium	Total Radium Calculation	**0.213 ± 0.705 (1.51)**	pCi/L	11/21/16 15:20	7440-14-4	

Sample: HGWA-2 **Lab ID: 30200042002** Collected: 10/19/16 13:25 Received: 10/21/16 10:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.284 ± 0.165 (0.214) C:91% T:NA**	pCi/L	11/05/16 18:42	13982-63-3	
Radium-228	EPA 9320	**0.828 ± 0.564 (1.06) C:66% T:75%**	pCi/L	11/19/16 19:44	15262-20-1	
Total Radium	Total Radium Calculation	**1.11 ± 0.729 (1.27)**	pCi/L	11/21/16 15:20	7440-14-4	

Sample: HGWA-3 **Lab ID: 30200042003** Collected: 10/19/16 15:10 Received: 10/21/16 10:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.107 ± 0.118 (0.222) C:89% T:NA**	pCi/L	11/05/16 18:42	13982-63-3	
Radium-228	EPA 9320	**0.519 ± 0.455 (0.893) C:75% T:83%**	pCi/L	11/19/16 19:47	15262-20-1	
Total Radium	Total Radium Calculation	**0.626 ± 0.573 (1.12)**	pCi/L	11/21/16 15:20	7440-14-4	

Sample: HGWA-4 **Lab ID: 30200042004** Collected: 10/19/16 15:22 Received: 10/21/16 10:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.154 ± 0.137 (0.243) C:92% T:NA**	pCi/L	11/05/16 18:42	13982-63-3	
Radium-228	EPA 9320	**2.19 ± 0.776 (1.15) C:56% T:86%**	pCi/L	11/19/16 19:47	15262-20-1	
Total Radium	Total Radium Calculation	**2.34 ± 0.913 (1.39)**	pCi/L	11/21/16 15:20	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 Hammond
Pace Project No.: 30200042

QC Batch: 238844 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30200042001, 30200042002, 30200042003, 30200042004

METHOD BLANK: 1173703 Matrix: Water
Associated Lab Samples: 30200042001, 30200042002, 30200042003, 30200042004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0306 ± 0.0501 (0.101) C:95% T:NA	pCi/L	11/04/16 23:09	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30200042

QC Batch: 239880 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30200042003, 30200042004

METHOD BLANK: 1178547 Matrix: Water
Associated Lab Samples: 30200042003, 30200042004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.935 ± 0.482 (0.855) C:73% T:95%	pCi/L	11/19/16 19:47	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30200042

QC Batch: 239879 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30200042001, 30200042002

METHOD BLANK: 1178545 Matrix: Water
Associated Lab Samples: 30200042001, 30200042002

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

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: Plant Hammond
Pace Project No.: 30200042

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#:30200042

Pace Analytical
www.pacelabs.com

Chain of Custody

Workorder: AZJ0580 Workorder Name: Plant Hammond Owner Received Date: Results Requested By: 11/21/2016

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

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	HGWA-1	G	10/19/2016 11:15	AZJ0580-01	GW	1	X	001
2	HGWA-2	G	10/19/2016 13:25	AZJ0580-02	GW	1	X	002
3	HGWA-3	G	10/19/2016 15:10	AZJ0580-03	GW	2	X	003
4	HWGA-4	G	10/19/2016 15:22	AZJ0580-04	GW	1	X	004
5								
6								
7								
8								
9								
10								

Transfers	Released By	Date/Time	Reveived By	Date/Time	Comments
1	Charles [illegible]	10/20/16 1730	Karen E. [illegible]	10-21-16 1040	
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.

3020004Z

CHAIN OF CUSTODY RECORD

Pace Analytical

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

PAGE: 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 Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

	Container type	P	P	P
	Preservation	3	7	3
		Metals Part 257, App. III & IV (EPA 6020/7470)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Part 257, 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
10/19/16	11:15	GW		x	HGWA-1	3	1	1	1	1	001
10/19/16	13:25	GW		x	HGWA-2	3	1	1	1	2	002
10/19/16	15:10	GW		x	HGWA-3	4	1	1	2	3	Extra Radium volume collected for Lab QA/QC 003
10/19/16	15:22	GW		x	HGWA-4	3	1	1	1	4	Unpres. Samt labeled HGWA-22 TAH 10/20/16 004

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: A.Shoredts AS, M.Rogers MR | DATE/TIME: 10/19/16 1522

RELINQUISHED BY: Will Vigo (ERM) | DATE/TIME: 10/20/16 0600

RECEIVED BY: | DATE/TIME:

RELINQUISHED BY: | DATE/TIME:

RECEIVED BY LAB: [signature] | DATE/TIME: 10/20/16 1140

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

pH checked: Yes No NA | Ice: Yes No NA | Temp: 3.0 2.1

FOR LAB USE ONLY
LAB #: AZJ0580
Entered into LIMS: CH
Tracking #:

2016 10 19 Hammond AP 1&2 COC.xlsx

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

30200042

Client Name: Pace Atlanta Project #

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

Tracking #: 6812 5099 9526

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 10-22-16

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. 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: 10-22-16

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:	11/16/2016
Worklist:	32404
Matrix:	DW

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

Laboratory Control Sample Assessment	LCSD (Y or N)? LCS32404	N LCSD32404
Count Date:	11/19/2016	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	26.037	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.803	
Target Conc. (pCi/L, g, F):	6.489	
Uncertainty (Calculated):	0.467	
Result (pCi/L, g, F):	6.876	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.889	
Numerical Performance Indicator:	0.75	
Percent Recovery:	105.96%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

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.:	30199878004	Enter Duplicate
Duplicate Sample I.D.	30199878004DUP	sample IDs if
Sample Result (pCi/L, g, F):	1.237	other than
Sample Result Counting Uncertainty (pCi/L, g, F):	0.569	LCS/LCSD in
Sample Duplicate Result (pCi/L, g, F):	1.514	the space below.
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.603	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.655	30199878004
Duplicate RPD:	20.15%	30199878004DUP
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:	JLW
Date:	11/16/2016
Worklist:	32405
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1178547
MB concentration:	0.935
M/B Counting Uncertainty:	0.452
MB MDC:	0.855
MB Numerical Performance Indicator:	4.05
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)? LCS32405	N LCSD32405
Count Date:	11/19/2016	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	26.037	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.807	
Target Conc. (pCi/L, g, F):	6.450	
Uncertainty (Calculated):	0.464	
Result (pCi/L, g, F):	7.929	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.807	
Numerical Performance Indicator:	3.11	
Percent Recovery:	122.93%	
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.:	30200226001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30200226001DUP	
Sample Result (pCi/L, g, F):	1.006	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.544	
Sample Duplicate Result (pCi/L, g, F):	0.294	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.439	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	1.996	30200226001
Duplicate RPD:	109.60%	30200226001DUP
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:
*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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	JC2
Date:	11/3/2016
Worklist:	32222
Matrix:	DW

Method Blank Assessment

MB Sample ID	1173703
MB concentration:	0.031
M/B Counting Uncertainty:	0.050
MB MDC:	0.101
MB Numerical Performance Indicator:	1.20
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS32222	LCSD32222
Count Date:	11/5/2016	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.675	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.501	
Target Conc. (pCi/L, g, F):	8.914	
Uncertainty (Calculated):	0.419	
Result (pCi/L, g, F):	8.283	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.789	
Numerical Performance Indicator:	-1.38	
Percent Recovery:	92.92%	
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.:	30200041003	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30200041003DUP	
Sample Result (pCi/L, g, F):	0.058	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.063	
Sample Duplicate Result (pCi/L, g, F):	0.490	
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:	-3.182	30200041003
Duplicate RPD:	157.41%	30200041003DUP
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: **AZJ0621**
October 28, 2016

Project: CCR Event

Project #:Plant Hammond

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

October 28, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWA-5	AZJ0621-01	Ground Water	10/20/16 11:07	10/21/16 11:48
HGWA-6	AZJ0621-02	Ground Water	10/20/16 13:08	10/21/16 11:48
HGWC-7	AZJ0621-03	Ground Water	10/20/16 12:30	10/21/16 11:48
HGWC-8	AZJ0621-04	Ground Water	10/20/16 13:55	10/21/16 11:48
HGWC-9	AZJ0621-05	Ground Water	10/20/16 15:50	10/21/16 11:48
Dup-1	AZJ0621-06	Ground Water	10/20/16 00:00	10/21/16 11:48

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 28, 2016

Report No.: AZJ0621
Client ID: HGWA-5
Date/Time Sampled: 10/20/2016 11:07:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0621-01
Date/Time Received: 10/21/2016 11:48:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	99	25	10	mg/L	SM 2540 C		1	10/25/16 12:55	10/25/16 12:55	6100642	JPT
Inorganic Anions											
Chloride	2.2	0.25	0.01	mg/L	EPA 300.0		1	10/25/16 12:27	10/25/16 18:21	6100645	RNB
Fluoride	0.10	0.30	0.02	mg/L	EPA 300.0	J	1	10/25/16 12:27	10/25/16 18:21	6100645	RNB
Sulfate	19	1.0	0.05	mg/L	EPA 300.0		1	10/25/16 12:27	10/25/16 18:21	6100645	RNB
Metals, Total											
Antimony	0.0023	0.0030	0.0008	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 13:06	6100671	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:06	6100671	CSW
Barium	0.0539	0.0100	0.0004	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:06	6100671	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:06	6100671	CSW
Boron	0.0135	0.100	0.0064	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 13:06	6100671	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:06	6100671	CSW
Calcium	26.7	2.50	0.155	mg/L	EPA 6020B		5	10/26/16 09:00	10/27/16 13:32	6100671	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:06	6100671	CSW
Cobalt	0.0008	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 13:06	6100671	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 13:06	6100671	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:06	6100671	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:06	6100671	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:06	6100671	CSW
Lithium	0.0031	0.0500	0.0021	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 13:06	6100671	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/24/16 10:35	10/24/16 15:36	6100579	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

October 28, 2016

Report No.: AZJ0621
Client ID: HGWA-6
Date/Time Sampled: 10/20/2016 1:08:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0621-02
Date/Time Received: 10/21/2016 11:48:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	225	25	10	mg/L	SM 2540 C		1	10/25/16 12:55	10/25/16 12:55	6100642	JPT
Inorganic Anions											
Chloride	1.6	0.25	0.01	mg/L	EPA 300.0		1	10/25/16 12:27	10/25/16 19:25	6100645	RNB
Fluoride	0.06	0.30	0.02	mg/L	EPA 300.0	J	1	10/25/16 12:27	10/25/16 19:25	6100645	RNB
Sulfate	36	1.0	0.05	mg/L	EPA 300.0		1	10/25/16 12:27	10/25/16 19:25	6100645	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:11	6100671	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:11	6100671	CSW
Barium	0.157	0.0100	0.0004	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:11	6100671	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:11	6100671	CSW
Boron	0.0197	0.100	0.0064	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 13:11	6100671	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:11	6100671	CSW
Calcium	50.7	5.00	0.311	mg/L	EPA 6020B		10	10/26/16 09:00	10/27/16 15:27	6100671	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:11	6100671	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:11	6100671	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:11	6100671	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:11	6100671	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:11	6100671	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:11	6100671	CSW
Lithium	0.0105	0.0500	0.0021	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 13:11	6100671	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/24/16 10:35	10/24/16 15:39	6100579	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

October 28, 2016

Report No.: AZJ0621
Client ID: HGWC-7
Date/Time Sampled: 10/20/2016 12:30:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0621-03
Date/Time Received: 10/21/2016 11:48:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	393	25	10	mg/L	SM 2540 C		1	10/25/16 12:55	10/25/16 12:55	6100642	JPT
Inorganic Anions											
Chloride	49	0.25	0.01	mg/L	EPA 300.0		1	10/25/16 12:27	10/25/16 20:07	6100645	RNB
Fluoride	0.40	0.30	0.02	mg/L	EPA 300.0		1	10/25/16 12:27	10/25/16 20:07	6100645	RNB
Sulfate	110	4.0	0.20	mg/L	EPA 300.0		4	10/25/16 12:27	10/25/16 19:46	6100645	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:17	6100671	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:17	6100671	CSW
Barium	0.0720	0.0100	0.0004	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:17	6100671	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:17	6100671	CSW
Boron	0.936	0.100	0.0064	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:17	6100671	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:17	6100671	CSW
Calcium	96.9	25.0	1.55	mg/L	EPA 6020B		50	10/26/16 09:00	10/27/16 13:43	6100671	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:17	6100671	CSW
Cobalt	0.0008	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 13:17	6100671	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:17	6100671	CSW
Molybdenum	0.0360	0.0100	0.0017	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:17	6100671	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:17	6100671	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:17	6100671	CSW
Lithium	0.0021	0.0500	0.0021	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 13:17	6100671	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/24/16 10:35	10/24/16 15:41	6100579	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

October 28, 2016

Report No.: AZJ0621
Client ID: HGWC-8
Date/Time Sampled: 10/20/2016 1:55:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0621-04
Date/Time Received: 10/21/2016 11:48:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	644	25	10	mg/L	SM 2540 C		1	10/25/16 12:55	10/25/16 12:55	6100642	JPT
Inorganic Anions											
Chloride	110	2.5	0.14	mg/L	EPA 300.0		10	10/25/16 12:27	10/26/16 22:50	6100645	RNB
Fluoride	0.56	0.30	0.02	mg/L	EPA 300.0		1	10/25/16 12:27	10/25/16 20:50	6100645	RNB
Sulfate	240	10	0.51	mg/L	EPA 300.0		10	10/25/16 12:27	10/26/16 22:50	6100645	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:23	6100671	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:23	6100671	CSW
Barium	0.0811	0.0100	0.0004	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:23	6100671	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:23	6100671	CSW
Boron	1.72	0.100	0.0064	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:23	6100671	CSW
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 13:23	6100671	CSW
Calcium	134	25.0	1.55	mg/L	EPA 6020B		50	10/26/16 09:00	10/27/16 13:49	6100671	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:23	6100671	CSW
Cobalt	0.0020	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 13:23	6100671	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:23	6100671	CSW
Molybdenum	0.472	0.0100	0.0017	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:23	6100671	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:23	6100671	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:23	6100671	CSW
Lithium	0.0027	0.0500	0.0021	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 13:23	6100671	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/24/16 10:35	10/24/16 15:43	6100579	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

October 28, 2016

Report No.: AZJ0621
Client ID: HGWC-9
Date/Time Sampled: 10/20/2016 3:50:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0621-05
Date/Time Received: 10/21/2016 11:48:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	642	25	10	mg/L	SM 2540 C		1	10/25/16 12:55	10/25/16 12:55	6100642	JPT
Inorganic Anions											
Chloride	110	2.5	0.14	mg/L	EPA 300.0		10	10/25/16 12:27	10/26/16 23:11	6100645	RNB
Fluoride	0.56	0.30	0.02	mg/L	EPA 300.0		1	10/25/16 12:27	10/25/16 21:33	6100645	RNB
Sulfate	240	10	0.51	mg/L	EPA 300.0		10	10/25/16 12:27	10/26/16 23:11	6100645	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:29	6100671	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:29	6100671	CSW
Barium	0.0806	0.0100	0.0004	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:29	6100671	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:29	6100671	CSW
Boron	1.68	0.100	0.0064	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:29	6100671	CSW
Cadmium	0.0002	0.0010	0.00007	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 13:29	6100671	CSW
Calcium	133	25.0	1.55	mg/L	EPA 6020B		50	10/26/16 09:00	10/27/16 13:55	6100671	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:29	6100671	CSW
Cobalt	0.0020	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 13:29	6100671	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:29	6100671	CSW
Molybdenum	0.477	0.0100	0.0017	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:29	6100671	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:29	6100671	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:29	6100671	CSW
Lithium	0.0027	0.0500	0.0021	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 13:29	6100671	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/24/16 10:35	10/24/16 15:46	6100579	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

October 28, 2016

Report No.: AZJ0621
Client ID: Dup-1
Date/Time Sampled: 10/20/2016 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0621-06
Date/Time Received: 10/21/2016 11:48:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	772	25	10	mg/L	SM 2540 C		1	10/25/16 12:55	10/25/16 12:55	6100642	JPT
Inorganic Anions											
Chloride	160	2.5	0.14	mg/L	EPA 300.0		10	10/25/16 12:27	10/26/16 23:32	6100645	RNB
Fluoride	0.11	0.30	0.02	mg/L	EPA 300.0	J	1	10/25/16 12:27	10/25/16 23:44	6100645	RNB
Sulfate	240	10	0.51	mg/L	EPA 300.0		10	10/25/16 12:27	10/26/16 23:32	6100645	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:46	6100671	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:46	6100671	CSW
Barium	0.126	0.0100	0.0004	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:46	6100671	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:46	6100671	CSW
Boron	1.73	0.100	0.0064	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:46	6100671	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:46	6100671	CSW
Calcium	175	25.0	1.55	mg/L	EPA 6020B		50	10/26/16 09:00	10/27/16 14:01	6100671	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:46	6100671	CSW
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 13:46	6100671	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:46	6100671	CSW
Molybdenum	0.0227	0.0100	0.0017	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:46	6100671	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:46	6100671	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 13:46	6100671	CSW
Lithium	0.0043	0.0500	0.0021	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 13:46	6100671	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/24/16 10:35	10/24/16 15:48	6100579	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

October 28, 2016

Report No.: AZJ0621

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100642 - SM 2540 C											
Blank (6100642-BLK1)						Prepared & Analyzed: 10/25/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6100642-BS1)						Prepared & Analyzed: 10/25/16					
Total Dissolved Solids	388	25	10	mg/L	400.00		97	84-108			
Duplicate (6100642-DUP1)		**Source: AZJ0621-05**				Prepared & Analyzed: 10/25/16					
Total Dissolved Solids	646	25	10	mg/L		642			0.6	10	
Duplicate (6100642-DUP2)		**Source: AZJ0623-04**				Prepared & Analyzed: 10/25/16					
Total Dissolved Solids	323	25	10	mg/L		305			6	10	

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 28, 2016

Report No.: AZJ0621

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100645 - EPA 300.0											
Blank (6100645-BLK1)						Prepared & Analyzed: 10/25/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.10	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
LCS (6100645-BS1)						Prepared & Analyzed: 10/25/16					
Chloride	9.99	1.0	0.01	mg/L	10.010		100	90-110			
Fluoride	10.4	0.10	0.05	mg/L	10.020		104	90-110			
Sulfate	10.2	5.0	0.05	mg/L	10.020		102	90-110			
Matrix Spike (6100645-MS1)		**Source: AZJ0621-01**				Prepared & Analyzed: 10/25/16					
Chloride	10.7	1.0	0.01	mg/L	10.010	2.20	85	90-110			QM-02
Fluoride	8.83	0.10	0.02	mg/L	10.020	0.10	87	90-110			QM-02
Sulfate	26.0	5.0	0.05	mg/L	10.020	19.1	69	90-110			QM-02
Matrix Spike Dup (6100645-MSD1)		**Source: AZJ0621-01**				Prepared & Analyzed: 10/25/16					
Chloride	11.7	1.0	0.01	mg/L	10.010	2.20	95	90-110	8	15	
Fluoride	9.84	0.10	0.02	mg/L	10.020	0.10	97	90-110	11	15	
Sulfate	26.7	5.0	0.05	mg/L	10.020	19.1	77	90-110	3	15	QM-02

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 28, 2016

Report No.: AZJ0621

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100579 - EPA 7470A											
Blank (6100579-BLK1)						Prepared & Analyzed: 10/24/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6100579-BS1)						Prepared & Analyzed: 10/24/16					
Mercury	0.00242	0.00050	0.000041	mg/L	2.5000E-3		97	80-120			
Matrix Spike (6100579-MS1)		**Source: AZJ0582-01**				Prepared & Analyzed: 10/24/16					
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125			
Matrix Spike Dup (6100579-MSD1)		**Source: AZJ0582-01**				Prepared & Analyzed: 10/24/16					
Mercury	0.00237	0.00050	0.000041	mg/L	2.5000E-3	ND	95	75-125	0.6	20	
Post Spike (6100579-PS1)		**Source: AZJ0582-01**				Prepared & Analyzed: 10/24/16					
Mercury	1.80			ug/L	1.6667	-0.0129	109	80-120			
Batch 6100671 - EPA 3005A											
Blank (6100671-BLK1)						Prepared & Analyzed: 10/26/16					
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							

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 28, 2016

Report No.: AZJ0621

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100671 - EPA 3005A											
LCS (6100671-BS1)						Prepared & Analyzed: 10/26/16					
Antimony	0.107	0.0030	0.0008	mg/L	0.10000		107	80-120			
Arsenic	0.104	0.0050	0.0016	mg/L	0.10000		104	80-120			
Barium	0.0971	0.0100	0.0004	mg/L	0.10000		97	80-120			
Beryllium	0.103	0.0030	0.00008	mg/L	0.10000		103	80-120			
Boron	1.05	0.100	0.0064	mg/L	1.0000		105	80-120			
Cadmium	0.103	0.0010	0.00007	mg/L	0.10000		103	80-120			
Calcium	1.05	0.500	0.0311	mg/L	1.0000		105	80-120			
Chromium	0.104	0.0100	0.0009	mg/L	0.10000		104	80-120			
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Copper	0.101	0.0050	0.0005	mg/L	0.10000		101	80-120			
Lead	0.102	0.0050	0.0001	mg/L	0.10000		102	80-120			
Molybdenum	0.104	0.0100	0.0017	mg/L	0.10000		104	80-120			
Nickel	0.102	0.0050	0.0006	mg/L	0.10000		102	80-120			
Selenium	0.100	0.0100	0.0010	mg/L	0.10000		100	80-120			
Silver	0.102	0.0050	0.0005	mg/L	0.10000		102	80-120			
Thallium	0.102	0.0010	0.0002	mg/L	0.10000		102	80-120			
Vanadium	0.102	0.0100	0.0071	mg/L	0.10000		102	80-120			
Zinc	0.108	0.0100	0.0021	mg/L	0.10000		108	80-120			
Lithium	0.107	0.0500	0.0021	mg/L	0.10000		107	80-120			
Matrix Spike (6100671-MS1)		**Source: AZJ0696-04**				Prepared & Analyzed: 10/26/16					
Antimony	0.107	0.0030	0.0008	mg/L	0.10000	ND	107	75-125			
Arsenic	0.100	0.0050	0.0016	mg/L	0.10000	ND	100	75-125			
Barium	0.0982	0.0100	0.0004	mg/L	0.10000	ND	98	75-125			
Beryllium	0.101	0.0030	0.00008	mg/L	0.10000	ND	101	75-125			
Boron	1.06	0.100	0.0064	mg/L	1.0000	ND	106	75-125			
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125			
Calcium	1.02	0.500	0.0311	mg/L	1.0000	ND	102	75-125			
Chromium	0.104	0.0100	0.0009	mg/L	0.10000	ND	104	75-125			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	ND	102	75-125			
Copper	0.101	0.0050	0.0005	mg/L	0.10000	ND	101	75-125			
Lead	0.0990	0.0050	0.0001	mg/L	0.10000	ND	99	75-125			
Molybdenum	0.101	0.0100	0.0017	mg/L	0.10000	ND	101	75-125			
Nickel	0.102	0.0050	0.0006	mg/L	0.10000	ND	102	75-125			
Selenium	0.0992	0.0100	0.0010	mg/L	0.10000	ND	99	75-125			
Silver	0.102	0.0050	0.0005	mg/L	0.10000	ND	102	75-125			
Thallium	0.0994	0.0010	0.0002	mg/L	0.10000	ND	99	75-125			
Vanadium	0.103	0.0100	0.0071	mg/L	0.10000	ND	103	75-125			
Zinc	0.106	0.0100	0.0021	mg/L	0.10000	ND	106	75-125			
Lithium	0.104	0.0500	0.0021	mg/L	0.10000	ND	104	75-125			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 28, 2016

Report No.: AZJ0621

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100671 - EPA 3005A											
Matrix Spike Dup (6100671-MSD1)		**Source: AZJ0696-04**				Prepared & Analyzed: 10/26/16					
Antimony	0.105	0.0030	0.0008	mg/L	0.10000	ND	105	75-125	3	20	
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000	ND	102	75-125	2	20	
Barium	0.0959	0.0100	0.0004	mg/L	0.10000	ND	96	75-125	2	20	
Beryllium	0.101	0.0030	0.00008	mg/L	0.10000	ND	101	75-125	0.02	20	
Boron	1.04	0.100	0.0064	mg/L	1.0000	ND	104	75-125	2	20	
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125	0.5	20	
Calcium	0.998	0.500	0.0311	mg/L	1.0000	ND	100	75-125	2	20	
Chromium	0.104	0.0100	0.0009	mg/L	0.10000	ND	104	75-125	0.6	20	
Cobalt	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125	0.9	20	
Copper	0.0985	0.0050	0.0005	mg/L	0.10000	ND	98	75-125	2	20	
Lead	0.0995	0.0050	0.0001	mg/L	0.10000	ND	99	75-125	0.5	20	
Molybdenum	0.0977	0.0100	0.0017	mg/L	0.10000	ND	98	75-125	3	20	
Nickel	0.0994	0.0050	0.0006	mg/L	0.10000	ND	99	75-125	2	20	
Selenium	0.101	0.0100	0.0010	mg/L	0.10000	ND	101	75-125	2	20	
Silver	0.0997	0.0050	0.0005	mg/L	0.10000	ND	100	75-125	2	20	
Thallium	0.100	0.0010	0.0002	mg/L	0.10000	ND	100	75-125	1	20	
Vanadium	0.105	0.0100	0.0071	mg/L	0.10000	ND	105	75-125	2	20	
Zinc	0.105	0.0100	0.0021	mg/L	0.10000	ND	105	75-125	1	20	
Lithium	0.101	0.0500	0.0021	mg/L	0.10000	ND	101	75-125	3	20	
Post Spike (6100671-PS1)		**Source: AZJ0696-04**				Prepared & Analyzed: 10/26/16					
Antimony	96.0			ug/L	100.00	0.176	96	80-120			
Arsenic	103			ug/L	100.00	-0.164	104	80-120			
Barium	98.0			ug/L	100.00	-0.0089	98	80-120			
Beryllium	99.2			ug/L	100.00	0.0006	99	80-120			
Boron	1060			ug/L	1000.0	1.09	106	80-120			
Cadmium	103			ug/L	100.00	-0.0453	103	80-120			
Calcium	1050			ug/L	1000.0	10.9	103	80-120			
Chromium	105			ug/L	100.00	-0.0552	105	80-120			
Cobalt	101			ug/L	100.00	0.0039	101	80-120			
Copper	99.3			ug/L	100.00	0.0665	99	80-120			
Lead	99.0			ug/L	100.00	-0.0007	99	80-120			
Molybdenum	105			ug/L	100.00	0.0174	105	80-120			
Nickel	101			ug/L	100.00	0.0775	100	80-120			
Selenium	102			ug/L	100.00	-1.57	103	80-120			
Silver	102			ug/L	100.00	0.0072	102	80-120			
Thallium	99.9			ug/L	100.00	0.0064	100	80-120			
Vanadium	103			ug/L	100.00	-0.163	103	80-120			
Zinc	108			ug/L	100.00	0.823	107	80-120			
Lithium	105			ug/L	100.00	0.0048	105	80-120			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

October 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-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 Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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							
10/20/16	11:07	GW		x	HGWA-5	3		1	1	1							1
10/20/16	13:08	GW		x	HGWA-6	3		1	1	1							2
10/20/16	12:30	GW		x	HGWC-7	3		1	1	1							3
10/20/16	13:55	GW		x	HGWC-8	3		1	1	1							4
10/20/16	16:50	GW		x	HGWC-9	3		1	1	1							5
10/20/16	--	GW		x	DUP-1	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: A. Shoredits AS T. Wardell TW

DATE/TIME: 10/20/2016 15:50

RELINQUISHED BY: Will Vinz (TERM)

DATE/TIME: 10/21/16 1145

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY LAB:

DATE/TIME: 10/21/16 1148

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: 4

Cooler ID:

FOR LAB USE ONLY

LAB #: AZJ0621

Entered into LIMS: 1247

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: 10/28/2016 5:02:01PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 10/21/16 11:48

Work Order: AZJ0621
Logged In By: Charles Hawks

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

November 23, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Hammond
Pace Project No.: 30200228

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on October 24, 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 Hammond
Pace Project No.: 30200228

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 Hammond
Pace Project No.: 30200228

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30200228001	**HGWA-5**	Water	10/20/16 11:07	10/24/16 09:00
30200228002	**HGWA-6**	Water	10/20/16 13:08	10/24/16 09:00
30200228003	**HGWC-7**	Water	10/20/16 12:30	10/24/16 09:00
30200228004	**HGWC-8**	Water	10/20/16 13:55	10/24/16 09:00
30200228005	**HGWC-9**	Water	10/20/16 15:50	10/24/16 09:00
30200228006	**Dup-1**	Water	10/20/16 00:00	10/24/16 09:00

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

SAMPLE ANALYTE COUNT

Project: Plant Hammond
Pace Project No.: 30200228

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30200228001	**HGWA-5**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30200228002	**HGWA-6**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30200228003	**HGWC-7**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30200228004	**HGWC-8**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30200228005	**HGWC-9**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30200228006	**Dup-1**	EPA 9315	JC2	1
		EPA 9320	JLW	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: Plant Hammond
Pace Project No.: 30200228

Sample: HGWA-5 **Lab ID: 30200228001** Collected: 10/20/16 11:07 Received: 10/24/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.136 ± 0.191 (0.599) C:81% T:NA**	pCi/L	11/09/16 06:59	13982-63-3	
Radium-228	EPA 9320	**0.351 ± 0.473 (0.970) C:78% T:82%**	pCi/L	11/19/16 19:48	15262-20-1	
Total Radium	Total Radium Calculation	**0.351 ± 0.664 (1.57)**	pCi/L	11/21/16 16:24	7440-14-4	

Sample: HGWA-6 **Lab ID: 30200228002** Collected: 10/20/16 13:08 Received: 10/24/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0608 ± 0.162 (0.395) C:87% T:NA**	pCi/L	11/09/16 06:59	13982-63-3	
Radium-228	EPA 9320	**0.603 ± 0.458 (0.883) C:80% T:82%**	pCi/L	11/19/16 19:48	15262-20-1	
Total Radium	Total Radium Calculation	**0.664 ± 0.620 (1.28)**	pCi/L	11/21/16 16:24	7440-14-4	

Sample: HGWC-7 **Lab ID: 30200228003** Collected: 10/20/16 12:30 Received: 10/24/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.139 ± 0.203 (0.443) C:86% T:NA**	pCi/L	11/09/16 06:59	13982-63-3	
Radium-228	EPA 9320	**1.83 ± 0.691 (1.05) C:68% T:73%**	pCi/L	11/19/16 19:48	15262-20-1	
Total Radium	Total Radium Calculation	**1.97 ± 0.894 (1.49)**	pCi/L	11/21/16 16:24	7440-14-4	

Sample: HGWC-8 **Lab ID: 30200228004** Collected: 10/20/16 13:55 Received: 10/24/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.235 ± 0.228 (0.448) C:97% T:NA**	pCi/L	11/09/16 06:59	13982-63-3	
Radium-228	EPA 9320	**0.800 ± 0.451 (0.804) C:74% T:84%**	pCi/L	11/19/16 19:48	15262-20-1	
Total Radium	Total Radium Calculation	**1.04 ± 0.679 (1.25)**	pCi/L	11/21/16 16:24	7440-14-4	

Sample: HGWC-9 **Lab ID: 30200228005** Collected: 10/20/16 15:50 Received: 10/24/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.360 ± 0.224 (0.325) C:98% T:NA**	pCi/L	11/09/16 06:59	13982-63-3	
Radium-228	EPA 9320	**0.805 ± 0.450 (0.797) C:70% T:85%**	pCi/L	11/19/16 19:46	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 Hammond
Pace Project No.: 30200228

Sample: HGWC-9 **Lab ID: 30200228005** Collected: 10/20/16 15:50 Received: 10/24/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**1.17 ± 0.674 (1.12)**	pCi/L	11/21/16 16:24	7440-14-4	

Sample: Dup-1 **Lab ID: 30200228006** Collected: 10/20/16 00:00 Received: 10/24/16 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0571 ± 0.208 (0.511) C:96% T:NA**	pCi/L	11/09/16 06:59	13982-63-3	
Radium-228	EPA 9320	**2.64 ± 0.829 (1.06) C:53% T:80%**	pCi/L	11/19/16 19:46	15262-20-1	
Total Radium	Total Radium Calculation	**2.70 ± 1.04 (1.57)**	pCi/L	11/21/16 16:24	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 Hammond
Pace Project No.: 30200228

QC Batch: 239218 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30200228001, 30200228002, 30200228003, 30200228004, 30200228005, 30200228006

METHOD BLANK: 1175535 Matrix: Water
Associated Lab Samples: 30200228001, 30200228002, 30200228003, 30200228004, 30200228005, 30200228006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0550 ± 0.118 (0.398) C:85% T:NA	pCi/L	11/09/16 06:59	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30200228

QC Batch: 239880 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30200228001, 30200228002, 30200228003, 30200228004, 30200228005, 30200228006

METHOD BLANK: 1178547 Matrix: Water
Associated Lab Samples: 30200228001, 30200228002, 30200228003, 30200228004, 30200228005, 30200228006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.935 ± 0.482 (0.855) C:73% T:95%	pCi/L	11/19/16 19:47	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: Plant Hammond
Pace Project No.: 30200228

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#:30200228

Chain of Custody

Workorder: AZJ0621 Workorder Name: Plant Hammond Owner Received Date: Results Requested By: 11/23/2016

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	HWGA-5	G	10/20/2016 11:07	AZJ0621-01	GW	1	X	001
2	HGWA-6	G	10/20/2016 13:08	AZJ0621-02	GW	1	X	002
3	HWGC-7	G	10/20/2016 12:30	AZJ0621-03	GW	1	X	003
4	HWGC-8	G	10/20/2016 13:55	AZJ0621-04	GW	1	X	004
5	HWGC-9	G	10/20/2016 15:50	AZJ0621-05	GW	1	X	005
6	Dup-1	G	10/20/2016 0:00	AZJ0621-06	GW	1	X	006
7								
8								
9								
10								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	Charles Hinds	10/21/16 1730	RBig Pace	10/24/16	0900
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.

3020228

CHAIN OF CUSTODY RECORD — PaceAnalytical

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 Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED:
- Container type P / Preservation 3: Metals Part 257, App. III & IV (EPA 6020/7470)
- Container type P / Preservation 7: Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)
- Container type P / Preservation 3: Radium 226 & 228 (SW-846 9315/9320)

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Part 257, 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
10/20/16	11:07	GW		x	HGWA-5	3	1	1	1	1	001
10/20/16	13:08	GW		x	HGWA-6	3	1	1	1	2	002
10/20/16	12:50	GW		x	HGWC-7	3	1	1	1	3	003
10/20/16	13:55	GW		x	HGWC-8	3	1	1	1	4	004
10/20/16	15:51	GW		x	HGWC-9	3	1	1	1	5	005
10/20/16	--	GW		x	DUP-1	3	1	1	1	6	006

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: A Shoreiats AS (?), T Wandell TW (?) — DATE/TIME: 10/20/2016 15:50 (?)

RELINQUISHED BY: J. Vrza (?) (EGM) — DATE/TIME: 10/21/16 1145

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: [illegible signature] — DATE/TIME: 10/21/16 1148

pH checked: Yes No NA — Ice: Yes No NA — Temperature: 1°C

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

Custody Seal: Intact (circled) Broken Not Present — # of Coolers: 4 (?) — Cooler ID:

FOR LAB USE ONLY: LAB #: AZJ0621 — Entered into LIMS: [initials] — Tracking #:

20161020 Hammond AP 1&2 COC.xlsx

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace GA　　Project # 30200228

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

Tracking #: 6812 5099 9949

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 10/24/16

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. Signature not on COC. [illegible] 11/3/16
Sample Labels match COC:	X			5.
-Includes date/time/ID/Analysis　Matrix: WT				
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 10/24/16 RTB; 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: RTB　Date: 10/24/16

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.

J:\QAQC\Master\Document Management\Sample Mgt\Sample Condition Upon Receipt Pittsburgh (C056-2 25Jul2016)

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JLW
Date:	11/16/2016
Worklist:	32405
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1178547
MB concentration:	0.935
M/B Counting Uncertainty:	0.452
MB MDC:	0.855
MB Numerical Performance Indicator:	4.05
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS32405	LCSD32405
Count Date:	11/19/2016	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	26.037	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.807	
Target Conc. (pCi/L, g, F):	6.450	
Uncertainty (Calculated):	0.464	
Result (pCi/L, g, F):	7.929	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.807	
Numerical Performance Indicator:	3.11	
Percent Recovery:	122.93%	
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.:	30200226001	
Duplicate Sample I.D.	30200226001DUP	
Sample Result (pCi/L, g, F):	1.006	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.544	
Sample Duplicate Result (pCi/L, g, F):	0.294	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.439	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	1.996	30200226001
Duplicate RPD:	109.60%	30200226001DUP
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:

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

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

ex numerical duplicate to assess when results < 5 x MDC
acceptable when < 2 for all matrices

11/23/16

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	JC2
Date:	11/3/2016
Worklist:	32222
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1173703
MB concentration:	0.031
M/B Counting Uncertainty:	0.050
MB MDC:	0.101
MB Numerical Performance Indicator:	1.20
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS32222	LCSD32222
Count Date:	11/5/2016	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.675	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.501	
Target Conc. (pCi/L, g, F):	8.914	
Uncertainty (Calculated):	0.419	
Result (pCi/L, g, F):	8.283	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.789	
Numerical Performance Indicator:	-1.38	
Percent Recovery:	92.92%	
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		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30200041003	
Duplicate Sample I.D.	30200041003DUP	
Sample Result (pCi/L, g, F):	0.058	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.063	
Sample Duplicate Result (pCi/L, g, F):	0.490	
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:	-3.182	30200041003
Duplicate RPD:	157.41%	30200041003DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	

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

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

Comments:

results < MDC - NA

***Batch must be ~~re-prepped due to unacceptable precision.~~ JM 11/23/16

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:

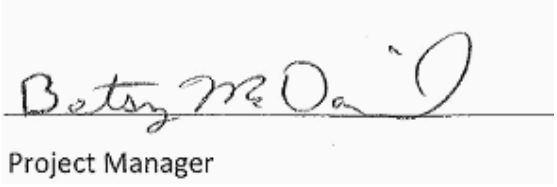
Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: **Mr. Joju Abraham**

Report Number: **AZJ0696**
November 04, 2016
Project: CCR Event
Project #:Plant Hammond

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

November 04, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWC-10	AZJ0696-01	Ground Water	10/24/16 13:05	10/25/16 14:10
HGWC-13	AZJ0696-02	Ground Water	10/24/16 14:45	10/25/16 14:10
FB-1	AZJ0696-03	Water	10/24/16 16:30	10/25/16 14:10
FERB-1	AZJ0696-04	Water	10/24/16 16:35	10/25/16 14:10
HGWC-14	AZJ0696-05	Ground Water	10/24/16 16:10	10/25/16 14:10
HGWC-11	AZJ0696-06	Ground Water	10/24/16 13:15	10/25/16 14:10
HGWC-12	AZJ0696-07	Ground Water	10/24/16 14:45	10/25/16 14:10
HGWC-15	AZJ0696-08	Ground Water	10/24/16 16:27	10/25/16 14:10

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

November 04, 2016

Report No.: AZJ0696
Client ID: HGWC-10
Date/Time Sampled: 10/24/2016 1:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0696-01
Date/Time Received: 10/25/2016 2:10:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	643	25	10	mg/L	SM 2540 C		1	10/31/16 19:05	10/31/16 19:05	6100829	JPT
Inorganic Anions											
Chloride	99	2.5	0.14	mg/L	EPA 300.0		10	10/26/16 15:29	11/01/16 10:33	6100701	RNB
Fluoride	0.06	0.30	0.02	mg/L	EPA 300.0	J	1	10/26/16 15:29	10/27/16 01:36	6100701	RNB
Sulfate	190	10	0.51	mg/L	EPA 300.0		10	10/26/16 15:29	11/01/16 10:33	6100701	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:37	6100671	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:37	6100671	CSW
Barium	0.101	0.0100	0.0004	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:37	6100671	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:37	6100671	CSW
Boron	0.831	0.100	0.0064	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:37	6100671	CSW
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 14:37	6100671	CSW
Calcium	156	25.0	1.55	mg/L	EPA 6020B		50	10/26/16 09:00	10/27/16 14:47	6100671	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:37	6100671	CSW
Cobalt	0.0009	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 14:37	6100671	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:37	6100671	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:37	6100671	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:37	6100671	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:37	6100671	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:37	6100671	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 12:40	6100740	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

November 04, 2016

Report No.: AZJ0696
Client ID: HGWC-13
Date/Time Sampled: 10/24/2016 2:45:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0696-02
Date/Time Received: 10/25/2016 2:10:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	647	25	10	mg/L	SM 2540 C		1	10/31/16 19:05	10/31/16 19:05	6100829	JPT
Inorganic Anions											
Chloride	140	2.5	0.14	mg/L	EPA 300.0		10	10/26/16 15:29	11/01/16 10:54	6100701	RNB
Fluoride	0.31	0.30	0.02	mg/L	EPA 300.0		1	10/26/16 15:29	10/27/16 02:38	6100701	RNB
Sulfate	180	10	0.51	mg/L	EPA 300.0		10	10/26/16 15:29	11/01/16 10:54	6100701	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:57	6100671	CSW
Arsenic	0.334	0.0050	0.0016	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:57	6100671	CSW
Barium	0.0882	0.0100	0.0004	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:57	6100671	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:57	6100671	CSW
Boron	4.01	1.00	0.0642	mg/L	EPA 6020B		10	10/26/16 09:00	10/27/16 14:53	6100671	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:57	6100671	CSW
Calcium	127	25.0	1.55	mg/L	EPA 6020B		50	10/26/16 09:00	10/27/16 14:58	6100671	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:57	6100671	CSW
Cobalt	0.0040	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 14:57	6100671	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:57	6100671	CSW
Molybdenum	0.0352	0.0100	0.0017	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:57	6100671	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 14:57	6100671	CSW
Thallium	0.0005	0.0010	0.0002	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 14:57	6100671	CSW
Lithium	0.0435	0.0500	0.0021	mg/L	EPA 6020B	J	1	10/26/16 09:00	10/26/16 14:57	6100671	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 12:42	6100740	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

November 04, 2016

Report No.: AZJ0696
Client ID: FB-1
Date/Time Sampled: 10/24/2016 4:30:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZJ0696-03
Date/Time Received: 10/25/2016 2:10:00PM

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	10/31/16 19:05	10/31/16 19:05	6100829	JPT
Inorganic Anions											
Chloride	12	0.25	0.01	mg/L	EPA 300.0		1	10/26/16 15:29	10/27/16 02:58	6100701	RNB
Fluoride	0.04	0.30	0.02	mg/L	EPA 300.0	J	1	10/26/16 15:29	10/27/16 02:58	6100701	RNB
Sulfate	14	1.0	0.05	mg/L	EPA 300.0		1	10/26/16 15:29	10/27/16 02:58	6100701	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:54	6100671	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:54	6100671	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:54	6100671	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:54	6100671	CSW
Boron	ND	0.100	0.0064	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:54	6100671	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:54	6100671	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:54	6100671	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:54	6100671	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:54	6100671	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:54	6100671	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:54	6100671	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:54	6100671	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:54	6100671	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:54	6100671	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 12:45	6100740	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

November 04, 2016

Report No.: AZJ0696
Client ID: FERB-1
Date/Time Sampled: 10/24/2016 4:35:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZJ0696-04
Date/Time Received: 10/25/2016 2:10:00PM

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	10/31/16 19:05	10/31/16 19:05	6100829	JPT
Inorganic Anions											
Chloride	ND	0.25	0.01	mg/L	EPA 300.0		1	10/26/16 15:29	11/02/16 21:29	6100701	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	10/26/16 15:29	11/02/16 21:29	6100701	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	10/26/16 15:29	11/02/16 21:29	6100701	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:59	6100671	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:59	6100671	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:59	6100671	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:59	6100671	CSW
Boron	ND	0.100	0.0064	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:59	6100671	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:59	6100671	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:59	6100671	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:59	6100671	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:59	6100671	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:59	6100671	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:59	6100671	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:59	6100671	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:59	6100671	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/26/16 09:00	10/26/16 15:59	6100671	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 12:47	6100740	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

November 04, 2016

Report No.: AZJ0696
Client ID: HGWC-14
Date/Time Sampled: 10/24/2016 4:10:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0696-05
Date/Time Received: 10/25/2016 2:10:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	2920	25	10	mg/L	SM 2540 C		1	10/31/16 19:05	10/31/16 19:05	6100829	JPT
Inorganic Anions											
Chloride	110	2.5	0.14	mg/L	EPA 300.0		10	10/26/16 15:29	11/01/16 13:19	6100701	RNB
Fluoride	0.04	0.30	0.02	mg/L	EPA 300.0	J	1	10/26/16 15:29	10/27/16 03:39	6100701	RNB
Sulfate	280	10	0.51	mg/L	EPA 300.0		10	10/26/16 15:29	11/01/16 13:19	6100701	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:00	6100710	CSW
Arsenic	0.0058	0.0050	0.0016	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:00	6100710	CSW
Barium	0.0208	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:00	6100710	CSW
Beryllium	0.0005	0.0030	0.0004	mg/L	EPA 6020B	J	5	10/27/16 14:30	11/01/16 13:39	6100710	CSW
Boron	13.7	0.500	0.0321	mg/L	EPA 6020B		5	10/27/16 14:30	11/01/16 13:39	6100710	CSW
Cadmium	0.0002	0.0010	0.00007	mg/L	EPA 6020B	J	1	10/27/16 14:30	10/29/16 01:00	6100710	CSW
Calcium	564	50.0	3.11	mg/L	EPA 6020B		100	10/27/16 14:30	11/01/16 17:42	6100710	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:00	6100710	CSW
Cobalt	0.0253	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:00	6100710	CSW
Lead	0.0016	0.0050	0.0001	mg/L	EPA 6020B	J	1	10/27/16 14:30	10/29/16 01:00	6100710	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:00	6100710	CSW
Selenium	0.0135	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:00	6100710	CSW
Thallium	0.0004	0.0010	0.0002	mg/L	EPA 6020B	J	1	10/27/16 14:30	10/29/16 01:00	6100710	CSW
Lithium	ND	0.0500	0.0103	mg/L	EPA 6020B		5	10/27/16 14:30	11/01/16 13:39	6100710	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 12:49	6100740	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

November 04, 2016

Report No.: AZJ0696
Client ID: HGWC-11
Date/Time Sampled: 10/24/2016 1:15:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0696-06
Date/Time Received: 10/25/2016 2:10:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	836	25	10	mg/L	SM 2540 C		1	10/31/16 19:05	10/31/16 19:05	6100829	JPT
Inorganic Anions											
Chloride	220	6.2	0.35	mg/L	EPA 300.0		25	10/26/16 15:29	11/01/16 11:35	6100701	RNB
Fluoride	0.26	0.30	0.02	mg/L	EPA 300.0	J	1	10/26/16 15:29	10/27/16 04:00	6100701	RNB
Sulfate	370	25	1.3	mg/L	EPA 300.0		25	10/26/16 15:29	11/01/16 11:35	6100701	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:05	6100710	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:05	6100710	CSW
Barium	0.0794	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:05	6100710	CSW
Beryllium	ND	0.0030	0.0004	mg/L	EPA 6020B		5	10/27/16 14:30	11/01/16 13:47	6100710	CSW
Boron	2.54	0.500	0.0321	mg/L	EPA 6020B		5	10/27/16 14:30	11/01/16 13:47	6100710	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:05	6100710	CSW
Calcium	145	25.0	1.55	mg/L	EPA 6020B		50	10/27/16 14:30	11/01/16 17:48	6100710	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:05	6100710	CSW
Cobalt	0.0032	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/27/16 14:30	10/29/16 01:05	6100710	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:05	6100710	CSW
Molybdenum	0.0293	0.0100	0.0017	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:05	6100710	CSW
Selenium	0.0021	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/27/16 14:30	10/29/16 01:05	6100710	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:05	6100710	CSW
Lithium	ND	0.0500	0.0103	mg/L	EPA 6020B		5	10/27/16 14:30	11/01/16 13:47	6100710	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 12:57	6100740	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

November 04, 2016

Report No.: AZJ0696
Client ID: HGWC-12
Date/Time Sampled: 10/24/2016 2:45:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0696-07
Date/Time Received: 10/25/2016 2:10:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	868	25	10	mg/L	SM 2540 C		1	10/31/16 19:05	10/31/16 19:05	6100829	JPT
Inorganic Anions											
Chloride	160	2.5	0.14	mg/L	EPA 300.0		10	10/26/16 15:29	11/01/16 11:56	6100701	RNB
Fluoride	0.19	0.30	0.02	mg/L	EPA 300.0	J	1	10/26/16 15:29	10/27/16 04:21	6100701	RNB
Sulfate	270	10	0.51	mg/L	EPA 300.0		10	10/26/16 15:29	11/01/16 11:56	6100701	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:11	6100710	CSW
Arsenic	0.0049	0.0050	0.0016	mg/L	EPA 6020B	J	1	10/27/16 14:30	10/29/16 01:11	6100710	CSW
Barium	0.135	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:11	6100710	CSW
Beryllium	ND	0.0030	0.0004	mg/L	EPA 6020B		5	10/27/16 14:30	11/01/16 13:54	6100710	CSW
Boron	2.75	0.500	0.0321	mg/L	EPA 6020B		5	10/27/16 14:30	11/01/16 13:54	6100710	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:11	6100710	CSW
Calcium	193	25.0	1.55	mg/L	EPA 6020B		50	10/27/16 14:30	11/01/16 17:53	6100710	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:11	6100710	CSW
Cobalt	0.0017	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/27/16 14:30	10/29/16 01:11	6100710	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:11	6100710	CSW
Molybdenum	0.0470	0.0100	0.0017	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:11	6100710	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:11	6100710	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:11	6100710	CSW
Lithium	0.0114	0.0500	0.0103	mg/L	EPA 6020B	J	5	10/27/16 14:30	11/01/16 13:54	6100710	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 12:59	6100740	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

November 04, 2016

Report No.: AZJ0696
Client ID: HGWC-15
Date/Time Sampled: 10/24/2016 4:27:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0696-08
Date/Time Received: 10/25/2016 2:10:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1090	25	10	mg/L	SM 2540 C		1	10/31/16 19:05	10/31/16 19:05	6100829	JPT
Inorganic Anions											
Chloride	200	2.5	0.14	mg/L	EPA 300.0		10	10/26/16 15:29	11/01/16 12:16	6100701	RNB
Fluoride	0.07	0.30	0.02	mg/L	EPA 300.0	J	1	10/26/16 15:29	10/27/16 04:41	6100701	RNB
Sulfate	420	10	0.51	mg/L	EPA 300.0		10	10/26/16 15:29	11/01/16 12:16	6100701	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:17	6100710	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:17	6100710	CSW
Barium	0.0326	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:17	6100710	CSW
Beryllium	ND	0.0030	0.0004	mg/L	EPA 6020B		5	10/27/16 14:30	11/01/16 14:01	6100710	CSW
Boron	1.93	0.100	0.0064	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:17	6100710	CSW
Cadmium	0.0018	0.0010	0.00007	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:17	6100710	CSW
Calcium	200	25.0	1.55	mg/L	EPA 6020B		50	10/27/16 14:30	11/01/16 17:59	6100710	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:17	6100710	CSW
Cobalt	0.0557	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:17	6100710	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:17	6100710	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:17	6100710	CSW
Selenium	0.0012	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/27/16 14:30	10/29/16 01:17	6100710	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 01:17	6100710	CSW
Lithium	ND	0.0500	0.0103	mg/L	EPA 6020B		5	10/27/16 14:30	11/01/16 14:01	6100710	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 13:01	6100740	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

November 04, 2016

Report No.: AZJ0696

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100829 - SM 2540 C											
Blank (6100829-BLK1)						Prepared & Analyzed: 10/31/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6100829-BS1)						Prepared & Analyzed: 10/31/16					
Total Dissolved Solids	377	25	10	mg/L	400.00		94	84-108			
Duplicate (6100829-DUP1)			**Source: AZJ0696-02RE1**			Prepared & Analyzed: 10/31/16					
Total Dissolved Solids	674	25	10	mg/L		647			4	10	
Duplicate (6100829-DUP2)			**Source: AZJ0700-01RE1**			Prepared & Analyzed: 10/31/16					
Total Dissolved Solids	141	25	10	mg/L		136			4	10	

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

November 04, 2016

Report No.: AZJ0696

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100701 - EPA 300.0											
Blank (6100701-BLK1)						Prepared: 10/26/16 Analyzed: 10/27/16					
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 (6100701-BS1)						Prepared: 10/26/16 Analyzed: 10/27/16					
Chloride	10.9	0.25	0.01	mg/L	10.010		108	90-110			
Fluoride	10.9	0.30	0.02	mg/L	10.020		108	90-110			
Sulfate	10.8	1.0	0.05	mg/L	10.020		108	90-110			
Duplicate (6100701-DUP1)			**Source: AZJ0701-03RE1**			Prepared: 10/26/16 Analyzed: 11/02/16					
Chloride	ND	1.0	1.0	mg/L		ND				15	
Fluoride	ND	0.10	0.10	mg/L		ND				15	
Sulfate	ND	5.0	5.0	mg/L		ND				15	
Duplicate (6100701-DUP2)			**Source: AZJ0696-04RE1**			Prepared: 10/26/16 Analyzed: 11/02/16					
Chloride	ND	1.0	1.0	mg/L		ND				15	
Fluoride	ND	0.10	0.10	mg/L		ND				15	
Sulfate	ND	5.0	5.0	mg/L		ND				15	
Matrix Spike (6100701-MS1)			**Source: AZJ0696-01**			Prepared: 10/26/16 Analyzed: 10/27/16					
Chloride	84.1	0.25	0.01	mg/L	10.010	83.3	7	90-110			QM-02
Fluoride	8.55	0.30	0.02	mg/L	10.020	0.06	85	90-110			QM-05
Sulfate	147	1.0	0.05	mg/L	10.020	151	NR	90-110			QM-02
Matrix Spike (6100701-MS2)			**Source: AZJ0697-03**			Prepared: 10/26/16 Analyzed: 10/27/16					
Chloride	14.6	0.25	0.01	mg/L	10.010	5.18	94	90-110			
Fluoride	10.0	0.30	0.02	mg/L	10.020	0.13	99	90-110			
Sulfate	196	1.0	0.05	mg/L	10.020	194	18	90-110			QM-02

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

November 04, 2016

Report No.: AZJ0696

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100701 - EPA 300.0											
Matrix Spike Dup (6100701-MSD1)		**Source: AZJ0696-01**			Prepared: 10/26/16 Analyzed: 10/27/16						
Chloride	84.2	0.25	0.01	mg/L	10.010	83.3	9	90-110	0.2	15	QM-02
Fluoride	9.63	0.30	0.02	mg/L	10.020	0.06	96	90-110	12	15	
Sulfate	146	1.0	0.05	mg/L	10.020	151	NR	90-110	0.3	15	QM-02

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

November 04, 2016

Report No.: AZJ0696

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100671 - EPA 3005A											
Blank (6100671-BLK1)						Prepared & Analyzed: 10/26/16					
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 (6100671-BS1)						Prepared & Analyzed: 10/26/16					
Antimony	0.107	0.0030	0.0008	mg/L	0.10000		107	80-120			
Arsenic	0.104	0.0050	0.0016	mg/L	0.10000		104	80-120			
Barium	0.0971	0.0100	0.0004	mg/L	0.10000		97	80-120			
Beryllium	0.103	0.0030	0.00008	mg/L	0.10000		103	80-120			
Boron	1.05	0.100	0.0064	mg/L	1.0000		105	80-120			
Cadmium	0.103	0.0010	0.00007	mg/L	0.10000		103	80-120			
Calcium	1.05	0.500	0.0311	mg/L	1.0000		105	80-120			
Chromium	0.104	0.0100	0.0009	mg/L	0.10000		104	80-120			
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Copper	0.101	0.0050	0.0005	mg/L	0.10000		101	80-120			
Lead	0.102	0.0050	0.0001	mg/L	0.10000		102	80-120			
Molybdenum	0.104	0.0100	0.0017	mg/L	0.10000		104	80-120			
Nickel	0.102	0.0050	0.0006	mg/L	0.10000		102	80-120			
Selenium	0.100	0.0100	0.0010	mg/L	0.10000		100	80-120			
Silver	0.102	0.0050	0.0005	mg/L	0.10000		102	80-120			
Thallium	0.102	0.0010	0.0002	mg/L	0.10000		102	80-120			
Vanadium	0.102	0.0100	0.0071	mg/L	0.10000		102	80-120			
Zinc	0.108	0.0100	0.0021	mg/L	0.10000		108	80-120			
Lithium	0.107	0.0500	0.0021	mg/L	0.10000		107	80-120			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 04, 2016

Report No.: AZJ0696

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100671 - EPA 3005A											
Matrix Spike (6100671-MS1)		**Source: AZJ0696-04**				Prepared & Analyzed: 10/26/16					
Antimony	0.107	0.0030	0.0008	mg/L	0.10000	ND	107	75-125			
Arsenic	0.100	0.0050	0.0016	mg/L	0.10000	ND	100	75-125			
Barium	0.0982	0.0100	0.0004	mg/L	0.10000	ND	98	75-125			
Beryllium	0.101	0.0030	0.00008	mg/L	0.10000	ND	101	75-125			
Boron	1.06	0.100	0.0064	mg/L	1.0000	ND	106	75-125			
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125			
Calcium	1.02	0.500	0.0311	mg/L	1.0000	ND	102	75-125			
Chromium	0.104	0.0100	0.0009	mg/L	0.10000	ND	104	75-125			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	ND	102	75-125			
Copper	0.101	0.0050	0.0005	mg/L	0.10000	ND	101	75-125			
Lead	0.0990	0.0050	0.0001	mg/L	0.10000	ND	99	75-125			
Molybdenum	0.101	0.0100	0.0017	mg/L	0.10000	ND	101	75-125			
Nickel	0.102	0.0050	0.0006	mg/L	0.10000	ND	102	75-125			
Selenium	0.0992	0.0100	0.0010	mg/L	0.10000	ND	99	75-125			
Silver	0.102	0.0050	0.0005	mg/L	0.10000	ND	102	75-125			
Thallium	0.0994	0.0010	0.0002	mg/L	0.10000	ND	99	75-125			
Vanadium	0.103	0.0100	0.0071	mg/L	0.10000	ND	103	75-125			
Zinc	0.106	0.0100	0.0021	mg/L	0.10000	ND	106	75-125			
Lithium	0.104	0.0500	0.0021	mg/L	0.10000	ND	104	75-125			
Matrix Spike Dup (6100671-MSD1)		**Source: AZJ0696-04**				Prepared & Analyzed: 10/26/16					
Antimony	0.105	0.0030	0.0008	mg/L	0.10000	ND	105	75-125	3	20	
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000	ND	102	75-125	2	20	
Barium	0.0959	0.0100	0.0004	mg/L	0.10000	ND	96	75-125	2	20	
Beryllium	0.101	0.0030	0.00008	mg/L	0.10000	ND	101	75-125	0.02	20	
Boron	1.04	0.100	0.0064	mg/L	1.0000	ND	104	75-125	2	20	
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125	0.5	20	
Calcium	0.998	0.500	0.0311	mg/L	1.0000	ND	100	75-125	2	20	
Chromium	0.104	0.0100	0.0009	mg/L	0.10000	ND	104	75-125	0.6	20	
Cobalt	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125	0.9	20	
Copper	0.0985	0.0050	0.0005	mg/L	0.10000	ND	98	75-125	2	20	
Lead	0.0995	0.0050	0.0001	mg/L	0.10000	ND	99	75-125	0.5	20	
Molybdenum	0.0977	0.0100	0.0017	mg/L	0.10000	ND	98	75-125	3	20	
Nickel	0.0994	0.0050	0.0006	mg/L	0.10000	ND	99	75-125	2	20	
Selenium	0.101	0.0100	0.0010	mg/L	0.10000	ND	101	75-125	2	20	
Silver	0.0997	0.0050	0.0005	mg/L	0.10000	ND	100	75-125	2	20	
Thallium	0.100	0.0010	0.0002	mg/L	0.10000	ND	100	75-125	1	20	
Vanadium	0.105	0.0100	0.0071	mg/L	0.10000	ND	105	75-125	2	20	
Zinc	0.105	0.0100	0.0021	mg/L	0.10000	ND	105	75-125	1	20	
Lithium	0.101	0.0500	0.0021	mg/L	0.10000	ND	101	75-125	3	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

November 04, 2016

Report No.: AZJ0696

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100671 - EPA 3005A											
Post Spike (6100671-PS1)		**Source: AZJ0696-04**				Prepared & Analyzed: 10/26/16					
Antimony	96.0			ug/L	100.00	0.176	96	80-120			
Arsenic	103			ug/L	100.00	-0.164	104	80-120			
Barium	98.0			ug/L	100.00	-0.0089	98	80-120			
Beryllium	99.2			ug/L	100.00	0.0006	99	80-120			
Boron	1060			ug/L	1000.0	1.09	106	80-120			
Cadmium	103			ug/L	100.00	-0.0453	103	80-120			
Calcium	1050			ug/L	1000.0	10.9	103	80-120			
Chromium	105			ug/L	100.00	-0.0552	105	80-120			
Cobalt	101			ug/L	100.00	0.0039	101	80-120			
Copper	99.3			ug/L	100.00	0.0665	99	80-120			
Lead	99.0			ug/L	100.00	-0.0007	99	80-120			
Molybdenum	105			ug/L	100.00	0.0174	105	80-120			
Nickel	101			ug/L	100.00	0.0775	100	80-120			
Selenium	102			ug/L	100.00	-1.57	103	80-120			
Silver	102			ug/L	100.00	0.0072	102	80-120			
Thallium	99.9			ug/L	100.00	0.0064	100	80-120			
Vanadium	103			ug/L	100.00	-0.163	103	80-120			
Zinc	108			ug/L	100.00	0.823	107	80-120			
Lithium	105			ug/L	100.00	0.0048	105	80-120			
Batch 6100710 - EPA 3005A											
Blank (6100710-BLK1)						Prepared: 10/27/16 Analyzed: 10/29/16					
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	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 04, 2016

Report No.: AZJ0696

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100710 - EPA 3005A											
Blank (6100710-BLK1)						Prepared: 10/27/16 Analyzed: 10/29/16					
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							
LCS (6100710-BS1)						Prepared: 10/27/16 Analyzed: 10/29/16					
Antimony	0.110	0.0030	0.0008	mg/L	0.10000		110	80-120			
Arsenic	0.104	0.0050	0.0016	mg/L	0.10000		104	80-120			
Barium	0.102	0.0100	0.0004	mg/L	0.10000		102	80-120			
Beryllium	0.101	0.0030	0.00008	mg/L	0.10000		101	80-120			
Boron	1.08	0.100	0.0064	mg/L	1.0000		108	80-120			
Cadmium	0.105	0.0010	0.00007	mg/L	0.10000		105	80-120			
Calcium	1.08	0.500	0.0311	mg/L	1.0000		108	80-120			
Chromium	0.108	0.0100	0.0009	mg/L	0.10000		108	80-120			
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000		105	80-120			
Copper	0.100	0.0050	0.0005	mg/L	0.10000		100	80-120			
Lead	0.101	0.0050	0.0001	mg/L	0.10000		101	80-120			
Molybdenum	0.109	0.0100	0.0017	mg/L	0.10000		109	80-120			
Nickel	0.101	0.0050	0.0006	mg/L	0.10000		101	80-120			
Selenium	0.113	0.0100	0.0010	mg/L	0.10000		113	80-120			
Silver	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Thallium	0.101	0.0010	0.0002	mg/L	0.10000		101	80-120			
Vanadium	0.108	0.0100	0.0071	mg/L	0.10000		108	80-120			
Zinc	0.106	0.0100	0.0021	mg/L	0.10000		106	80-120			
Lithium	0.108	0.0500	0.0021	mg/L	0.10000		108	80-120			
Matrix Spike (6100710-MS1)		**Source: AZJ0696-05**				Prepared: 10/27/16 Analyzed: 10/29/16					
Antimony	0.113	0.0030	0.0008	mg/L	0.10000	ND	113	75-125			
Arsenic	0.118	0.0050	0.0016	mg/L	0.10000	0.0058	112	75-125			
Barium	0.126	0.0100	0.0004	mg/L	0.10000	0.0208	105	75-125			
Beryllium	0.0942	0.0150	0.0004	mg/L	0.10000	0.0005	94	75-125			
Boron	15.6	0.500	0.0321	mg/L	1.0000	13.7	199	75-125			QM-02
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	0.0002	101	75-125			
Calcium	574	50.0	3.11	mg/L	1.0000	564	953	75-125			QM-02
Chromium	0.109	0.0100	0.0009	mg/L	0.10000	ND	109	75-125			
Cobalt	0.129	0.0100	0.0005	mg/L	0.10000	0.0253	103	75-125			
Copper	0.0950	0.0050	0.0005	mg/L	0.10000	ND	95	75-125			
Lead	0.0922	0.0050	0.0001	mg/L	0.10000	0.0016	91	75-125			
Molybdenum	0.112	0.0100	0.0017	mg/L	0.10000	ND	112	75-125			
Nickel	0.105	0.0050	0.0006	mg/L	0.10000	0.0063	98	75-125			
Selenium	0.130	0.0100	0.0010	mg/L	0.10000	0.0135	116	75-125			
Silver	0.0937	0.0100	0.0005	mg/L	0.10000	ND	94	75-125			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 04, 2016

Report No.: AZJ0696

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100710 - EPA 3005A											
Matrix Spike (6100710-MS1)		**Source: AZJ0696-05**				Prepared: 10/27/16 Analyzed: 10/29/16					
Thallium	0.0937	0.0010	0.0002	mg/L	0.10000	0.0004	93	75-125			
Vanadium	0.113	0.0100	0.0071	mg/L	0.10000	ND	113	75-125			
Zinc	0.108	0.0100	0.0021	mg/L	0.10000	0.0054	103	75-125			
Lithium	0.105	0.250	0.0103	mg/L	0.10000	ND	105	75-125			J
Matrix Spike Dup (6100710-MSD1)		**Source: AZJ0696-05**				Prepared: 10/27/16 Analyzed: 10/29/16					
Antimony	0.110	0.0030	0.0008	mg/L	0.10000	ND	110	75-125	2	20	
Arsenic	0.114	0.0050	0.0016	mg/L	0.10000	0.0058	108	75-125	3	20	
Barium	0.126	0.0100	0.0004	mg/L	0.10000	0.0208	105	75-125	0.01	20	
Beryllium	0.0949	0.0150	0.0004	mg/L	0.10000	0.0005	94	75-125	0.7	20	
Boron	15.6	0.500	0.0321	mg/L	1.0000	13.7	192	75-125	0.4	20	QM-02
Cadmium	0.100	0.0010	0.00007	mg/L	0.10000	0.0002	100	75-125	1	20	
Calcium	566	50.0	3.11	mg/L	1.0000	564	146	75-125	1	20	QM-02
Chromium	0.107	0.0100	0.0009	mg/L	0.10000	ND	107	75-125	2	20	
Cobalt	0.127	0.0100	0.0005	mg/L	0.10000	0.0253	102	75-125	1	20	
Copper	0.0927	0.0050	0.0005	mg/L	0.10000	ND	93	75-125	2	20	
Lead	0.0898	0.0050	0.0001	mg/L	0.10000	0.0016	88	75-125	3	20	
Molybdenum	0.110	0.0100	0.0017	mg/L	0.10000	ND	110	75-125	2	20	
Nickel	0.104	0.0050	0.0006	mg/L	0.10000	0.0063	98	75-125	0.8	20	
Selenium	0.124	0.0100	0.0010	mg/L	0.10000	0.0135	110	75-125	5	20	
Silver	0.0921	0.0100	0.0005	mg/L	0.10000	ND	92	75-125	2	20	
Thallium	0.0914	0.0010	0.0002	mg/L	0.10000	0.0004	91	75-125	2	20	
Vanadium	0.111	0.0100	0.0071	mg/L	0.10000	ND	111	75-125	1	20	
Zinc	0.105	0.0100	0.0021	mg/L	0.10000	0.0054	99	75-125	4	20	
Lithium	0.102	0.250	0.0103	mg/L	0.10000	ND	102	75-125	2	20	J
Post Spike (6100710-PS1)		**Source: AZJ0696-05**				Prepared: 10/27/16 Analyzed: 10/29/16					
Antimony	109			ug/L	100.00	0.588	108	80-120			
Arsenic	113			ug/L	100.00	5.81	107	80-120			
Barium	124			ug/L	100.00	20.8	103	80-120			
Beryllium	96.2			ug/L	100.00	0.500	96	80-120			
Boron	16000			ug/L	1000.0	13700	233	80-120			QM-02
Cadmium	95.0			ug/L	100.00	0.172	95	80-120			
Calcium	585000			ug/L	1000.0	564000	NR	80-120			QM-02
Chromium	108			ug/L	100.00	0.110	108	80-120			
Cobalt	126			ug/L	100.00	25.3	101	80-120			
Copper	91.0			ug/L	100.00	0.183	91	80-120			
Lead	88.5			ug/L	100.00	1.57	87	80-120			
Molybdenum	109			ug/L	100.00	0.199	109	80-120			
Nickel	104			ug/L	100.00	6.33	98	80-120			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 04, 2016

Report No.: AZJ0696

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100710 - EPA 3005A											
Post Spike (6100710-PS1)			**Source: AZJ0696-05**			Prepared: 10/27/16 Analyzed: 10/29/16					
Selenium	128			ug/L	100.00	13.5	115	80-120			
Silver	91.0			ug/L	100.00	0.0447	91	80-120			
Thallium	90.1			ug/L	100.00	0.369	90	80-120			
Vanadium	109			ug/L	100.00	-0.296	110	80-120			
Zinc	103			ug/L	100.00	5.40	97	80-120			
Lithium	106			ug/L	100.00	0.650	105	80-120			
Batch 6100740 - EPA 7470A											
Blank (6100740-BLK1)						Prepared & Analyzed: 10/28/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6100740-BS1)						Prepared & Analyzed: 10/28/16					
Mercury	0.00240	0.00050	0.000041	mg/L	2.5000E-3		96	80-120			
Matrix Spike (6100740-MS1)			**Source: AZJ0702-01**			Prepared & Analyzed: 10/28/16					
Mercury	0.00238	0.00050	0.000041	mg/L	2.5000E-3	ND	95	75-125			
Matrix Spike Dup (6100740-MSD1)			**Source: AZJ0702-01**			Prepared & Analyzed: 10/28/16					
Mercury	0.00242	0.00050	0.000041	mg/L	2.5000E-3	ND	97	75-125	2	20	
Post Spike (6100740-PS1)			**Source: AZJ0702-01**			Prepared & Analyzed: 10/28/16					
Mercury	1.70			ug/L	1.6667	0.00850	101	80-120			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 04, 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.

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

November 04, 2016

Report Notes

The metals for HGWC-15 was pH adjusted by the Lab with HNO3. 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: Joju Abraham

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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							
10/24/16	13:05	GW		X	HGWC-10	3		1	1	1							1
10/24/16	14:45	GW		X	HGWC-13	3		1	1	1							2
10/24/16	16:30	W		X	FB-1	3		1	1	1							3
10/24/16	16:35	W		X	FERB-1	3		1	1	1							4
10/24/16	16:10	GW		X	HGWC-14	3		1	1	1							5
10/24/16	13:15	GW		X	HGWC-11	3		1	1	1							6
10/24/16	14:45	GW		X	HGWC-12	3		1	1	1							7
10/24/16	16:27	GW		X	HGWC-15	3		1	1	1							8

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: G. Jirak GET
A. Shoredits AS, M. Rogers MR
DATE/TIME: 10/24/2016 17:00

RELINQUISHED BY:
DATE/TIME: 10/24/16 17:00

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY/LAB:
DATE/TIME: 10/25/16 1410

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

pH checked: Yes No NA
Ice: Yes No NA
Temperature: 1.2 °C Min 1.2 °C Max
Custody Seal: Intact Broken Not Present
# of Coolers:
Cooler ID:

FOR LAB USE ONLY:
LAB #: AZJ0696
Entered into LIMS: MR
Tracking #:

20161024 Hammond 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: 11/4/2016 4:24:56PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 10/25/16 14:10

Work Order: AZJ0696
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 8 **#Containers:** 24

Minimum Temp(C): 1.0 **Maximum Temp(C):** 1.0 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

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

Comments:

The metals for HGWC-15 was pH adjusted by the Lab with HNO3. MMR

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

November 30, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Hammond
Pace Project No.: 30200508

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on October 26, 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 Hammond
Pace Project No.: 30200508

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 Hammond
Pace Project No.: 30200508

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30200508001	**HGWC-10**	Water	10/24/16 13:05	10/26/16 10:30
30200508002	**HGWC-13**	Water	10/24/16 14:45	10/26/16 10:30
30200508003	**FB-1**	Water	10/24/16 16:30	10/26/16 10:30
30200508004	**FERB-1**	Water	10/24/16 16:35	10/26/16 10:30
30200508005	**HGWC-14**	Water	10/24/16 16:10	10/26/16 10:30
30200508006	**HGWC-11**	Water	10/24/16 13:15	10/26/16 10:30
30200508007	**HGWC-12**	Water	10/24/16 14:45	10/26/16 10:30
30200508008	**HGWC-15**	Water	10/24/16 16:27	10/26/16 10:30

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

SAMPLE ANALYTE COUNT

Project: Plant Hammond
Pace Project No.: 30200508

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30200508001	**HGWC-10**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200508002	**HGWC-13**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200508003	**FB-1**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200508004	**FERB-1**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200508005	**HGWC-14**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200508006	**HGWC-11**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200508007	**HGWC-12**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200508008	**HGWC-15**	EPA 9315	JC2	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 Hammond
Pace Project No.: 30200508

Sample: HGWC-10 **Lab ID: 30200508001** Collected: 10/24/16 13:05 Received: 10/26/16 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	**0.0606 ± 0.187 (0.460) C:86% T:NA**	pCi/L	11/09/16 07:02	13982-63-3	
Radium-228	EPA 9320	**0.856 ± 0.396 (0.659) C:77% T:88%**	pCi/L	11/28/16 15:22	15262-20-1	
Total Radium	Total Radium Calculation	**0.917 ± 0.583 (1.12)**	pCi/L	11/29/16 16:28	7440-14-4	

Sample: HGWC-13 **Lab ID: 30200508002** Collected: 10/24/16 14:45 Received: 10/26/16 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	**0.394 ± 0.265 (0.428) C:83% T:NA**	pCi/L	11/09/16 07:02	13982-63-3	
Radium-228	EPA 9320	**1.15 ± 0.452 (0.677) C:78% T:80%**	pCi/L	11/28/16 15:22	15262-20-1	
Total Radium	Total Radium Calculation	**1.54 ± 0.717 (1.11)**	pCi/L	11/29/16 16:28	7440-14-4	

Sample: FB-1 **Lab ID: 30200508003** Collected: 10/24/16 16:30 Received: 10/26/16 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	**-0.0861 ± 0.132 (0.434) C:91% T:NA**	pCi/L	11/09/16 07:03	13982-63-3	
Radium-228	EPA 9320	**0.967 ± 0.403 (0.608) C:79% T:76%**	pCi/L	11/28/16 15:22	15262-20-1	
Total Radium	Total Radium Calculation	**0.967 ± 0.535 (1.04)**	pCi/L	11/29/16 16:28	7440-14-4	

Sample: FERB-1 **Lab ID: 30200508004** Collected: 10/24/16 16:35 Received: 10/26/16 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	**0.106 ± 0.171 (0.380) C:96% T:NA**	pCi/L	11/09/16 07:03	13982-63-3	
Radium-228	EPA 9320	**0.740 ± 0.380 (0.651) C:76% T:81%**	pCi/L	11/28/16 15:22	15262-20-1	
Total Radium	Total Radium Calculation	**0.846 ± 0.551 (1.03)**	pCi/L	11/29/16 16:28	7440-14-4	

Sample: HGWC-14 **Lab ID: 30200508005** Collected: 10/24/16 16:10 Received: 10/26/16 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	**0.435 ± 0.199 (0.252) C:97% T:NA**	pCi/L	11/09/16 07:10	13982-63-3	
Radium-228	EPA 9320	**1.44 ± 0.480 (0.645) C:78% T:89%**	pCi/L	11/28/16 15:22	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 Hammond
Pace Project No.: 30200508

Sample: HGWC-14 **Lab ID: 30200508005** Collected: 10/24/16 16:10 Received: 10/26/16 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**1.88 ± 0.679 (0.897)**	pCi/L	11/29/16 16:28	7440-14-4	

Sample: HGWC-11 **Lab ID: 30200508006** Collected: 10/24/16 13:15 Received: 10/26/16 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	**0.225 ± 0.158 (0.260) C:91% T:NA**	pCi/L	11/09/16 07:10	13982-63-3	
Radium-228	EPA 9320	**1.19 ± 0.493 (0.772) C:76% T:77%**	pCi/L	11/28/16 15:23	15262-20-1	
Total Radium	Total Radium Calculation	**1.42 ± 0.651 (1.03)**	pCi/L	11/29/16 16:28	7440-14-4	

Sample: HGWC-12 **Lab ID: 30200508007** Collected: 10/24/16 14:45 Received: 10/26/16 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	**0.218 ± 0.168 (0.301) C:93% T:NA**	pCi/L	11/09/16 07:10	13982-63-3	
Radium-228	EPA 9320	**1.76 ± 0.571 (0.753) C:80% T:77%**	pCi/L	11/28/16 15:23	15262-20-1	
Total Radium	Total Radium Calculation	**1.98 ± 0.739 (1.05)**	pCi/L	11/29/16 16:28	7440-14-4	

Sample: HGWC-15 **Lab ID: 30200508008** Collected: 10/24/16 16:27 Received: 10/26/16 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	**0.197 ± 0.160 (0.285) C:87% T:NA**	pCi/L	11/09/16 07:10	13982-63-3	
Radium-228	EPA 9320	**0.772 ± 0.385 (0.657) C:75% T:87%**	pCi/L	11/28/16 15:23	15262-20-1	
Total Radium	Total Radium Calculation	**0.969 ± 0.545 (0.942)**	pCi/L	11/29/16 16:28	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 Hammond
Pace Project No.: 30200508

QC Batch: 239218 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30200508001, 30200508002, 30200508003, 30200508004

METHOD BLANK: 1175535 Matrix: Water
Associated Lab Samples: 30200508001, 30200508002, 30200508003, 30200508004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0550 ± 0.118 (0.398) C:85% T:NA	pCi/L	11/09/16 06:59	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30200508

QC Batch: 239219 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30200508005, 30200508006, 30200508007, 30200508008

METHOD BLANK: 1175537 Matrix: Water
Associated Lab Samples: 30200508005, 30200508006, 30200508007, 30200508008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0202 ± 0.0834 (0.245) C:99% T:NA	pCi/L	11/09/16 07:10	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30200508

QC Batch: 239882 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30200508001, 30200508002, 30200508003, 30200508004, 30200508005, 30200508006, 30200508007, 30200508008

METHOD BLANK: 1178558 Matrix: Water
Associated Lab Samples: 30200508001, 30200508002, 30200508003, 30200508004, 30200508005, 30200508006, 30200508007, 30200508008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.610 ± 0.398 (0.756) C:82% T:76%	pCi/L	11/28/16 15:21	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: Plant Hammond
Pace Project No.: 30200508

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#:30200508

Chain of Custody

30200508

Pace Analytical
www.pacelabs.com

Workorder: AZJ0696 Workorder Name: Plant Hammond Owner Received Date: Results Requested By: 11/28/2016

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	HGWC-10	G	10/24/2016 13:05	AZJ0696-01	GW	1	X	001
2	HGWC-13	G	10/24/2016 14:45	AZJ0696-02	GW	1	X	002
3	FB-1	G	10/24/2016 16:30	AZJ0696-03	W	1	X	003
4	FERB-1	G	10/24/2016 16:35	AZJ0696-04	W	1	X	004
5	HGWC-14	G	10/24/2016 16:10	AZJ0696-05	GW	1	X	005
6	HGWC-11	G	10/24/2016 13:15	AZJ0696-06	GW	1	X	006
7	HGWC-12	G	10/24/2016 14:45	AZJ0696-07	GW	1	X	007
8	HGWC-15	G	10/24/2016 16:27	AZJ0696-08	GW	1	X	008
9								
10								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M Zalman	10/25/16	[illegible]	10-26-16 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.

30200508

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 Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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						
10/24/16	13:05	GW		X	HGWC-10	3		1	1	1						1
10/24/16	14:45	GW		X	HGWC-13	3		1	1	1						2
10/24/16	16:30	W		X	FB-1	3		1	1	1						3
10/24/16	16:35	W		X	FERB-1	3		1	1	1						4
10/24/16	16:10	GW		X	HGWC-14	3		1	1	1						5
10/24/16	13:15	GW		X	HGWC-11	3		1	1	1						6
10/24/16	14:45	GW		X	HGWC-12	3		1	1	1						7
10/24/16	16:27	GW		X	HGWC-15	3		1	1	1						8

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: G. Jirak GET
A. Shoredits AS; M. Rogers M.R.

DATE/TIME: 10/24/2016 17:00

RELINQUISHED BY:

DATE/TIME: 10/24/16 17:00

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY/LAB: MRahman

DATE/TIME: 10/25/16 1410

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 #: AZ70696
Entered into LIMS: MR
Tracking #:

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: PACE GA Project # 30200508

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

Tracking #: MSTR 6812 5100 0382

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: 10-26-16 TAW

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3. NO Time
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. 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 TAW 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: TAW Date: 10-26-16

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:	JC2
Date:	11/8/2016
Worklist:	32294
Matrix:	DW

Method Blank Assessment

MB Sample ID	1175537
MB concentration:	-0.020
M/B Counting Uncertainty:	0.083
MB MDC:	0.245
MB Numerical Performance Indicator:	-0.47
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS32294	LCSD32294
Count Date:	11/9/2016	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.675	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.506	
Target Conc. (pCi/L, g, F):	8.836	
Uncertainty (Calculated):	0.416	
Result (pCi/L, g, F):	7.443	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.860	
Numerical Performance Indicator:	-2.86	
Percent Recovery:	84.23%	
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.:	30200749001
Duplicate Sample I.D.	30200749001DUP
Sample Result (pCi/L, g, F):	0.927
Sample Result Counting Uncertainty (pCi/L, g, F):	0.267
Sample Duplicate Result (pCi/L, g, F):	1.134
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.354
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-0.917
Duplicate RPD:	20.13%
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.

30200749001
30200749001DUP

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

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	JC2
Date:	11/8/2016
Worklist:	32293
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1175535
MB concentration:	-0.055
M/B Counting Uncertainty:	0.118
MB MDC:	0.398
MB Numerical Performance Indicator:	-0.91
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS32293	LCSD32293
Count Date:	11/9/2016	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.675	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.501	
Target Conc. (pCi/L, g, F):	8.926	
Uncertainty (Calculated):	0.420	
Result (pCi/L, g, F):	7.610	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.866	
Numerical Performance Indicator:	-2.68	
Percent Recovery:	85.26%	
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.:	30200502001
Duplicate Sample I.D.	30200502001DUP
Sample Result (pCi/L, g, F):	0.981
Sample Result Counting Uncertainty (pCi/L, g, F):	0.372
Sample Duplicate Result (pCi/L, g, F):	1.175
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.397
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-0.700
Duplicate RPD:	18.00%
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.

30200502001
30200502001DUP

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:

11/30/16

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JLW
Date:	11/22/2016
Worklist:	32406
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1178558
MB concentration:	0.610
M/B Counting Uncertainty:	0.383
MB MDC:	0.756
MB Numerical Performance Indicator:	3.12
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS32406	LCSD32406
Count Date:	11/28/2016	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	25.962	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.813	
Target Conc. (pCi/L, g, F):	6.385	
Uncertainty (Calculated):	0.460	
Result (pCi/L, g, F):	8.119	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.744	
Numerical Performance Indicator:	3.89	
Percent Recovery:	127.15%	
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.:	30200749001	
Duplicate Sample I.D.	30200749001DUP	
Sample Result (pCi/L, g, F):	1.763	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.390	
Sample Duplicate Result (pCi/L, g, F):	2.026	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.427	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.892	30200749001
Duplicate RPD:	13.88%	30200749001DUP
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:

11/30/16

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:

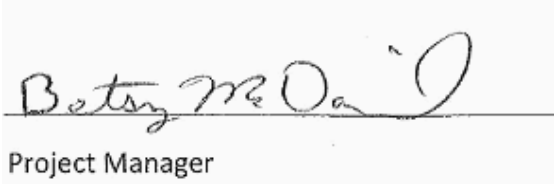
Georgia Power
2480 Maner Road
Atlanta, GA 30339

Attention: **Mr. Joju Abraham**

Report Number: **AZJ0727**
November 07, 2016
Project: CCR Event
Project #:Plant Hammond

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

November 07, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWC-18	AZJ0727-01	Ground Water	10/25/16 12:30	10/26/16 11:50
HGWC-16	AZJ0727-02	Ground Water	10/25/16 11:35	10/26/16 11:50
HGWC-17	AZJ0727-03	Ground Water	10/25/16 12:35	10/26/16 11:50
FERB-2	AZJ0727-04	Water	10/25/16 10:00	10/26/16 11:50
FB-2	AZJ0727-05	Water	10/25/16 09:00	10/26/16 11:50
Dup-2	AZJ0727-06	Ground Water	10/25/16 00:00	10/26/16 11:50

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

November 07, 2016

Report No.: AZJ0727
Client ID: HGWC-18
Date/Time Sampled: 10/25/2016 12:30:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0727-01
Date/Time Received: 10/26/2016 11:50:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1870	25	10	mg/L	SM 2540 C		1	10/27/16 16:30	10/27/16 16:30	6100729	JPT
Inorganic Anions											
Chloride	290	25	1.4	mg/L	EPA 300.0		100	10/27/16 14:24	11/02/16 22:56	6100735	RLC
Fluoride	0.58	0.30	0.02	mg/L	EPA 300.0		1	10/27/16 14:24	10/29/16 01:51	6100735	RLC
Sulfate	950	100	5.1	mg/L	EPA 300.0		100	10/27/16 14:24	11/02/16 22:56	6100735	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 13:56	6100754	CSW
Arsenic	0.0060	0.0050	0.0016	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 13:56	6100754	CSW
Barium	0.0349	0.0100	0.0004	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 13:56	6100754	CSW
Beryllium	0.0034	0.0030	0.00008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 13:56	6100754	CSW
Boron	8.50	0.500	0.0321	mg/L	EPA 6020B		5	10/28/16 09:30	11/02/16 15:29	6100754	CSW
Cadmium	0.0022	0.0010	0.00007	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 13:56	6100754	CSW
Calcium	362	25.0	1.55	mg/L	EPA 6020B		50	10/28/16 09:30	11/02/16 15:22	6100754	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 13:56	6100754	CSW
Cobalt	0.188	0.0100	0.0005	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 13:56	6100754	CSW
Lead	0.0015	0.0050	0.0001	mg/L	EPA 6020B	J	1	10/28/16 09:30	10/31/16 13:56	6100754	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 13:56	6100754	CSW
Selenium	0.0282	0.0100	0.0010	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 13:56	6100754	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 13:56	6100754	CSW
Lithium	0.0160	0.0500	0.0021	mg/L	EPA 6020B	J	1	10/28/16 09:30	10/31/16 13:56	6100754	CSW
Mercury	0.00004	0.00050	0.000041	mg/L	EPA 7470A	J	1	10/28/16 08:45	10/28/16 14:24	6100745	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

November 07, 2016

Report No.: AZJ0727
Client ID: HGWC-16
Date/Time Sampled: 10/25/2016 11:35:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0727-02
Date/Time Received: 10/26/2016 11:50:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	563	25	10	mg/L	SM 2540 C		1	10/27/16 16:30	10/27/16 16:30	6100729	JPT
Inorganic Anions											
Chloride	35	2.5	0.14	mg/L	EPA 300.0		10	10/27/16 14:24	11/02/16 23:18	6100735	RLC
Fluoride	0.25	0.30	0.02	mg/L	EPA 300.0	J	1	10/27/16 14:24	10/29/16 02:11	6100735	RLC
Sulfate	230	10	0.51	mg/L	EPA 300.0		10	10/27/16 14:24	11/02/16 23:18	6100735	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:02	6100754	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:02	6100754	CSW
Barium	0.0991	0.0100	0.0004	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:02	6100754	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:02	6100754	CSW
Boron	1.27	0.100	0.0064	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:02	6100754	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:02	6100754	CSW
Calcium	138	25.0	1.55	mg/L	EPA 6020B		50	10/28/16 09:30	11/02/16 15:35	6100754	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:02	6100754	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:02	6100754	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:02	6100754	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:02	6100754	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:02	6100754	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:02	6100754	CSW
Lithium	0.0029	0.0500	0.0021	mg/L	EPA 6020B	J	1	10/28/16 09:30	10/31/16 14:02	6100754	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 14:27	6100745	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

November 07, 2016

Report No.: AZJ0727
Client ID: HGWC-17
Date/Time Sampled: 10/25/2016 12:35:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0727-03
Date/Time Received: 10/26/2016 11:50:00AM

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	10/27/16 16:30	10/27/16 16:30	6100729	JPT
Inorganic Anions											
Chloride	98	2.5	0.14	mg/L	EPA 300.0		10	10/27/16 14:24	11/03/16 01:07	6100735	RLC
Fluoride	0.07	0.30	0.02	mg/L	EPA 300.0	J	1	10/27/16 14:24	10/29/16 02:32	6100735	RLC
Sulfate	440	10	0.51	mg/L	EPA 300.0		10	10/27/16 14:24	11/03/16 01:07	6100735	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:08	6100754	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:08	6100754	CSW
Barium	0.0225	0.0100	0.0004	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:08	6100754	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:08	6100754	CSW
Boron	5.38	0.500	0.0321	mg/L	EPA 6020B		5	10/28/16 09:30	11/02/16 16:03	6100754	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:08	6100754	CSW
Calcium	206	25.0	1.55	mg/L	EPA 6020B		50	10/28/16 09:30	11/02/16 15:56	6100754	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:08	6100754	CSW
Cobalt	0.0141	0.0100	0.0005	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:08	6100754	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:08	6100754	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:08	6100754	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:08	6100754	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:08	6100754	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:08	6100754	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 14:29	6100745	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

November 07, 2016

Report No.: AZJ0727
Client ID: FERB-2
Date/Time Sampled: 10/25/2016 10:00:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AZJ0727-04
Date/Time Received: 10/26/2016 11:50:00AM

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	10/27/16 16:30	10/27/16 16:30	6100729	JPT
Inorganic Anions											
Chloride	7.3	0.25	0.01	mg/L	EPA 300.0		1	10/27/16 14:24	10/29/16 02:53	6100735	RLC
Fluoride	0.02	0.30	0.02	mg/L	EPA 300.0	J	1	10/27/16 14:24	10/29/16 02:53	6100735	RLC
Sulfate	33	1.0	0.05	mg/L	EPA 300.0		1	10/27/16 14:24	10/29/16 02:53	6100735	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:14	6100754	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:14	6100754	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:14	6100754	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:14	6100754	CSW
Boron	0.0257	0.100	0.0064	mg/L	EPA 6020B	J	1	10/28/16 09:30	10/31/16 14:14	6100754	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:14	6100754	CSW
Calcium	0.0441	0.500	0.0311	mg/L	EPA 6020B	J	1	10/28/16 09:30	10/31/16 14:08	6100754	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:14	6100754	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:14	6100754	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:14	6100754	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:14	6100754	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:14	6100754	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:14	6100754	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:14	6100754	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 14:31	6100745	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

November 07, 2016

Report No.: AZJ0727
Client ID: FB-2
Date/Time Sampled: 10/25/2016 9:00:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AZJ0727-05
Date/Time Received: 10/26/2016 11:50:00AM

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	10/27/16 16:30	10/27/16 16:30	6100729	JPT
Inorganic Anions											
Chloride	0.26	0.25	0.01	mg/L	EPA 300.0		1	10/27/16 14:24	10/29/16 03:13	6100735	RLC
Fluoride	0.11	0.30	0.02	mg/L	EPA 300.0	J	1	10/27/16 14:24	10/29/16 03:13	6100735	RLC
Sulfate	0.89	1.0	0.05	mg/L	EPA 300.0	J	1	10/27/16 14:24	10/29/16 03:13	6100735	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:19	6100754	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:19	6100754	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:19	6100754	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:19	6100754	CSW
Boron	0.0123	0.100	0.0064	mg/L	EPA 6020B	J	1	10/28/16 09:30	10/31/16 14:19	6100754	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:19	6100754	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:19	6100754	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:19	6100754	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:19	6100754	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:19	6100754	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:19	6100754	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:19	6100754	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:19	6100754	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:19	6100754	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 14:34	6100745	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

November 07, 2016

Report No.: AZJ0727
Client ID: Dup-2
Date/Time Sampled: 10/25/2016 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZJ0727-06
Date/Time Received: 10/26/2016 11:50:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	584	25	10	mg/L	SM 2540 C		1	10/27/16 16:30	10/27/16 16:30	6100729	JPT
Inorganic Anions											
Chloride	34	0.25	0.01	mg/L	EPA 300.0		1	10/27/16 14:24	10/29/16 03:35	6100735	RLC
Fluoride	0.29	0.30	0.02	mg/L	EPA 300.0	J	1	10/27/16 14:24	10/29/16 03:35	6100735	RLC
Sulfate	230	10	0.51	mg/L	EPA 300.0		10	10/27/16 14:24	11/03/16 01:29	6100735	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:25	6100754	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:25	6100754	CSW
Barium	0.100	0.0100	0.0004	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:25	6100754	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:25	6100754	CSW
Boron	1.25	0.100	0.0064	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:25	6100754	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:25	6100754	CSW
Calcium	136	25.0	1.55	mg/L	EPA 6020B		50	10/28/16 09:30	11/02/16 16:09	6100754	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:25	6100754	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:25	6100754	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:25	6100754	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:25	6100754	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:25	6100754	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:25	6100754	CSW
Lithium	0.0029	0.0500	0.0021	mg/L	EPA 6020B	J	1	10/28/16 09:30	10/31/16 14:25	6100754	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 14:41	6100745	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

November 07, 2016

Report No.: AZJ0727

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100729 - SM 2540 C											
Blank (6100729-BLK1)						Prepared & Analyzed: 10/27/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6100729-BS1)						Prepared & Analyzed: 10/27/16					
Total Dissolved Solids	360	25	10	mg/L	400.00		90	84-108			
Duplicate (6100729-DUP1)		**Source: AZJ0726-03**				Prepared & Analyzed: 10/27/16					
Total Dissolved Solids	179	25	10	mg/L		172			4	10	
Duplicate (6100729-DUP2)		**Source: AZJ0727-02**				Prepared & Analyzed: 10/27/16					
Total Dissolved Solids	567	25	10	mg/L		563			0.7	10	

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

November 07, 2016

Report No.: AZJ0727

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100735 - EPA 300.0											
Blank (6100735-BLK1)						Prepared: 10/27/16 Analyzed: 10/28/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
LCS (6100735-BS1)						Prepared: 10/27/16 Analyzed: 10/28/16					
Chloride	10.1	0.25	0.01	mg/L	10.010		101	90-110			
Fluoride	10.1	0.30	0.02	mg/L	10.020		101	90-110			
Sulfate	10.1	1.0	0.05	mg/L	10.020		101	90-110			
Matrix Spike (6100735-MS1)		**Source: AZJ0710-05**				Prepared: 10/27/16 Analyzed: 10/28/16					
Chloride	10.8	0.25	0.01	mg/L	10.010	1.17	96	90-110			
Fluoride	9.73	0.30	0.02	mg/L	10.020	0.04	97	90-110			
Sulfate	10.4	1.0	0.05	mg/L	10.020	0.74	97	90-110			
Matrix Spike (6100735-MS2)		**Source: AZJ0726-03**				Prepared: 10/27/16 Analyzed: 10/29/16					
Chloride	14.1	0.25	0.01	mg/L	10.010	4.81	93	90-110			
Fluoride	9.53	0.30	0.02	mg/L	10.020	0.17	93	90-110			
Sulfate	40.1	1.0	0.05	mg/L	10.020	40.7	NR	90-110			QM-02
Matrix Spike Dup (6100735-MSD1)		**Source: AZJ0710-05**				Prepared: 10/27/16 Analyzed: 10/28/16					
Chloride	11.5	0.25	0.01	mg/L	10.010	1.17	103	90-110	6	15	
Fluoride	10.6	0.30	0.02	mg/L	10.020	0.04	105	90-110	9	15	
Sulfate	11.2	1.0	0.05	mg/L	10.020	0.74	104	90-110	7	15	

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

November 07, 2016

Report No.: AZJ0727

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100745 - EPA 7470A											
Blank (6100745-BLK1)						Prepared & Analyzed: 10/28/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6100745-BS1)						Prepared & Analyzed: 10/28/16					
Mercury	0.00244	0.00050	0.000041	mg/L	2.5000E-3		98	80-120			
Matrix Spike (6100745-MS1)		**Source: AZJ0710-06**				Prepared & Analyzed: 10/28/16					
Mercury	0.00245	0.00050	0.000041	mg/L	2.5000E-3	ND	98	75-125			
Matrix Spike Dup (6100745-MSD1)		**Source: AZJ0710-06**				Prepared & Analyzed: 10/28/16					
Mercury	0.00244	0.00050	0.000041	mg/L	2.5000E-3	ND	98	75-125	0.5	20	
Post Spike (6100745-PS1)		**Source: AZJ0710-06**				Prepared & Analyzed: 10/28/16					
Mercury	1.70			ug/L	1.6667	0.00854	102	80-120			
Batch 6100754 - EPA 3005A											
Blank (6100754-BLK1)						Prepared: 10/28/16 Analyzed: 10/31/16					
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							

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

November 07, 2016

Report No.: AZJ0727

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100754 - EPA 3005A											
LCS (6100754-BS1)						Prepared: 10/28/16 Analyzed: 10/31/16					
Antimony	0.104	0.0030	0.0008	mg/L	0.10000		104	80-120			
Arsenic	0.0981	0.0050	0.0016	mg/L	0.10000		98	80-120			
Barium	0.0998	0.0100	0.0004	mg/L	0.10000		100	80-120			
Beryllium	0.0990	0.0030	0.00008	mg/L	0.10000		99	80-120			
Boron	1.02	0.100	0.0064	mg/L	1.0000		102	80-120			
Cadmium	0.0997	0.0010	0.00007	mg/L	0.10000		100	80-120			
Calcium	1.00	0.500	0.0311	mg/L	1.0000		100	80-120			
Chromium	0.0995	0.0100	0.0009	mg/L	0.10000		99	80-120			
Cobalt	0.0981	0.0100	0.0005	mg/L	0.10000		98	80-120			
Copper	0.0960	0.0050	0.0005	mg/L	0.10000		96	80-120			
Lead	0.0998	0.0050	0.0001	mg/L	0.10000		100	80-120			
Molybdenum	0.103	0.0100	0.0017	mg/L	0.10000		103	80-120			
Nickel	0.0975	0.0050	0.0006	mg/L	0.10000		98	80-120			
Selenium	0.103	0.0100	0.0010	mg/L	0.10000		103	80-120			
Silver	0.103	0.0050	0.0005	mg/L	0.10000		103	80-120			
Thallium	0.102	0.0010	0.0002	mg/L	0.10000		102	80-120			
Vanadium	0.0975	0.0100	0.0071	mg/L	0.10000		98	80-120			
Zinc	0.106	0.0100	0.0021	mg/L	0.10000		106	80-120			
Lithium	0.101	0.0500	0.0021	mg/L	0.10000		101	80-120			
Matrix Spike (6100754-MS1)		**Source: AZJ0710-07**				Prepared: 10/28/16 Analyzed: 10/31/16					
Antimony	0.107	0.0030	0.0008	mg/L	0.10000	ND	107	75-125			
Arsenic	0.0981	0.0050	0.0016	mg/L	0.10000	ND	98	75-125			
Barium	0.128	0.0100	0.0004	mg/L	0.10000	0.0271	101	75-125			
Beryllium	0.0975	0.0030	0.00008	mg/L	0.10000	0.00009	97	75-125			
Boron	1.04	0.100	0.0064	mg/L	1.0000	ND	104	75-125			
Cadmium	0.0988	0.0010	0.00007	mg/L	0.10000	0.0001	99	75-125			
Calcium	32.3	2.50	0.155	mg/L	1.0000	30.2	208	75-125			QM-02
Chromium	0.107	0.0100	0.0009	mg/L	0.10000	ND	107	75-125			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	ND	102	75-125			
Copper	0.0968	0.0050	0.0005	mg/L	0.10000	ND	97	75-125			
Lead	0.100	0.0050	0.0001	mg/L	0.10000	0.0001	100	75-125			
Molybdenum	0.107	0.0100	0.0017	mg/L	0.10000	ND	107	75-125			
Nickel	0.100	0.0050	0.0006	mg/L	0.10000	0.0006	100	75-125			
Selenium	0.102	0.0100	0.0010	mg/L	0.10000	ND	102	75-125			
Silver	0.102	0.0050	0.0005	mg/L	0.10000	ND	102	75-125			
Thallium	0.104	0.0010	0.0002	mg/L	0.10000	ND	104	75-125			
Vanadium	0.107	0.0100	0.0071	mg/L	0.10000	ND	107	75-125			
Zinc	0.146	0.0100	0.0021	mg/L	0.10000	0.0402	105	75-125			
Lithium	0.102	0.0500	0.0021	mg/L	0.10000	ND	102	75-125			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 07, 2016

Report No.: AZJ0727

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100754 - EPA 3005A											
Matrix Spike Dup (6100754-MSD1)		**Source: AZJ0710-07**			Prepared: 10/28/16 Analyzed: 10/31/16						
Antimony	0.104	0.0030	0.0008	mg/L	0.10000	ND	104	75-125	2	20	
Arsenic	0.0989	0.0050	0.0016	mg/L	0.10000	ND	99	75-125	0.9	20	
Barium	0.129	0.0100	0.0004	mg/L	0.10000	0.0271	101	75-125	0.4	20	
Beryllium	0.0954	0.0030	0.00008	mg/L	0.10000	0.00009	95	75-125	2	20	
Boron	0.985	0.100	0.0064	mg/L	1.0000	ND	99	75-125	5	20	
Cadmium	0.0995	0.0010	0.00007	mg/L	0.10000	0.0001	99	75-125	0.7	20	
Calcium	32.2	2.50	0.155	mg/L	1.0000	30.2	197	75-125	0.4	20	QM-02
Chromium	0.106	0.0100	0.0009	mg/L	0.10000	ND	106	75-125	1	20	
Cobalt	0.104	0.0100	0.0005	mg/L	0.10000	ND	104	75-125	1	20	
Copper	0.0990	0.0050	0.0005	mg/L	0.10000	ND	99	75-125	2	20	
Lead	0.100	0.0050	0.0001	mg/L	0.10000	0.0001	100	75-125	0.3	20	
Molybdenum	0.106	0.0100	0.0017	mg/L	0.10000	ND	106	75-125	0.8	20	
Nickel	0.102	0.0050	0.0006	mg/L	0.10000	0.0006	101	75-125	1	20	
Selenium	0.101	0.0100	0.0010	mg/L	0.10000	ND	101	75-125	0.9	20	
Silver	0.102	0.0050	0.0005	mg/L	0.10000	ND	102	75-125	0.1	20	
Thallium	0.104	0.0010	0.0002	mg/L	0.10000	ND	104	75-125	0.005	20	
Vanadium	0.105	0.0100	0.0071	mg/L	0.10000	ND	105	75-125	1	20	
Zinc	0.149	0.0100	0.0021	mg/L	0.10000	0.0402	109	75-125	3	20	
Lithium	0.0977	0.0500	0.0021	mg/L	0.10000	ND	98	75-125	5	20	
Post Spike (6100754-PS1)		**Source: AZJ0710-07**			Prepared: 10/28/16 Analyzed: 10/31/16						
Antimony	97.4			ug/L	100.00	0.314	97	80-120			
Arsenic	102			ug/L	100.00	0.144	102	80-120			
Barium	125			ug/L	100.00	27.1	97	80-120			
Beryllium	101			ug/L	100.00	0.0908	101	80-120			
Boron	1020			ug/L	1000.0	6.19	101	80-120			
Cadmium	101			ug/L	100.00	0.113	101	80-120			
Calcium	32400			ug/L	1000.0	30200	220	80-120			QM-02
Chromium	103			ug/L	100.00	0.860	102	80-120			
Cobalt	100			ug/L	100.00	0.0677	100	80-120			
Copper	95.2			ug/L	100.00	0.178	95	80-120			
Lead	98.2			ug/L	100.00	0.145	98	80-120			
Molybdenum	105			ug/L	100.00	0.161	105	80-120			
Nickel	95.9			ug/L	100.00	0.590	95	80-120			
Selenium	105			ug/L	100.00	0.123	105	80-120			
Silver	103			ug/L	100.00	0.0110	103	80-120			
Thallium	102			ug/L	100.00	0.0377	102	80-120			
Vanadium	103			ug/L	100.00	0.451	102	80-120			
Zinc	143			ug/L	100.00	40.2	103	80-120			
Lithium	103			ug/L	100.00	0.622	103	80-120			

PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 07, 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: Joju Abraham

CC: Maria Padilla, Heath McCorkle

REQUESTED COMPLETION DATE:

PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Part 257 App. III & IV (EPA 6020/7470) — Container type P, Preservation 3	Cl, F, SO_4, & TDS (EPA 300.0 & SM 2540C) — Container type P, Preservation 7	Radium 226 & 228 (SW-846 9315/9320) — Container type P, Preservation 3	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
10/25/16	12:30	GW		X	HGWC-18	4	1	1	2	1	- Extra volume collected for lab Ra analysis QA/QC-
10/25/16	11:35	GW		X	HGWC-16	3	1	1	1	2	
10/25/16	12:35	GW		X	HGWC-17	3	1	1	1	3	
10/25/16	10:00	W		X	FERB-2	3	1	1	1	4	
10/25/16	09:00	W		X	FB-2	3	1	1	1	5	
10/25/16	--	GW		X	DUP-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

SAMPLED BY AND TITLE: G. Jirak GET, A. Shoredits ##, M. Rogers ## — DATE/TIME: 10/25/2016 14:00

RELINQUISHED BY: [signature] — DATE/TIME: 10-26-16 / 1150

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: M. Lanman — DATE/TIME: 10/26/16 1150

pH checked: (Yes) 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 (N/A) — # of Coolers — Cooler ID:

FOR LAB USE ONLY
LAB #: AZJ0727
Entered into LIMS: C/H
Tracking #:

20161025 Hammond 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: 11/7/2016 3:46:16PM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 10/26/16 11:50

Work Order: AZJ0727
Logged In By: Charles Hawks

OBSERVATIONS

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

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

December 05, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Hammond
Pace Project No.: 30200749

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on October 27, 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 Hammond
Pace Project No.: 30200749

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 Hammond
Pace Project No.: 30200749

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30200749001	**HGWC-18**	Water	10/25/16 12:30	10/27/16 09:30
30200749002	**HGWC-16**	Water	10/25/16 11:35	10/27/16 09:30
30200749003	**HGWC-17**	Water	10/25/16 12:35	10/27/16 09:30
30200749004	**FERB-2**	Water	10/25/16 10:00	10/27/16 09:30
30200749005	**FB-2**	Water	10/25/16 09:00	10/27/16 09:30
30200749006	**Dup-2**	Water	10/25/16 00:00	10/27/16 09:30

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

SAMPLE ANALYTE COUNT

Project: Plant Hammond
Pace Project No.: 30200749

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30200749001	**HGWC-18**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200749002	**HGWC-16**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200749003	**HGWC-17**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200749004	**FERB-2**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200749005	**FB-2**	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200749006	**Dup-2**	EPA 9315	JC2	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

PROJECT NARRATIVE

Project: Plant Hammond
Pace Project No.: 30200749

Method: **EPA 9315**
Description: 9315 Total Radium
Client: Pace Analytical Services, Inc. Atlanta
Date: December 05, 2016

General Information:
6 samples were analyzed for EPA 9315. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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

PROJECT NARRATIVE

Project: Plant Hammond
Pace Project No.: 30200749

Method: **EPA 9320**
Description: 9320 Radium 228
Client: Pace Analytical Services, Inc. Atlanta
Date: December 05, 2016

General Information:
6 samples were analyzed for EPA 9320. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Batch Comments:

Insufficient volume was available for a sample duplicate in batch 32407 for Ra-228 analysis by EPA 904.0. A LCS duplicate was prepared, however, it was inadvertently not spiked with Ra-228. The client was notified and gave permission to report samples from batch 32407 based on acceptable LCS recovery and MB results.
- QC Batch: 239884

Analyte Comments:

QC Batch: 239884

1c: Insufficient volume was available for a sample duplicate in batch 32407 for Ra-228 analysis by EPA 904.0. A LCS duplicate was prepared, however, it was inadvertently not spiked with Ra-228. The client was notified and gave permission to report samples from batch 32407 based on acceptable LCS recovery and MB results.
- BLANK (Lab ID: 1178563)
  - Radium-228
- Dup-2 (Lab ID: 30200749006)
  - Radium-228
- FB-2 (Lab ID: 30200749005)
  - Radium-228
- FERB-2 (Lab ID: 30200749004)
  - Radium-228
- HGWC-17 (Lab ID: 30200749003)
  - Radium-228

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

PROJECT NARRATIVE

Project: Plant Hammond
Pace Project No.: 30200749

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Pace Analytical Services, Inc. Atlanta
Date: December 05, 2016

General Information:
6 samples were analyzed for Total Radium Calculation. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30200749

Sample: HGWC-18 **Lab ID: 30200749001** Collected: 10/25/16 12:30 Received: 10/27/16 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	**0.927 ± 0.298 (0.275) C:93% T:NA**	pCi/L	11/09/16 07:10	13982-63-3	
Radium-228	EPA 9320	**1.76 ± 0.501 (0.532) C:82% T:90%**	pCi/L	11/28/16 15:23	15262-20-1	
Total Radium	Total Radium Calculation	**2.69 ± 0.799 (0.807)**	pCi/L	11/29/16 16:28	7440-14-4	

Sample: HGWC-16 **Lab ID: 30200749002** Collected: 10/25/16 11:35 Received: 10/27/16 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	**0.131 ± 0.163 (0.331) C:93% T:NA**	pCi/L	11/09/16 07:03	13982-63-3	
Radium-228	EPA 9320	**0.918 ± 0.441 (0.749) C:79% T:76%**	pCi/L	11/28/16 15:24	15262-20-1	
Total Radium	Total Radium Calculation	**1.05 ± 0.604 (1.08)**	pCi/L	11/29/16 16:28	7440-14-4	

Sample: HGWC-17 **Lab ID: 30200749003** Collected: 10/25/16 12:35 Received: 10/27/16 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	**0.329 ± 0.226 (0.367) C:98% T:NA**	pCi/L	11/09/16 07:03	13982-63-3	
Radium-228	EPA 9320	**0.783 ± 0.434 (0.795) C:71% T:89%**	pCi/L	11/29/16 11:24	15262-20-1	1c
Total Radium	Total Radium Calculation	**1.11 ± 0.660 (1.16)**	pCi/L	11/30/16 08:33	7440-14-4	

Sample: FERB-2 **Lab ID: 30200749004** Collected: 10/25/16 10:00 Received: 10/27/16 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	**-0.0667 ± 0.154 (0.496) C:68% T:NA**	pCi/L	11/09/16 07:04	13982-63-3	
Radium-228	EPA 9320	**0.593 ± 0.394 (0.754) C:72% T:87%**	pCi/L	11/29/16 11:24	15262-20-1	1c
Total Radium	Total Radium Calculation	**0.593 ± 0.548 (1.25)**	pCi/L	11/30/16 08:33	7440-14-4	

Sample: FB-2 **Lab ID: 30200749005** Collected: 10/25/16 09:00 Received: 10/27/16 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	**-0.177 ± 0.123 (0.515) C:79% T:NA**	pCi/L	11/09/16 07:04	13982-63-3	
Radium-228	EPA 9320	**0.954 ± 0.478 (0.838) C:75% T:80%**	pCi/L	11/29/16 11:52	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: Plant Hammond
Pace Project No.: 30200749

Sample: FB-2 **Lab ID: 30200749005** Collected: 10/25/16 09:00 Received: 10/27/16 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	**0.954 ± 0.601 (1.35)**	pCi/L	11/30/16 08:33	7440-14-4	

Sample: Dup-2 **Lab ID: 30200749006** Collected: 10/25/16 00:00 Received: 10/27/16 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	**0.121 ± 0.226 (0.518) C:94% T:NA**	pCi/L	11/09/16 07:04	13982-63-3	
Radium-228	EPA 9320	**0.908 ± 0.487 (0.871) C:73% T:78%**	pCi/L	11/29/16 11:52	15262-20-1	1c
Total Radium	Total Radium Calculation	**1.03 ± 0.713 (1.39)**	pCi/L	11/30/16 08:33	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 Hammond
Pace Project No.: 30200749

QC Batch: 239219 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30200749001, 30200749002, 30200749003, 30200749004, 30200749005, 30200749006

METHOD BLANK: 1175537 Matrix: Water
Associated Lab Samples: 30200749001, 30200749002, 30200749003, 30200749004, 30200749005, 30200749006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0202 ± 0.0834 (0.245) C:99% T:NA	pCi/L	11/09/16 07:10	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30200749

QC Batch: 239882 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30200749001, 30200749002

METHOD BLANK: 1178558 Matrix: Water
Associated Lab Samples: 30200749001, 30200749002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.610 ± 0.398 (0.756) C:82% T:76%	pCi/L	11/28/16 15:21	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30200749

QC Batch: 239884 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30200749003, 30200749004, 30200749005, 30200749006

METHOD BLANK: 1178563 Matrix: Water
Associated Lab Samples: 30200749003, 30200749004, 30200749005, 30200749006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.600 ± 0.390 (0.728) C:71% T:84%	pCi/L	11/29/16 11:51	1c

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 Hammond
Pace Project No.: 30200749

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.

BATCH QUALIFIERS

Batch: 239884

[1] Insufficient volume was available for a sample duplicate in batch 32407 for Ra-228 analysis by EPA 904.0. A LCS duplicate was prepared, however, it was inadvertently not spiked with Ra-228. The client was notified and gave permission to report samples from batch 32407 based on acceptable LCS recovery and MB results.

ANALYTE QUALIFIERS

1c Insufficient volume was available for a sample duplicate in batch 32407 for Ra-228 analysis by EPA 904.0. A LCS duplicate was prepared, however, it was inadvertently not spiked with Ra-228. The client was notified and gave permission to report samples from batch 32407 based on acceptable LCS recovery and MB results.

WO# : 30200749

Chain of Custody

30200749

Pace Analytical

Workorder: AZJ0727 Workorder Name: Plant Hammond Owner Received Date: Results Requested By: 11/28/2016

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	HGWC-18	G	10/25/2016 12:30	AZJ0727-01	GW	2					X												001
2	HGWC-16	G	10/25/2016 11:35	AZJ0727-02	GW	1					X												002
3	HGWC-17	G	10/25/2016 12:35	AZJ0727-03	GW	1					X												003
4	FERB-2	G	10/25/2016 10:00	AZJ0727-04	W	1					X												004
5	FB-2	G	10/25/2016 9:00	AZJ0727-05	W	1					X												005
6	Dup-2	G	10/25/2016 0:00	AZJ0727-06	GW	1					X												006
7																							
8																							
9																							
10																							

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			[signature]	10-27-16 930	
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.

30200749

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 Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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						
10/25/16	12:30	GW		X	HGWC-18	4		1	1	2						1
10/25/16	11:35	GW		X	HGWC-16	3		1	1	1						2
10/25/16	12:35	GW		X	HGWC-17	3		1	1	1						3
10/25/16	10:00	W		X	FERB-2	3		1	1	1						4
10/25/16	09:00	W		X	FB-2	3		1	1	1						5
10/25/16	--	GW		X	DUP-2	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

- Extra volume collected for lab Ra analysis QA/QC-

SAMPLED BY AND TITLE: G. Jirak GEJ
A. Shoredits AS; M. Rogers MR
DATE/TIME: 10/25/2016 14:00

RELINQUISHED BY: [signature] DATE/TIME: 10/26/16 1150

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: [signature] DATE/TIME: 10/26/16 1150

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

pH checked: Yes No NA
Ice: Yes No NA
Temperature: 1.0 °C Min: 1.0 °C Max:
Custody Seal: Intact Broken N/A
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: AZ50727
Entered into LIMS: CH
Tracking #:

20161025 Hammond COC.xlsx

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace Georgia Project # 30200749

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

Tracking #: 1081 2 5100 0599

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 10-27-16

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. 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: 10-27-16

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:	JLW
Date:	11/22/2016
Worklist:	32407
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1178563
MB concentration:	0.600
M/B Counting Uncertainty:	0.375
MB MDC:	0.728
MB Numerical Performance Indicator:	3.14
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS32407	LCSD32407
Count Date:	11/29/2016	11/29/2016
Spike I.D.:	16-027	16-027
Spike Concentration (pCi/mL):	25.955	25.954
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.808	0.808
Target Conc. (pCi/L, g, F):	6.426	6.422
Uncertainty (Calculated):	0.463	0.462
Result (pCi/L, g, F):	7.751	0.384
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.815	0.395
Numerical Performance Indicator:	2.77	-19.46
Percent Recovery:	120.61%	5.97%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Fail Low**

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.:	LCS32407	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD32407	
Sample Result (pCi/L, g, F):	7.751	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.815	
Sample Duplicate Result (pCi/L, g, F):	0.384	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.395	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	15.947	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	181.12%	
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 LCSD failure.
***Batch must be re-prepped due to unacceptable precision.

LCSD NOT SPIKED - CANNOT ASSESS PRECISION
CLIENT INFORMED AND GAVE PERMISSION TO
REPORT BASED ON ACCEPTABLE LCS and MB

12/5/16

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JLW
Date:	11/22/2016
Worklist:	32406
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1178558
MB concentration:	0.610
M/B Counting Uncertainty:	0.383
MB MDC:	0.756
MB Numerical Performance Indicator:	3.12
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS32406	LCSD32406
Count Date:	11/28/2016	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	25.962	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.813	
Target Conc. (pCi/L, g, F):	6.385	
Uncertainty (Calculated):	0.460	
Result (pCi/L, g, F):	8.119	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.744	
Numerical Performance Indicator:	3.89	
Percent Recovery:	127.15%	
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.:	30200749001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30200749001DUP	
Sample Result (pCi/L, g, F):	1.763	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.390	
Sample Duplicate Result (pCi/L, g, F):	2.026	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.427	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.892	30200749001
Duplicate RPD:	13.88%	30200749001DUP
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-226
Analyst:	JC2
Date:	11/8/2016
Worklist:	32294
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1175537
MB concentration:	-0.020
M/B Counting Uncertainty:	0.083
MB MDC:	0.245
MB Numerical Performance Indicator:	-0.47
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS32294	LCSD32294
Count Date:	11/9/2016	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.675	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.506	
Target Conc. (pCi/L, g, F):	8.836	
Uncertainty (Calculated):	0.416	
Result (pCi/L, g, F):	7.443	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.860	
Numerical Performance Indicator:	-2.86	
Percent Recovery:	84.23%	
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.:	30200749001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30200749001DUP	
Sample Result (pCi/L, g, F):	0.927	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.267	
Sample Duplicate Result (pCi/L, g, F):	1.134	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.354	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.917	30200749001
Duplicate RPD:	20.13%	30200749001DUP
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:

12/1/16

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: AZL0282
December 19, 2016
Project: CCR Event
Project #:Plant Hammond

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
HGWA-1	AZL0282-01	Water	12/06/16 10:20	12/07/16 12:00
HGWA-2	AZL0282-02	Water	12/06/16 10:20	12/07/16 12:00
HGWA-3	AZL0282-03	Water	12/06/16 11:50	12/07/16 12:00
HGWA-4	AZL0282-04	Water	12/06/16 12:52	12/07/16 12:00
FB-1	AZL0282-05	Water	12/06/16 12:10	12/07/16 12:00
FERB-1	AZL0282-06	Water	12/06/16 12:20	12/07/16 12:00
HGWC-7	AZL0282-07	Water	12/06/16 15:25	12/07/16 12:00
HGWC-8	AZL0282-08	Water	12/06/16 14:08	12/07/16 12:00
HGWC-9	AZL0282-09	Water	12/06/16 15:15	12/07/16 12:00
Dup-1	AZL0282-10	Water	12/06/16 00:00	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.: AZL0282
Client ID: HGWA-1
Date/Time Sampled: 12/6/2016 10:20:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0282-01
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	377	25	10	mg/L	SM 2540 C		1	12/10/16 17:30	12/10/16 17:30	6120286	JPT
Inorganic Anions											
Chloride	5.4	0.25	0.01	mg/L	EPA 300.0		1	12/12/16 09:29	12/13/16 15:28	6120316	RLC
Fluoride	0.11	0.30	0.02	mg/L	EPA 300.0	J	1	12/12/16 09:29	12/13/16 15:28	6120316	RLC
Sulfate	59	10	0.51	mg/L	EPA 300.0		10	12/12/16 09:29	12/14/16 08:23	6120316	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:10	6120281	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:10	6120281	CSW
Barium	0.0304	0.0100	0.0004	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:10	6120281	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:10	6120281	CSW
Boron	0.0211	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/10/16 15:10	12/12/16 16:10	6120281	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:10	6120281	CSW
Calcium	105	25.0	1.55	mg/L	EPA 6020B		50	12/10/16 15:10	12/14/16 14:38	6120281	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:10	6120281	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:10	6120281	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:10	6120281	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:10	6120281	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:10	6120281	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:10	6120281	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:10	6120281	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/13/16 09:50	12/13/16 13:57	6120352	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0282
Client ID: HGWA-2
Date/Time Sampled: 12/6/2016 10:20:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0282-02
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	145	25	10	mg/L	SM 2540 C		1	12/10/16 17:30	12/10/16 17:30	6120286	JPT
Inorganic Anions											
Chloride	6.0	0.25	0.01	mg/L	EPA 300.0		1	12/12/16 09:29	12/13/16 16:10	6120316	RLC
Fluoride	0.36	0.30	0.02	mg/L	EPA 300.0		1	12/12/16 09:29	12/13/16 16:10	6120316	RLC
Sulfate	44	1.0	0.05	mg/L	EPA 300.0		1	12/12/16 09:29	12/13/16 16:10	6120316	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:18	6120281	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:18	6120281	CSW
Barium	0.108	0.0100	0.0004	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:18	6120281	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	12/10/16 15:10	12/12/16 16:18	6120281	CSW
Boron	0.0326	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/10/16 15:10	12/12/16 16:18	6120281	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:18	6120281	CSW
Calcium	18.2	2.50	0.155	mg/L	EPA 6020B		5	12/10/16 15:10	12/14/16 14:44	6120281	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:18	6120281	CSW
Cobalt	0.0184	0.0100	0.0005	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:18	6120281	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:18	6120281	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:18	6120281	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:18	6120281	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:18	6120281	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:18	6120281	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/13/16 09:50	12/13/16 14:00	6120352	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0282
Client ID: HGWA-3
Date/Time Sampled: 12/6/2016 11:50:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0282-03
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	285	25	10	mg/L	SM 2540 C		1	12/10/16 17:30	12/10/16 17:30	6120286	JPT
Inorganic Anions											
Chloride	7.2	0.25	0.01	mg/L	EPA 300.0		1	12/12/16 09:29	12/13/16 16:32	6120316	RLC
Fluoride	0.21	0.30	0.02	mg/L	EPA 300.0	J	1	12/12/16 09:29	12/13/16 16:32	6120316	RLC
Sulfate	43	1.0	0.05	mg/L	EPA 300.0		1	12/12/16 09:29	12/13/16 16:32	6120316	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:25	6120281	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:25	6120281	CSW
Barium	0.127	0.0100	0.0004	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:25	6120281	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:25	6120281	CSW
Boron	0.0085	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/10/16 15:10	12/12/16 16:25	6120281	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:25	6120281	CSW
Calcium	74.9	5.00	0.311	mg/L	EPA 6020B		10	12/10/16 15:10	12/14/16 14:50	6120281	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:25	6120281	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:25	6120281	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:25	6120281	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:25	6120281	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:25	6120281	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:25	6120281	CSW
Lithium	0.0033	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/10/16 15:10	12/12/16 16:25	6120281	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/13/16 09:50	12/13/16 14:07	6120352	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0282
Client ID: HGWA-4
Date/Time Sampled: 12/6/2016 12:52:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0282-04
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	356	25	10	mg/L	SM 2540 C		1	12/10/16 17:30	12/10/16 17:30	6120286	JPT
Inorganic Anions											
Chloride	4.5	0.25	0.01	mg/L	EPA 300.0		1	12/12/16 09:29	12/13/16 06:40	6120316	RLC
Fluoride	0.07	0.30	0.02	mg/L	EPA 300.0	J	1	12/12/16 09:29	12/13/16 06:40	6120316	RLC
Sulfate	13	1.0	0.05	mg/L	EPA 300.0		1	12/12/16 09:29	12/13/16 06:40	6120316	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:33	6120281	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:33	6120281	CSW
Barium	0.0334	0.0100	0.0004	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:33	6120281	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:33	6120281	CSW
Boron	0.0158	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/10/16 15:10	12/12/16 16:33	6120281	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:33	6120281	CSW
Calcium	80.0	5.00	0.311	mg/L	EPA 6020B		10	12/10/16 15:10	12/14/16 14:56	6120281	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:33	6120281	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:33	6120281	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	12/10/16 15:10	12/12/16 16:33	6120281	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:33	6120281	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:33	6120281	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:33	6120281	CSW
Lithium	0.0046	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/10/16 15:10	12/12/16 16:33	6120281	CSW
Mercury	0.00005	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/13/16 09:50	12/13/16 14:09	6120352	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0282
Client ID: FB-1
Date/Time Sampled: 12/6/2016 12:10:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0282-05
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	ND	25	10	mg/L	SM 2540 C		1	12/10/16 17:30	12/10/16 17:30	6120286	JPT
Inorganic Anions											
Chloride	0.05	0.25	0.01	mg/L	EPA 300.0	J	1	12/12/16 09:29	12/12/16 18:28	6120316	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	12/12/16 09:29	12/12/16 18:28	6120316	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	12/12/16 09:29	12/12/16 18:28	6120316	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:40	6120281	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:40	6120281	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:40	6120281	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:40	6120281	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:40	6120281	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:40	6120281	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:40	6120281	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:40	6120281	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:40	6120281	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:40	6120281	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:40	6120281	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:40	6120281	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:40	6120281	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/10/16 15:10	12/12/16 16:40	6120281	CSW
Mercury	0.00005	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/13/16 09:50	12/13/16 14:11	6120352	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0282
Client ID: FERB-1
Date/Time Sampled: 12/6/2016 12:20:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0282-06
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	75	25	10	mg/L	SM 2540 C		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	12/12/16 09:29	12/12/16 18:48	6120316	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	12/12/16 09:29	12/12/16 18:48	6120316	RLC
Sulfate	0.06	1.0	0.05	mg/L	EPA 300.0	J	1	12/12/16 09:29	12/12/16 18:48	6120316	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 13:55	6120325	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 13:55	6120325	KLH
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 13:55	6120325	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 13:55	6120325	KLH
Boron	0.0184	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 13:55	6120325	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 13:55	6120325	KLH
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 13:55	6120325	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 13:55	6120325	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 13:55	6120325	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 13:55	6120325	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 13:55	6120325	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 13:55	6120325	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 13:55	6120325	KLH
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 13:55	6120325	KLH
Mercury	0.00005	0.00050	0.000041	mg/L	EPA 7470A	J	1	12/13/16 09:50	12/13/16 14:14	6120352	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0282
Client ID: HGWC-7
Date/Time Sampled: 12/6/2016 3:25:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0282-07
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	492	25	10	mg/L	SM 2540 C		1	12/10/16 18:16	12/10/16 18:16	6120287	JPT
Inorganic Anions											
Chloride	51	2.5	0.14	mg/L	EPA 300.0		10	12/12/16 09:29	12/14/16 08:44	6120316	RLC
Fluoride	0.26	0.30	0.02	mg/L	EPA 300.0	J	1	12/12/16 09:29	12/12/16 19:09	6120316	RLC
Sulfate	110	10	0.51	mg/L	EPA 300.0		10	12/12/16 09:29	12/14/16 08:44	6120316	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:01	6120325	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:01	6120325	KLH
Barium	0.0752	0.0100	0.0004	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:01	6120325	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:01	6120325	KLH
Boron	1.06	0.0400	0.0064	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:01	6120325	KLH
Cadmium	0.0002	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:01	6120325	KLH
Calcium	104	25.0	1.55	mg/L	EPA 6020B		50	12/12/16 16:35	12/17/16 02:19	6120325	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:01	6120325	KLH
Cobalt	0.0009	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:01	6120325	KLH
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:01	6120325	KLH
Molybdenum	0.0365	0.0100	0.0017	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:01	6120325	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:01	6120325	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:01	6120325	KLH
Lithium	0.0026	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:01	6120325	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/13/16 09:50	12/13/16 14:16	6120352	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0282
Client ID: HGWC-8
Date/Time Sampled: 12/6/2016 2:08:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0282-08
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	733	25	10	mg/L	SM 2540 C		1	12/10/16 18:16	12/10/16 18:16	6120287	JPT
Inorganic Anions											
Chloride	100	2.5	0.14	mg/L	EPA 300.0		10	12/12/16 09:29	12/14/16 09:06	6120316	RLC
Fluoride	0.76	0.30	0.02	mg/L	EPA 300.0		1	12/12/16 09:29	12/12/16 20:52	6120316	RLC
Sulfate	250	10	0.51	mg/L	EPA 300.0		10	12/12/16 09:29	12/14/16 09:06	6120316	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:07	6120325	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:07	6120325	KLH
Barium	0.0845	0.0100	0.0004	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:07	6120325	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:07	6120325	KLH
Boron	2.06	0.0400	0.0064	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:07	6120325	KLH
Cadmium	0.0017	0.0010	0.00007	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:07	6120325	KLH
Calcium	142	25.0	1.55	mg/L	EPA 6020B		50	12/12/16 16:35	12/17/16 02:24	6120325	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:07	6120325	KLH
Cobalt	0.0026	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:07	6120325	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:07	6120325	KLH
Molybdenum	0.520	0.0100	0.0017	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:07	6120325	KLH
Selenium	0.0024	0.0100	0.0010	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:07	6120325	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:07	6120325	KLH
Lithium	0.0032	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:07	6120325	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/13/16 09:50	12/13/16 14:18	6120352	MTC

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 19, 2016

Report No.: AZL0282
Client ID: HGWC-9
Date/Time Sampled: 12/6/2016 3:15:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0282-09
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	899	25	10	mg/L	SM 2540 C		1	12/10/16 18:16	12/10/16 18:16	6120287	JPT
Inorganic Anions											
Chloride	150	2.5	0.14	mg/L	EPA 300.0		10	12/12/16 09:29	12/14/16 09:28	6120316	RLC
Fluoride	0.31	0.30	0.02	mg/L	EPA 300.0		1	12/12/16 09:29	12/12/16 21:13	6120316	RLC
Sulfate	240	10	0.51	mg/L	EPA 300.0		10	12/12/16 09:29	12/14/16 09:28	6120316	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:13	6120325	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:13	6120325	KLH
Barium	0.128	0.0100	0.0004	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:13	6120325	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:13	6120325	KLH
Boron	2.15	0.0400	0.0064	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:13	6120325	KLH
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:13	6120325	KLH
Calcium	181	25.0	1.55	mg/L	EPA 6020B		50	12/12/16 16:35	12/17/16 02:30	6120325	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:13	6120325	KLH
Cobalt	0.0011	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:13	6120325	KLH
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:13	6120325	KLH
Molybdenum	0.0236	0.0100	0.0017	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:13	6120325	KLH
Selenium	0.0037	0.0100	0.0010	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:13	6120325	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:13	6120325	KLH
Lithium	0.0050	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:13	6120325	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/13/16 09:50	12/13/16 14:40	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.: AZL0282
Client ID: Dup-1
Date/Time Sampled: 12/6/2016 12:00:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0282-10
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	929	25	10	mg/L	SM 2540 C		1	12/10/16 18:16	12/10/16 18:16	6120287	JPT
Inorganic Anions											
Chloride	160	2.5	0.14	mg/L	EPA 300.0		10	12/12/16 09:29	12/14/16 09:50	6120316	RLC
Fluoride	0.31	0.30	0.02	mg/L	EPA 300.0		1	12/12/16 09:29	12/12/16 21:34	6120316	RLC
Sulfate	240	10	0.51	mg/L	EPA 300.0		10	12/12/16 09:29	12/14/16 09:50	6120316	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:19	6120325	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:19	6120325	KLH
Barium	0.127	0.0100	0.0004	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:19	6120325	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:19	6120325	KLH
Boron	2.13	0.0400	0.0064	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:19	6120325	KLH
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:19	6120325	KLH
Calcium	181	25.0	1.55	mg/L	EPA 6020B		50	12/12/16 16:35	12/17/16 02:36	6120325	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:19	6120325	KLH
Cobalt	0.0010	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:19	6120325	KLH
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:19	6120325	KLH
Molybdenum	0.0228	0.0100	0.0017	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:19	6120325	KLH
Selenium	0.0036	0.0100	0.0010	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:19	6120325	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/12/16 16:35	12/13/16 14:19	6120325	KLH
Lithium	0.0049	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/12/16 16:35	12/13/16 14:19	6120325	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/13/16 09:50	12/13/16 14:42	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.: AZL0282

General Chemistry - Quality Control

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

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.: AZL0282

Inorganic Anions - Quality Control

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

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.: AZL0282

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120281 - EPA 3005A											
Blank (6120281-BLK1)						Prepared: 12/10/16 Analyzed: 12/12/16					
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.0400	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0100	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							
LCS (6120281-BS1)						Prepared: 12/10/16 Analyzed: 12/12/16					
Antimony	0.0986	0.0030	0.0008	mg/L	0.10000		99	80-120			
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000		102	80-120			
Barium	0.0971	0.0100	0.0004	mg/L	0.10000		97	80-120			
Beryllium	0.104	0.0030	0.00008	mg/L	0.10000		104	80-120			
Boron	1.04	0.0400	0.0064	mg/L	1.0000		104	80-120			
Cadmium	0.0986	0.0010	0.00007	mg/L	0.10000		99	80-120			
Calcium	0.954	0.500	0.0311	mg/L	1.0000		95	80-120			
Chromium	0.0987	0.0100	0.0009	mg/L	0.10000		99	80-120			
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000		100	80-120			
Copper	0.100	0.0250	0.0005	mg/L	0.10000		100	80-120			
Lead	0.0987	0.0050	0.0001	mg/L	0.10000		99	80-120			
Molybdenum	0.100	0.0100	0.0017	mg/L	0.10000		100	80-120			
Nickel	0.102	0.0100	0.0006	mg/L	0.10000		102	80-120			
Selenium	0.102	0.0100	0.0010	mg/L	0.10000		102	80-120			
Silver	0.0987	0.0100	0.0005	mg/L	0.10000		99	80-120			
Thallium	0.0985	0.0010	0.0002	mg/L	0.10000		98	80-120			
Vanadium	0.102	0.0100	0.0071	mg/L	0.10000		102	80-120			
Zinc	0.101	0.0100	0.0021	mg/L	0.10000		101	80-120			
Lithium	0.102	0.0500	0.0021	mg/L	0.10000		102	80-120			

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.: AZL0282

Metals, Total - Quality Control

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

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.: AZL0282

Metals, Total - Quality Control

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

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.: AZL0282

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						
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			
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			

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.: AZL0282

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						
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	
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			

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.: AZL0282

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					
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 6120352 - EPA 7470A											
Blank (6120352-BLK1)						Prepared & Analyzed: 12/13/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6120352-BS1)						Prepared & Analyzed: 12/13/16					
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3		96	80-120			
Matrix Spike (6120352-MS1)			**Source: AZL0281-07**			Prepared & Analyzed: 12/13/16					
Mercury	0.00237	0.00050	0.000041	mg/L	2.5000E-3	ND	95	75-125			
Matrix Spike Dup (6120352-MSD1)			**Source: AZL0281-07**			Prepared & Analyzed: 12/13/16					
Mercury	0.00246	0.00050	0.000041	mg/L	2.5000E-3	ND	98	75-125	4	20	
Post Spike (6120352-PS1)			**Source: AZL0281-07**			Prepared & Analyzed: 12/13/16					
Mercury	1.67			ug/L	1.6667	0.0177	99	80-120			
Batch 6120353 - EPA 7470A											
Blank (6120353-BLK1)						Prepared & Analyzed: 12/13/16					
Mercury	ND	0.00050	0.000041	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

December 19, 2016

Report No.: AZL0282

Metals, Total - Quality Control

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

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

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.

Huff - 2016 1206-01
- 2016 1206-02

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 Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	CONTAINER TYPE	PRESERVATION	# of CONTAINERS	Metals Part 257 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
12/06/16	10:20	W		X	HGWA-1	P	3	3	1	1	1	1	
12/06/16	10:20	W		X	HGWA-2	P	3	3	1	1	1	2	
12/06/16	11:50	W		X	HGWA-3	P	3	4	1	1	2	3	
12/06/16	12:52	W		X	HGWA-4	P	3	3	1	1	1	4	
12/06/16	12:10	W		X	FB-1	P	3	3	1	1	1	5	
12/06/16	12:20	W		X	FERB-1	P	3	3	1	1	1	6	
12/06/16	15:25	W		X	HGWC-7	P	3	3	1	1	1	7	
12/06/16	14:08	W		X	HGWC-8	P	3	3	1	1	1	8	
12/06/16	15:15	W		X	HGWC-9	P	3	3	1	1	1	9	
12/06/16	--	W		X	DUP-1	P	3	3	1	1	1	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: W.Virgo WFV M.Thomas MT M.Rogers MR
DATE/TIME: 12/6/16 2230
RELINQUISHED BY: Will Virgo (ERM)
DATE/TIME:

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

RECEIVED BY LAB: Laburman
DATE/TIME: 12/07/16 1200
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

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 #: AZL0282
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: 12/8/2016 10:19:23AM**

Attn: Mr. Joju Abraham

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

Work Order: AZL0282
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 Hammond
Pace Project No.: 30204834

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on December 08, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: Plant Hammond
Pace Project No.: 30204834

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 Hammond
Pace Project No.: 30204834

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30204834001	**HGWA-1**	Water	12/06/16 10:20	12/08/16 10:20
30204834002	**HGWA-2**	Water	12/06/16 10:20	12/08/16 10:20
30204834003	**HGWA-3**	Water	12/06/16 11:50	12/08/16 10:20
30204834004	**HGWA-4**	Water	12/06/16 12:52	12/08/16 10:20
30204834005	**FB-1**	Water	12/06/16 12:10	12/08/16 10:20
30204834006	**FERB-1**	Water	12/06/16 12:20	12/08/16 10:20
30204834007	**HGWC-7**	Water	12/06/16 15:25	12/08/16 10:20
30204834008	**HGWC-8**	Water	12/06/16 14:08	12/08/16 10:20
30204834009	**HGWC-9**	Water	12/06/16 15:15	12/08/16 10:20
30204834010	**Dup-1**	Water	12/06/16 00:00	12/08/16 10:20

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

SAMPLE ANALYTE COUNT

Project: Plant Hammond
Pace Project No.: 30204834

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30204834001	**HGWA-1**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204834002	**HGWA-2**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204834003	**HGWA-3**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204834004	**HGWA-4**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204834005	**FB-1**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204834006	**FERB-1**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204834007	**HGWC-7**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204834008	**HGWC-8**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204834009	**HGWC-9**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30204834010	**Dup-1**	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: Plant Hammond
Pace Project No.: 30204834

Sample: HGWA-1 **Lab ID: 30204834001** Collected: 12/06/16 10:20 Received: 12/08/16 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0715 ± 0.110 (0.240) C:91% T:NA**	pCi/L	12/19/16 10:06	13982-63-3	
Radium-228	EPA 9320	**0.372 ± 0.358 (0.732) C:72% T:83%**	pCi/L	01/08/17 13:29	15262-20-1	
Total Radium	Total Radium Calculation	**0.444 ± 0.468 (0.972)**	pCi/L	01/11/17 16:00	7440-14-4	

Sample: HGWA-2 **Lab ID: 30204834002** Collected: 12/06/16 10:20 Received: 12/08/16 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.153 ± 0.139 (0.262) C:90% T:NA**	pCi/L	12/19/16 10:17	13982-63-3	
Radium-228	EPA 9320	**0.588 ± 0.383 (0.726) C:79% T:80%**	pCi/L	01/08/17 13:29	15262-20-1	
Total Radium	Total Radium Calculation	**0.741 ± 0.522 (0.988)**	pCi/L	01/11/17 16:00	7440-14-4	

Sample: HGWA-3 **Lab ID: 30204834003** Collected: 12/06/16 11:50 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	**0.0531 ± 0.0967 (0.220) C:96% T:NA**	pCi/L	12/19/16 10:07	13982-63-3	
Radium-228	EPA 9320	**0.752 ± 0.395 (0.691) C:75% T:82%**	pCi/L	01/08/17 13:29	15262-20-1	
Total Radium	Total Radium Calculation	**0.805 ± 0.492 (0.911)**	pCi/L	01/11/17 16:00	7440-14-4	

Sample: HGWA-4 **Lab ID: 30204834004** Collected: 12/06/16 12:52 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	**0.111 ± 0.149 (0.319) C:81% T:NA**	pCi/L	12/19/16 10:08	13982-63-3	
Radium-228	EPA 9320	**0.814 ± 0.410 (0.695) C:74% T:77%**	pCi/L	01/08/17 13:29	15262-20-1	
Total Radium	Total Radium Calculation	**0.925 ± 0.559 (1.01)**	pCi/L	01/11/17 16:00	7440-14-4	

Sample: FB-1 **Lab ID: 30204834005** Collected: 12/06/16 12:10 Received: 12/08/16 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0259 ± 0.0768 (0.250) C:81% T:NA**	pCi/L	12/19/16 10:08	13982-63-3	
Radium-228	EPA 9320	**0.405 ± 0.410 (0.845) C:69% T:79%**	pCi/L	01/08/17 13:29	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: Plant Hammond
Pace Project No.: 30204834

Sample: FB-1 **Lab ID: 30204834005** Collected: 12/06/16 12:10 Received: 12/08/16 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.405 ± 0.487 (1.10)**	pCi/L	01/11/17 16:00	7440-14-4	

Sample: FERB-1 **Lab ID: 30204834006** Collected: 12/06/16 12:20 Received: 12/08/16 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.109 ± 0.131 (0.272) C:89% T:NA**	pCi/L	12/19/16 10:08	13982-63-3	
Radium-228	EPA 9320	**0.504 ± 0.377 (0.731) C:74% T:77%**	pCi/L	01/08/17 13:30	15262-20-1	
Total Radium	Total Radium Calculation	**0.613 ± 0.508 (1.00)**	pCi/L	01/11/17 16:00	7440-14-4	

Sample: HGWC-7 **Lab ID: 30204834007** Collected: 12/06/16 15:25 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	**0.101 ± 0.117 (0.236) C:92% T:NA**	pCi/L	12/19/16 10:13	13982-63-3	
Radium-228	EPA 9320	**1.90 ± 0.554 (0.589) C:75% T:81%**	pCi/L	01/08/17 13:30	15262-20-1	
Total Radium	Total Radium Calculation	**2.00 ± 0.671 (0.825)**	pCi/L	01/11/17 16:00	7440-14-4	

Sample: HGWC-8 **Lab ID: 30204834008** Collected: 12/06/16 14:08 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	**0.370 ± 0.172 (0.173) C:97% T:NA**	pCi/L	12/19/16 10:13	13982-63-3	
Radium-228	EPA 9320	**0.401 ± 0.376 (0.765) C:70% T:80%**	pCi/L	01/08/17 17:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.771 ± 0.548 (0.938)**	pCi/L	01/11/17 16:00	7440-14-4	

Sample: HGWC-9 **Lab ID: 30204834009** Collected: 12/06/16 15:15 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	**0.126 ± 0.121 (0.228) C:99% T:NA**	pCi/L	12/19/16 10:13	13982-63-3	
Radium-228	EPA 9320	**-0.170 ± 0.301 (0.751) C:71% T:78%**	pCi/L	01/08/17 17:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.126 ± 0.422 (0.979)**	pCi/L	01/11/17 16:00	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30204834

Sample: Dup-1 **Lab ID: 30204834010** Collected: 12/06/16 00:00 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	**0.109 ± 0.135 (0.283) C:95% T:NA**	pCi/L	12/19/16 10:13	13982-63-3	
Radium-228	EPA 9320	**0.366 ± 0.311 (0.618) C:74% T:86%**	pCi/L	01/08/17 17:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.475 ± 0.446 (0.901)**	pCi/L	01/11/17 16:00	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: Plant Hammond
Pace Project No.: 30204834

QC Batch: 243001 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30204834007, 30204834008, 30204834009, 30204834010

METHOD BLANK: 1195275 Matrix: Water
Associated Lab Samples: 30204834007, 30204834008, 30204834009, 30204834010

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

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30204834

QC Batch: 243003 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30204834001, 30204834002, 30204834003, 30204834004, 30204834005, 30204834006, 30204834007, 30204834008, 30204834009, 30204834010

METHOD BLANK: 1195281 Matrix: Water
Associated Lab Samples: 30204834001, 30204834002, 30204834003, 30204834004, 30204834005, 30204834006, 30204834007, 30204834008, 30204834009, 30204834010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.462 ± 0.350 (0.678) C:76% T:78%	pCi/L	01/08/17 13:29	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30204834

QC Batch: 243000 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30204834001, 30204834002, 30204834003, 30204834004, 30204834005, 30204834006

METHOD BLANK: 1195272 Matrix: Water
Associated Lab Samples: 30204834001, 30204834002, 30204834003, 30204834004, 30204834005, 30204834006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0698 ± 0.0862 (0.168) C:97% T:NA	pCi/L	12/19/16 09:55	

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: Plant Hammond
Pace Project No.: 30204834

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: AZL0282 Workorder Name: Plant Hammond 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# : 30204834

30204834

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	HGWA-1	G	12/6/2016 10:20	AZL0282-01	GW	1	X	001
2	HGWA-2	G	12/6/2016 10:20	AZL0282-02	GW	1	X	002
3	HGWA-3	G	12/6/2016 11:50	AZL0282-03	GW	2	X	003
4	HGWA-4	G	12/6/2016 12:52	AZL0282-04	GW	1	X	004
5	FB-1	G	12/6/2016 12:10	AZL0282-05	W	1	X	005
6	FERB-1	G	12/6/2016 12:20	AZL0282-06	W	1	X	006
7	HGWC-7	G	12/6/2016 15:25	AZL0282-07	GW	1	X	007
8	HGWC-8	G	12/6/2016 14:08	AZL0282-08	GW	1	X	008
9	HGWC-9	G	12/6/2016 15:15	AZL0282-09	GW	1	X	009
10	Dup-1	G	12/6/2016 0:00	AZL0282-10	GW	1	X	010

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Kristin 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.

Huff - 2016 1206-01
- 2016 1206-02

30204834

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 Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	CONTAINER TYPE	PRESERVATION	# of CONTAINERS	Metals Part 257 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
						P	3		1	7	3	
12/06/16	10:20	W		X	HGWA-1			3	1	1	1	1
12/06/16	10:20	W		X	HGWA-2			3	1	1	1	2
12/06/16	11:50	W		X	HGWA-3			4	1	1	2	3
12/06/16	12:52	W		X	HGWA-4			3	1	1	1	4
12/06/16	12:10	W		X	FB-1			3	1	1	1	5
12/06/16	12:20	W		X	FERB-1			3	1	1	1	6
12/06/16	15:25	W		X	HGWC-7			3	1	1	1	7
12/06/16	14:08	W		X	HGWC-8			3	1	1	1	8
12/06/16	15:15	W		X	HGWC-9			3	1	1	1	9
~~12/06/16~~	--	W		X	DUP-1			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: W.Virgo WFV, M.Thomas MT, M.Rogers MR
DATE/TIME: 12/6/16 2230

RELINQUISHED BY: Will Virgo (ERM)
DATE/TIME:

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

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

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

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

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

FOR LAB USE ONLY
LAB #: AZL0282
Entered into LIMS: MR
Tracking #:

2016 12 06 Hammond Huff COCs.xlsx

Sample Condition Upon Receipt Pittsburgh

30204834

Pace Analytical

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: AMR 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: 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: 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:	32909
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1195272
MB concentration:	0.070
M/B Counting Uncertainty:	0.086
MB MDC:	0.168
MB Numerical Performance Indicator:	1.60
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS32909	LCSD32909
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):	0.506	
Target Conc. (pCi/L, g, F):	8.828	
Uncertainty (Calculated):	0.415	
Result (pCi/L, g, F):	7.612	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.708	
Numerical Performance Indicator:	-2.90	
Percent Recovery:	86.22%	
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.:	30204306004	
Duplicate Sample I.D.	30204306004DUP	
Sample Result (pCi/L, g, F):	0.021	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.091	
Sample Duplicate Result (pCi/L, g, F):	0.129	
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:	-1.252	30204306004
Duplicate RPD:	144.06%	30204306004DUP
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.

1/11/17

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:	12/16/2016
Worklist:	32910
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1195275
MB concentration:	0.058
M/B 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:	

MDC

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.

1/11/17

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	12/28/2016
Worklist:	32912
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1195281
MB concentration:	0.462
M/B Counting Uncertainty:	0.340
MB MDC:	0.678
MB Numerical Performance Indicator:	2.66
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS32912	LCSD32912
Count Date:	1/8/2017	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	25.613	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.817	
Target Conc. (pCi/L, g, F):	6.269	
Uncertainty (Calculated):	0.451	
Result (pCi/L, g, F):	8.156	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.806	
Numerical Performance Indicator:	4.00	
Percent Recovery:	130.10%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

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.:	30204834003	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30204834003DUP	
Sample Result (pCi/L, g, F):	0.752	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.372	
Sample Duplicate Result (pCi/L, g, F):	1.526	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.436	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-2.649	30204834003
Duplicate RPD:	67.95%	30204834003DUP
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: AZL0390
December 23, 2016
Project: CCR Event
Project #:Plant Hammond

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 23, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWC-10	AZL0390-01	Water	12/07/16 10:05	12/08/16 12:15
HGWC-11	AZL0390-02	Water	12/07/16 12:55	12/08/16 12:15
HGWC-12	AZL0390-03	Water	12/07/16 09:40	12/08/16 12:15
HGWC-13	AZL0390-04	Water	12/07/16 10:45	12/08/16 12:15
HGWC-14	AZL0390-05	Water	12/07/16 11:58	12/08/16 12:15
HGWC-15	AZL0390-06	Water	12/07/16 12:50	12/08/16 12:15
HGWC-16	AZL0390-07	Water	12/07/16 14:45	12/08/16 12:15
HGWC-17	AZL0390-08	Water	12/07/16 14:27	12/08/16 12:15
Dup-2	AZL0390-09	Water	12/07/16 00:00	12/08/16 12:15

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 23, 2016

Case Narrative

Total Dissolved Solids (TDS) via Standard Method 2540C (H-02 qualifier):
Due to analyst oversight, sample AZL0390-09 (Dup-2) was analyzed outside the recommended holding time of 7 days.

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 23, 2016

Report No.: AZL0390
Client ID: HGWC-10
Date/Time Sampled: 12/7/2016 10:05:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0390-01
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	697	25	10	mg/L	SM 2540 C		1	12/13/16 08:56	12/13/16 08:56	6120342	JPT
Inorganic Anions											
Chloride	96	2.5	0.14	mg/L	EPA 300.0		10	12/18/16 10:09	12/18/16 17:57	6120686	RLC
Fluoride	0.44	0.30	0.02	mg/L	EPA 300.0		1	12/18/16 10:09	12/20/16 16:22	6120686	RLC
Sulfate	200	10	0.51	mg/L	EPA 300.0		10	12/18/16 10:09	12/18/16 17:57	6120686	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:32	6120327	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:32	6120327	CSW
Barium	0.107	0.0100	0.0004	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:32	6120327	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:32	6120327	CSW
Boron	1.01	0.0400	0.0064	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:32	6120327	CSW
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 19:32	6120327	CSW
Calcium	183	50.0	3.11	mg/L	EPA 6020B		100	12/13/16 07:55	12/21/16 15:57	6120327	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:32	6120327	CSW
Cobalt	0.0012	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 19:32	6120327	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:32	6120327	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:32	6120327	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:32	6120327	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:32	6120327	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:32	6120327	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 11:40	12/14/16 16:27	6120387	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 23, 2016

Report No.: AZL0390
Client ID: HGWC-11
Date/Time Sampled: 12/7/2016 12:55:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0390-02
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	748	25	10	mg/L	SM 2540 C		1	12/12/16 21:27	12/12/16 21:27	6120343	JPT
Inorganic Anions											
Chloride	180	2.5	0.14	mg/L	EPA 300.0		10	12/18/16 10:09	12/18/16 18:18	6120686	RLC
Fluoride	0.55	0.30	0.02	mg/L	EPA 300.0		1	12/18/16 10:09	12/20/16 18:14	6120686	RLC
Sulfate	260	10	0.51	mg/L	EPA 300.0		10	12/18/16 10:09	12/18/16 18:18	6120686	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:48	6120327	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:48	6120327	CSW
Barium	0.100	0.0100	0.0004	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:48	6120327	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:48	6120327	CSW
Boron	2.96	0.0400	0.0064	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:48	6120327	CSW
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 19:48	6120327	CSW
Calcium	159	50.0	3.11	mg/L	EPA 6020B		100	12/13/16 07:55	12/21/16 16:03	6120327	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:48	6120327	CSW
Cobalt	0.0030	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 19:48	6120327	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:48	6120327	CSW
Molybdenum	0.0209	0.0100	0.0017	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:48	6120327	CSW
Selenium	0.0015	0.0100	0.0010	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 19:48	6120327	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:48	6120327	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:48	6120327	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 11:40	12/14/16 16:30	6120387	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 23, 2016

Report No.: AZL0390
Client ID: HGWC-12
Date/Time Sampled: 12/7/2016 9:40:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0390-03
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	811	25	10	mg/L	SM 2540 C		1	12/12/16 21:27	12/12/16 21:27	6120343	JPT
Inorganic Anions											
Chloride	190	2.5	0.14	mg/L	EPA 300.0		10	12/18/16 10:09	12/18/16 18:38	6120686	RLC
Fluoride	0.73	0.30	0.02	mg/L	EPA 300.0		1	12/18/16 10:09	12/20/16 18:58	6120686	RLC
Sulfate	280	10	0.51	mg/L	EPA 300.0		10	12/18/16 10:09	12/18/16 18:38	6120686	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:56	6120327	CSW
Arsenic	0.0046	0.0050	0.0016	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 19:56	6120327	CSW
Barium	0.130	0.0100	0.0004	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:56	6120327	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:56	6120327	CSW
Boron	3.35	0.0400	0.0064	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:56	6120327	CSW
Cadmium	0.0002	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 19:56	6120327	CSW
Calcium	193	50.0	3.11	mg/L	EPA 6020B		100	12/13/16 07:55	12/21/16 16:09	6120327	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:56	6120327	CSW
Cobalt	0.0021	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 19:56	6120327	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:56	6120327	CSW
Molybdenum	0.0432	0.0100	0.0017	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:56	6120327	CSW
Selenium	0.0011	0.0100	0.0010	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 19:56	6120327	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 19:56	6120327	CSW
Lithium	0.0155	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 19:56	6120327	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 11:40	12/14/16 16:32	6120387	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 23, 2016

Report No.: AZL0390
Client ID: HGWC-13
Date/Time Sampled: 12/7/2016 10:45:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0390-04
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	465	25	10	mg/L	SM 2540 C		1	12/12/16 21:27	12/12/16 21:27	6120343	JPT
Inorganic Anions											
Chloride	110	2.5	0.14	mg/L	EPA 300.0		10	12/18/16 10:09	12/18/16 18:59	6120686	RLC
Fluoride	1.0	0.30	0.02	mg/L	EPA 300.0		1	12/18/16 10:09	12/20/16 19:21	6120686	RLC
Sulfate	120	10	0.51	mg/L	EPA 300.0		10	12/18/16 10:09	12/18/16 18:59	6120686	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:03	6120327	CSW
Arsenic	0.350	0.0050	0.0016	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:03	6120327	CSW
Barium	0.0798	0.0100	0.0004	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:03	6120327	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:03	6120327	CSW
Boron	3.85	0.0400	0.0064	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:03	6120327	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:03	6120327	CSW
Calcium	113	50.0	3.11	mg/L	EPA 6020B		100	12/13/16 07:55	12/21/16 16:26	6120327	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:03	6120327	CSW
Cobalt	0.0034	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 20:03	6120327	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:03	6120327	CSW
Molybdenum	0.0383	0.0100	0.0017	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:03	6120327	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:03	6120327	CSW
Thallium	0.0004	0.0010	0.0002	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 20:03	6120327	CSW
Lithium	0.0477	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 20:03	6120327	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 11:40	12/14/16 16:34	6120387	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 23, 2016

Report No.: AZL0390
Client ID: HGWC-14
Date/Time Sampled: 12/7/2016 11:58:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0390-05
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	2740	25	10	mg/L	SM 2540 C		1	12/12/16 21:27	12/12/16 21:27	6120343	JPT
Inorganic Anions											
Chloride	510	25	1.4	mg/L	EPA 300.0		100	12/18/16 10:09	12/18/16 19:20	6120686	RLC
Fluoride	0.11	0.30	0.02	mg/L	EPA 300.0	J	1	12/18/16 10:09	12/20/16 19:43	6120686	RLC
Sulfate	1300	100	5.1	mg/L	EPA 300.0		100	12/18/16 10:09	12/18/16 19:20	6120686	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:11	6120327	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:11	6120327	CSW
Barium	0.0220	0.0100	0.0004	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:11	6120327	CSW
Beryllium	0.0006	0.0030	0.00008	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 20:11	6120327	CSW
Boron	16.5	4.00	0.642	mg/L	EPA 6020B		100	12/13/16 07:55	12/21/16 16:32	6120327	CSW
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 20:11	6120327	CSW
Calcium	590	250	15.5	mg/L	EPA 6020B		500	12/13/16 07:55	12/22/16 12:09	6120327	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:11	6120327	CSW
Cobalt	0.0269	0.0100	0.0005	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:11	6120327	CSW
Lead	0.0018	0.0050	0.0001	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 20:11	6120327	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:11	6120327	CSW
Selenium	0.0100	0.0100	0.0010	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 20:11	6120327	CSW
Thallium	0.0003	0.0010	0.0002	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 20:11	6120327	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:11	6120327	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 11:40	12/14/16 16:37	6120387	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 23, 2016

Report No.: AZL0390
Client ID: HGWC-15
Date/Time Sampled: 12/7/2016 12:50:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0390-06
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	1040	25	10	mg/L	SM 2540 C		1	12/12/16 21:27	12/12/16 21:27	6120343	JPT
Inorganic Anions											
Chloride	240	2.5	0.14	mg/L	EPA 300.0		10	12/18/16 10:09	12/18/16 20:42	6120686	RLC
Fluoride	0.23	0.30	0.02	mg/L	EPA 300.0	J	1	12/18/16 10:09	12/20/16 20:05	6120686	RLC
Sulfate	450	10	0.51	mg/L	EPA 300.0		10	12/18/16 10:09	12/18/16 20:42	6120686	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:18	6120327	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:18	6120327	CSW
Barium	0.0301	0.0100	0.0004	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:18	6120327	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:18	6120327	CSW
Boron	2.23	0.0400	0.0064	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:18	6120327	CSW
Cadmium	0.0018	0.0010	0.00007	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:18	6120327	CSW
Calcium	203	50.0	3.11	mg/L	EPA 6020B		100	12/13/16 07:55	12/21/16 16:38	6120327	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:18	6120327	CSW
Cobalt	0.0536	0.0100	0.0005	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:18	6120327	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:18	6120327	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:18	6120327	CSW
Selenium	0.0041	0.0100	0.0010	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 20:18	6120327	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:18	6120327	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:18	6120327	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 11:40	12/14/16 16:39	6120387	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 23, 2016

Report No.: AZL0390
Client ID: HGWC-16
Date/Time Sampled: 12/7/2016 2:45:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0390-07
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	561	25	10	mg/L	SM 2540 C		1	12/12/16 21:27	12/12/16 21:27	6120343	JPT
Inorganic Anions											
Chloride	38	0.25	0.01	mg/L	EPA 300.0		1	12/18/16 10:09	12/20/16 20:28	6120686	RLC
Fluoride	0.23	0.30	0.02	mg/L	EPA 300.0	J	1	12/18/16 10:09	12/20/16 20:28	6120686	RLC
Sulfate	220	10	0.51	mg/L	EPA 300.0		10	12/18/16 10:09	12/18/16 21:03	6120686	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:25	6120327	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:25	6120327	CSW
Barium	0.101	0.0100	0.0004	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:25	6120327	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:25	6120327	CSW
Boron	1.42	0.0400	0.0064	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:25	6120327	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:25	6120327	CSW
Calcium	146	50.0	3.11	mg/L	EPA 6020B		100	12/13/16 07:55	12/21/16 16:43	6120327	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:25	6120327	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:25	6120327	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:25	6120327	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:25	6120327	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:25	6120327	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:25	6120327	CSW
Lithium	0.0029	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 20:25	6120327	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 11:40	12/14/16 16:46	6120387	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 23, 2016

Report No.: AZL0390
Client ID: HGWC-17
Date/Time Sampled: 12/7/2016 2:27:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0390-08
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	866	25	10	mg/L	SM 2540 C		1	12/12/16 21:27	12/12/16 21:27	6120343	JPT
Inorganic Anions											
Chloride	89	2.5	0.14	mg/L	EPA 300.0		10	12/18/16 10:09	12/18/16 21:24	6120686	RLC
Fluoride	0.54	0.30	0.02	mg/L	EPA 300.0		1	12/18/16 10:09	12/20/16 20:50	6120686	RLC
Sulfate	410	10	0.51	mg/L	EPA 300.0		10	12/18/16 10:09	12/18/16 21:24	6120686	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:33	6120327	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:33	6120327	CSW
Barium	0.0227	0.0100	0.0004	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:33	6120327	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:33	6120327	CSW
Boron	5.74	0.0400	0.0064	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:33	6120327	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:33	6120327	CSW
Calcium	212	50.0	3.11	mg/L	EPA 6020B		100	12/13/16 07:55	12/21/16 16:49	6120327	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:33	6120327	CSW
Cobalt	0.0141	0.0100	0.0005	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:33	6120327	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:33	6120327	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:33	6120327	CSW
Selenium	0.0023	0.0100	0.0010	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 20:33	6120327	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:33	6120327	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:33	6120327	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 11:40	12/14/16 16:49	6120387	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 23, 2016

Report No.: AZL0390
Client ID: Dup-2
Date/Time Sampled: 12/7/2016 12:00:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0390-09
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	576	25	10	mg/L	SM 2540 C	H-02	1	12/15/16 17:29	12/15/16 17:29	6120479	JPT
Inorganic Anions											
Chloride	110	2.5	0.14	mg/L	EPA 300.0		10	12/18/16 10:09	12/18/16 21:44	6120686	RLC
Fluoride	1.1	0.30	0.02	mg/L	EPA 300.0		1	12/18/16 10:09	12/20/16 21:12	6120686	RLC
Sulfate	120	10	0.51	mg/L	EPA 300.0		10	12/18/16 10:09	12/18/16 21:44	6120686	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:40	6120327	CSW
Arsenic	0.356	0.0050	0.0016	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:40	6120327	CSW
Barium	0.0796	0.0100	0.0004	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:40	6120327	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:40	6120327	CSW
Boron	3.56	0.0400	0.0064	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:40	6120327	CSW
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 20:40	6120327	CSW
Calcium	116	50.0	3.11	mg/L	EPA 6020B		100	12/13/16 07:55	12/21/16 16:55	6120327	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:40	6120327	CSW
Cobalt	0.0034	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 20:40	6120327	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:40	6120327	CSW
Molybdenum	0.0380	0.0100	0.0017	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:40	6120327	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/13/16 07:55	12/14/16 20:40	6120327	CSW
Thallium	0.0004	0.0010	0.0002	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 20:40	6120327	CSW
Lithium	0.0460	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/13/16 07:55	12/14/16 20:40	6120327	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/14/16 11:40	12/14/16 16:51	6120387	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 23, 2016

Report No.: AZL0390

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	
Batch 6120343 - SM 2540 C											
Blank (6120343-BLK1)						Prepared & Analyzed: 12/12/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6120343-BS1)						Prepared & Analyzed: 12/12/16					
Total Dissolved Solids	364	25	10	mg/L	400.00		91	84-108			
Duplicate (6120343-DUP1)		**Source: AZL0390-07**				Prepared & Analyzed: 12/12/16					
Total Dissolved Solids	536	25	10	mg/L		561			5	10	QR-03
Duplicate (6120343-DUP2)		**Source: AZL0418-03**				Prepared & Analyzed: 12/12/16					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Batch 6120479 - SM 2540 C											
Blank (6120479-BLK1)						Prepared & Analyzed: 12/15/16					
Total Dissolved Solids	ND	25	10	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

December 23, 2016

Report No.: AZL0390

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120479 - SM 2540 C											
LCS (6120479-BS1)						Prepared & Analyzed: 12/15/16					
Total Dissolved Solids	397	25	10	mg/L	400.00		99	84-108			
Duplicate (6120479-DUP1)			**Source: AZL0390-09**			Prepared & Analyzed: 12/15/16					
Total Dissolved Solids	602	25	10	mg/L		576			4	10	

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 23, 2016

Report No.: AZL0390

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120686 - EPA 300.0											
Blank (6120686-BLK1)						Prepared: 12/18/16 Analyzed: 12/20/16					
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 (6120686-BS1)						Prepared: 12/18/16 Analyzed: 12/20/16					
Chloride	10.2	0.25	0.01	mg/L	10.010		102	90-110			
Fluoride	10.5	0.30	0.02	mg/L	10.020		104	90-110			
Sulfate	10.5	1.0	0.05	mg/L	10.020		104	90-110			
Matrix Spike (6120686-MS1)			**Source: AZL0387-01RE1**			Prepared: 12/18/16 Analyzed: 12/20/16					
Chloride	12.0	0.25	0.01	mg/L	10.010	2.00	100	90-110			
Fluoride	10.4	0.30	0.02	mg/L	10.020	0.24	102	90-110			
Sulfate	22.0	1.0	0.05	mg/L	10.020	13.0	90	90-110			
Matrix Spike (6120686-MS2)			**Source: AZL0390-02RE2**			Prepared: 12/18/16 Analyzed: 12/20/16					
Chloride	125	0.25	0.01	mg/L	10.010	129	NR	90-110			QM-02
Fluoride	11.7	0.30	0.02	mg/L	10.020	0.55	111	90-110			QM-05
Sulfate	186	1.0	0.05	mg/L	10.020	194	NR	90-110			QM-02
Matrix Spike Dup (6120686-MSD1)			**Source: AZL0387-01RE1**			Prepared: 12/18/16 Analyzed: 12/20/16					
Chloride	12.3	0.25	0.01	mg/L	10.010	2.00	102	90-110	2	15	
Fluoride	10.7	0.30	0.02	mg/L	10.020	0.24	105	90-110	3	15	
Sulfate	22.0	1.0	0.05	mg/L	10.020	13.0	90	90-110	0.09	15	

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 23, 2016

Report No.: AZL0390

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120327 - EPA 3005A											
Blank (6120327-BLK1)						Prepared: 12/13/16 Analyzed: 12/14/16					
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.0400	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 (6120327-BS1)						Prepared: 12/13/16 Analyzed: 12/14/16					
Antimony	0.102	0.0030	0.0008	mg/L	0.10000		102	80-120			
Arsenic	0.0998	0.0050	0.0016	mg/L	0.10000		100	80-120			
Barium	0.0989	0.0100	0.0004	mg/L	0.10000		99	80-120			
Beryllium	0.101	0.0030	0.00008	mg/L	0.10000		101	80-120			
Boron	1.01	0.0400	0.0064	mg/L	1.0000		101	80-120			
Cadmium	0.104	0.0010	0.00007	mg/L	0.10000		104	80-120			
Calcium	0.968	0.500	0.0311	mg/L	1.0000		97	80-120			
Chromium	0.0986	0.0100	0.0009	mg/L	0.10000		99	80-120			
Cobalt	0.0970	0.0100	0.0005	mg/L	0.10000		97	80-120			
Copper	0.101	0.0250	0.0005	mg/L	0.10000		101	80-120			
Lead	0.0988	0.0050	0.0001	mg/L	0.10000		99	80-120			
Molybdenum	0.103	0.0100	0.0017	mg/L	0.10000		103	80-120			
Nickel	0.0972	0.0100	0.0006	mg/L	0.10000		97	80-120			
Selenium	0.0986	0.0100	0.0010	mg/L	0.10000		99	80-120			
Silver	0.102	0.0100	0.0005	mg/L	0.10000		102	80-120			
Thallium	0.0989	0.0010	0.0002	mg/L	0.10000		99	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	0.0991	0.0500	0.0021	mg/L	0.10000		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

December 23, 2016

Report No.: AZL0390

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120327 - EPA 3005A											
Matrix Spike (6120327-MS1)		**Source: AZL0387-04**			Prepared: 12/13/16 Analyzed: 12/14/16						
Antimony	0.102	0.0030	0.0008	mg/L	0.10000	ND	102	75-125			
Arsenic	0.0936	0.0050	0.0016	mg/L	0.10000	ND	94	75-125			
Barium	0.186	0.0100	0.0004	mg/L	0.10000	0.0868	99	75-125			
Beryllium	0.0993	0.0030	0.00008	mg/L	0.10000	ND	99	75-125			
Boron	1.09	0.0400	0.0064	mg/L	1.0000	0.0758	102	75-125			
Cadmium	0.105	0.0010	0.00007	mg/L	0.10000	ND	105	75-125			
Calcium	48.3	25.0	1.55	mg/L	1.0000	45.3	298	75-125			QM-02
Chromium	0.0936	0.0100	0.0009	mg/L	0.10000	ND	94	75-125			
Cobalt	0.0929	0.0100	0.0005	mg/L	0.10000	ND	93	75-125			
Copper	0.0939	0.0250	0.0005	mg/L	0.10000	0.0006	93	75-125			
Lead	0.0995	0.0050	0.0001	mg/L	0.10000	ND	100	75-125			
Molybdenum	0.103	0.0100	0.0017	mg/L	0.10000	ND	103	75-125			
Nickel	0.0946	0.0100	0.0006	mg/L	0.10000	0.0017	93	75-125			
Selenium	0.0937	0.0100	0.0010	mg/L	0.10000	ND	94	75-125			
Silver	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125			
Thallium	0.100	0.0010	0.0002	mg/L	0.10000	ND	100	75-125			
Vanadium	0.0976	0.0100	0.0071	mg/L	0.10000	ND	98	75-125			
Zinc	0.0971	0.0100	0.0021	mg/L	0.10000	ND	97	75-125			
Lithium	0.111	0.0500	0.0021	mg/L	0.10000	0.0153	95	75-125			
Matrix Spike Dup (6120327-MSD1)		**Source: AZL0387-04**			Prepared: 12/13/16 Analyzed: 12/14/16						
Antimony	0.101	0.0030	0.0008	mg/L	0.10000	ND	101	75-125	2	20	
Arsenic	0.0947	0.0050	0.0016	mg/L	0.10000	ND	95	75-125	1	20	
Barium	0.183	0.0100	0.0004	mg/L	0.10000	0.0868	97	75-125	1	20	
Beryllium	0.0972	0.0030	0.00008	mg/L	0.10000	ND	97	75-125	2	20	
Boron	1.05	0.0400	0.0064	mg/L	1.0000	0.0758	98	75-125	3	20	
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125	4	20	
Calcium	47.7	25.0	1.55	mg/L	1.0000	45.3	242	75-125	1	20	QM-02
Chromium	0.0910	0.0100	0.0009	mg/L	0.10000	ND	91	75-125	3	20	
Cobalt	0.0901	0.0100	0.0005	mg/L	0.10000	ND	90	75-125	3	20	
Copper	0.0922	0.0250	0.0005	mg/L	0.10000	0.0006	92	75-125	2	20	
Lead	0.0961	0.0050	0.0001	mg/L	0.10000	ND	96	75-125	3	20	
Molybdenum	0.101	0.0100	0.0017	mg/L	0.10000	ND	101	75-125	2	20	
Nickel	0.0924	0.0100	0.0006	mg/L	0.10000	0.0017	91	75-125	2	20	
Selenium	0.0915	0.0100	0.0010	mg/L	0.10000	ND	92	75-125	2	20	
Silver	0.0993	0.0100	0.0005	mg/L	0.10000	ND	99	75-125	2	20	
Thallium	0.0950	0.0010	0.0002	mg/L	0.10000	ND	95	75-125	5	20	
Vanadium	0.0973	0.0100	0.0071	mg/L	0.10000	ND	97	75-125	0.3	20	
Zinc	0.0942	0.0100	0.0021	mg/L	0.10000	ND	94	75-125	3	20	
Lithium	0.112	0.0500	0.0021	mg/L	0.10000	0.0153	97	75-125	1	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

December 23, 2016

Report No.: AZL0390

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120327 - EPA 3005A											
Post Spike (6120327-PS1)			**Source: AZL0387-04**			Prepared: 12/13/16 Analyzed: 12/14/16					
Antimony	98.8			ug/L	100.00	0.310	98	80-120			
Arsenic	92.5			ug/L	100.00	-0.580	92	80-120			
Barium	178			ug/L	100.00	86.8	92	80-120			
Beryllium	97.2			ug/L	100.00	0.0100	97	80-120			
Boron	1070			ug/L	1000.0	75.8	99	80-120			
Cadmium	102			ug/L	100.00	0.00	102	80-120			
Calcium	46400			ug/L	1000.0	45300	113	80-120			
Chromium	92.3			ug/L	100.00	-2.69	92	80-120			
Cobalt	91.0			ug/L	100.00	0.230	91	80-120			
Copper	92.4			ug/L	100.00	0.580	92	80-120			
Lead	97.1			ug/L	100.00	0.00	97	80-120			
Molybdenum	103			ug/L	100.00	0.130	103	80-120			
Nickel	91.8			ug/L	100.00	1.67	90	80-120			
Selenium	92.1			ug/L	100.00	-0.370	92	80-120			
Silver	99.8			ug/L	100.00	0.00	100	80-120			
Thallium	97.6			ug/L	100.00	0.0100	98	80-120			
Vanadium	97.8			ug/L	100.00	2.96	95	80-120			
Zinc	95.2			ug/L	100.00	1.18	94	80-120			
Lithium	110			ug/L	100.00	15.3	95	80-120			
Batch 6120387 - EPA 7470A											
Blank (6120387-BLK1)						Prepared & Analyzed: 12/14/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6120387-BS1)						Prepared & Analyzed: 12/14/16					
Mercury	0.00237	0.00050	0.000041	mg/L	2.5000E-3		95	80-120			

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 23, 2016

Report No.: AZL0390

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120387 - EPA 7470A											
Duplicate (6120387-DUP1)			**Source: AZL0390-01**			Prepared & Analyzed: 12/14/16					
Mercury	ND	0.00050	0.000041	mg/L		ND				20	
Matrix Spike (6120387-MS1)			**Source: AZL0387-07**			Prepared & Analyzed: 12/14/16					
Mercury	0.00235	0.00050	0.000041	mg/L	2.5000E-3	ND	94	75-125			
Matrix Spike Dup (6120387-MSD1)			**Source: AZL0387-07**			Prepared & Analyzed: 12/14/16					
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125	2	20	
Post Spike (6120387-PS1)			**Source: AZL0387-07**			Prepared & Analyzed: 12/14/16					
Mercury	1.66			ug/L	1.6667	-0.0210	100	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 23, 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).

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.

AP 1&2 - 20161207 - 01

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 Hammond - AP 1&2

PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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								
12/07/16	10:05	W		X	HGWC-10	3		1	1	1							1	
12/07/16	12:55	W		X	HGWC-11	3		1	1	1							2	
12/07/16	9:40	W		X	HGWC-12	4		1	1	2							3	
12/07/16	10:45	W		X	HGWC-13	3		1	1	1							4	
12/07/16	11:58	W		X	HGWC-14	3		1	1	1							5	
12/07/16	12:50	W		X	HGWC-15	3		1	1	1							6	
12/07/16	14:45	W		X	HGWC-16	3		1	1	1							7	
12/07/16	14:27	W		X	HGWC-17	3		1	1	1							8	
12/07/16	–	W		X	DUP-2	3		1	1	1							9	

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

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

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

SAMPLED BY AND TITLE: W.Virgo WV M.Thomas MT

DATE/TIME: 12/7/16 2300

RELINQUISHED BY: (Will Virgo (ERM) SS

DATE/TIME:

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

DATE/TIME:

FOR LAB USE ONLY
LAB #: AZL0390
Entered into LIMS: MR

RECEIVED BY LAB: Rahman

DATE/TIME: 12/08/16 1215

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

Tracking #:

Packed: No NA

Ice: Yes No NA

Temperature: 1°C Min: 1°C Max:

Custody Seal: Intact Broken Not Present

# of Coolers:

Cooler ID:

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 10:48:23AM

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 12/08/16 12:15

Work Order: AZL0390
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 9 **#Containers:** 28

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 23, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Hammond
Pace Project No.: 30205268

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 Hammond
Pace Project No.: 30205268

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 Hammond
Pace Project No.: 30205268

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30205268001	**HGWC-10**	Water	12/07/16 10:05	12/12/16 09:20
30205268002	**HGWC-11**	Water	12/07/16 12:55	12/12/16 09:20
30205268003	**HGWC-12**	Water	12/07/16 09:40	12/12/16 09:20
30205268004	**HGWC-13**	Water	12/07/16 10:45	12/12/16 09:20
30205268005	**HGWC-14**	Water	12/07/16 11:58	12/12/16 09:20
30205268006	**HGWC-15**	Water	12/07/16 12:50	12/12/16 09:20
30205268007	**HGWC-16**	Water	12/07/16 14:45	12/12/16 09:20
30205268008	**HGWC-17**	Water	12/07/16 14:27	12/12/16 09:20
30205268009	**Dup-2**	Water	12/07/16 00:01	12/12/16 09:20

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

SAMPLE ANALYTE COUNT

Project: Plant Hammond
Pace Project No.: 30205268

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30205268001	**HGWC-10**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205268002	**HGWC-11**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205268003	**HGWC-12**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205268004	**HGWC-13**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205268005	**HGWC-14**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205268006	**HGWC-15**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205268007	**HGWC-16**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205268008	**HGWC-17**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205268009	**Dup-2**	EPA 9315	LAL	1
		EPA 9320	JAL	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: Plant Hammond
Pace Project No.: 30205268

Sample: HGWC-10 **Lab ID: 30205268001** Collected: 12/07/16 10:05 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	**0.143 ± 0.159 (0.305) C:91% T:NA**	pCi/L	01/17/17 11:19	13982-63-3	
Radium-228	EPA 9320	**0.415 ± 0.375 (0.758) C:64% T:93%**	pCi/L	01/22/17 16:01	15262-20-1	
Total Radium	Total Radium Calculation	**0.558 ± 0.534 (1.06)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: HGWC-11 **Lab ID: 30205268002** Collected: 12/07/16 12:55 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	**0.206 ± 0.168 (0.270) C:97% T:NA**	pCi/L	01/17/17 11:19	13982-63-3	
Radium-228	EPA 9320	**0.575 ± 0.387 (0.728) C:64% T:90%**	pCi/L	01/22/17 16:01	15262-20-1	
Total Radium	Total Radium Calculation	**0.781 ± 0.555 (0.998)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: HGWC-12 **Lab ID: 30205268003** Collected: 12/07/16 09:40 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	**0.153 ± 0.195 (0.411) C:97% T:NA**	pCi/L	01/17/17 11:19	13982-63-3	
Radium-228	EPA 9320	**0.166 ± 0.337 (0.742) C:68% T:94%**	pCi/L	01/22/17 16:01	15262-20-1	
Total Radium	Total Radium Calculation	**0.319 ± 0.532 (1.15)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: HGWC-13 **Lab ID: 30205268004** Collected: 12/07/16 10:45 Received: 12/12/16 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.187 ± 0.176 (0.313) C:90% T:NA**	pCi/L	01/17/17 11:19	13982-63-3	
Radium-228	EPA 9320	**0.470 ± 0.363 (0.708) C:69% T:85%**	pCi/L	01/22/17 16:01	15262-20-1	
Total Radium	Total Radium Calculation	**0.657 ± 0.539 (1.02)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: HGWC-14 **Lab ID: 30205268005** Collected: 12/07/16 11:58 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	**0.383 ± 0.234 (0.342) C:97% T:NA**	pCi/L	01/17/17 11:19	13982-63-3	
Radium-228	EPA 9320	**0.968 ± 0.435 (0.686) C:65% T:87%**	pCi/L	01/22/17 16:01	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: Plant Hammond
Pace Project No.: 30205268

Sample: HGWC-14 **Lab ID: 30205268005** Collected: 12/07/16 11:58 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	**1.35 ± 0.669 (1.03)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: HGWC-15 **Lab ID: 30205268006** Collected: 12/07/16 12:50 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	**0.0588 ± 0.130 (0.307) C:91% T:NA**	pCi/L	01/17/17 11:19	13982-63-3	
Radium-228	EPA 9320	**0.243 ± 0.374 (0.808) C:64% T:87%**	pCi/L	01/22/17 16:01	15262-20-1	
Total Radium	Total Radium Calculation	**0.302 ± 0.504 (1.12)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: HGWC-16 **Lab ID: 30205268007** Collected: 12/07/16 14:45 Received: 12/12/16 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.101 ± 0.190 (0.435) C:93% T:NA**	pCi/L	01/17/17 09:42	13982-63-3	
Radium-228	EPA 9320	**1.01 ± 0.470 (0.791) C:66% T:90%**	pCi/L	01/22/17 16:01	15262-20-1	
Total Radium	Total Radium Calculation	**1.11 ± 0.660 (1.23)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: HGWC-17 **Lab ID: 30205268008** Collected: 12/07/16 14:27 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	**0.0575 ± 0.127 (0.300) C:97% T:NA**	pCi/L	01/17/17 09:42	13982-63-3	
Radium-228	EPA 9320	**0.906 ± 0.444 (0.756) C:65% T:91%**	pCi/L	01/22/17 15:59	15262-20-1	
Total Radium	Total Radium Calculation	**0.964 ± 0.571 (1.06)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: Dup-2 **Lab ID: 30205268009** Collected: 12/07/16 00:01 Received: 12/12/16 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0156 ± 0.145 (0.394) C:82% T:NA**	pCi/L	01/17/17 09:42	13982-63-3	
Radium-228	EPA 9320	**1.12 ± 0.455 (0.673) C:65% T:88%**	pCi/L	01/22/17 15:59	15262-20-1	
Total Radium	Total Radium Calculation	**1.14 ± 0.600 (1.07)**	pCi/L	01/23/17 12:09	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 Hammond
Pace Project No.: 30205268

QC Batch: 245742 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30205268001, 30205268002, 30205268003, 30205268004, 30205268005, 30205268006, 30205268007, 30205268008, 30205268009

METHOD BLANK: 1208865 Matrix: Water
Associated Lab Samples: 30205268001, 30205268002, 30205268003, 30205268004, 30205268005, 30205268006, 30205268007, 30205268008, 30205268009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.683 ± 0.424 (0.798) C:67% T:93%	pCi/L	01/22/17 16:02	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30205268

QC Batch: 245741 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30205268001, 30205268002, 30205268003, 30205268004, 30205268005, 30205268006, 30205268007, 30205268008, 30205268009

METHOD BLANK: 1208863 Matrix: Water
Associated Lab Samples: 30205268001, 30205268002, 30205268003, 30205268004, 30205268005, 30205268006, 30205268007, 30205268008, 30205268009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.106 ± 0.218 (0.506) C:79% T:NA	pCi/L	01/17/17 09:29	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: Plant Hammond
Pace Project No.: 30205268

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#:30205268

Chain of Custody

30205268

Pace Analytical

Workorder: AZL0390 Workorder Name: Plant Hammond 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
1	HGWC-10	G	12/7/2016 10:05	AZL0390-01	GW	1					X												
2	HGWC-11	G	12/7/2016 12:55	AZL0390-02	GW	1					X												
3	HGWC-12	G	12/7/2016 9:40	AZL0390-03	GW	2					X												
4	HGWC-13	G	12/7/2016 10:45	AZL0390-04	GW	1					X												
5	HGWC-14	G	12/7/2016 11:58	AZL0390-05	GW	1					X												
6	HGWC-15	G	12/7/2016 12:50	AZL0390-06	GW	1					X												
7	HGWC-16	G	12/7/2016 14:45	AZL0390-07	GW	1					X												
8	HGWC-17	G	12/7/2016 14:27	AZL0390-08	GW	1					X												
9	Dup-2	G	12/7/2016 0:00	AZL0390-09	GW	1					X												
10																							

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Karen Heiss	12-12-16 0912	
2			[illegible]	12/13/16 0920	
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.

N/A N N Y

AP 1&2 - 20161207 - 01

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

30205268

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 Hammond - AP 1&2

PROJECT #: CCR

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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							
12/07/16	10:05	W		X	HGWC-10	3		1	1	1							1
12/07/16	12:55	W		X	HGWC-11	3		1	1	1							2
12/07/16	9:40	W		X	HGWC-12	4		1	1	2							3
12/07/16	10:45	W		X	HGWC-13	3		1	1	1							4
12/07/16	11:58	W		X	HGWC-14	3		1	1	1							5
12/07/16	12:50	W		X	HGWC-15	3		1	1	1							6
12/07/16	14:45	W		X	HGWC-16	3		1	1	1							7
12/07/16	14:27	W		X	HGWC-17	3		1	1	1							8
12/07/16	–	W		X	DUP-2	3		1	1	1							9

ANALYSIS REQUESTED

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: W.Virgo WV M.Thomas MT
DATE/TIME: 12/7/16 2300

RELINQUISHED BY: (Will Virgo (ERM) WV
DATE/TIME:

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: M Latman
DATE/TIME: 12/08/16 1215

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

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

Temperature: 1°C Min. 1°C Max.

Sufficient: Yes No NA
Ice: Yes No NA

FOR LAB USE ONLY
LAB #: AZL0390
Entered into LIMS:
Tracking #:

2016 12 07 Hammond Huff COCs.xlsx

Sample Condition Upon Receipt Pittsburgh

30205268

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 / 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: / Date:

Client Notification/ Resolution:

Person Contacted: Date/Time: Contacted By:

Comments/ Resolution:

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

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Test: Ra-228
Analyst: JAL
Date: 1/13/2017
Worklist: 33373
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1208865
MB concentration:	0.683
M/B Counting Uncertainty:	0.406
MB MDC:	0.798
MB Numerical Performance Indicator:	3.30
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS33373	LCSD33373
Count Date:	1/22/2017	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	25.495	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.810	
Target Conc. (pCi/L, g, F):	6.292	
Uncertainty (Calculated):	0.453	
Result (pCi/L, g, F):	7.232	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.801	
Numerical Performance Indicator:	2.00	
Percent Recovery:	114.95%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

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.:	30205268003	
Duplicate Sample I.D.	30205268003DUP	
Sample Result (pCi/L, g, F):	0.166	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.335	
Sample Duplicate Result (pCi/L, g, F):	0.662	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.361	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-1.972	30205268003
Duplicate RPD:	119.81%	30205268003DUP
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

Test: Ra-226
Analyst: LAL
Date: 1/16/2017
Worklist: 33372
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1208863
MB concentration:	0.106
M/B Counting Uncertainty:	0.217
MB MDC:	0.506
MB Numerical Performance Indicator:	0.95
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS33372	LCSD33372
Count Date:	1/17/2017	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.671	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.510	
Target Conc. (pCi/L, g, F):	8.765	
Uncertainty (Calculated):	0.412	
Result (pCi/L, g, F):	7.466	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.856	
Numerical Performance Indicator:	-2.68	
Percent Recovery:	85.18%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

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.:	30205266001
Duplicate Sample I.D.	30205266001DUP
Sample Result (pCi/L, g, F):	-0.003
Sample Result Counting Uncertainty (pCi/L, g, F):	0.180
Sample Duplicate Result (pCi/L, g, F):	-0.014
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.099
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	0.110
Duplicate RPD:	-137.14%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

30205266001
30205266001DUP

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:

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: AZL0435
December 28, 2016
Project: CCR Event
Project #:Plant Hammond

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

December 28, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HGWA-5	AZL0435-01	Water	12/08/16 10:44	12/09/16 12:05
HGWA-6	AZL0435-02	Water	12/08/16 12:47	12/09/16 12:05
HGWC-18	AZL0435-03	Water	12/08/16 14:17	12/09/16 12:05
FB-2	AZL0435-04	Water	12/08/16 14:40	12/09/16 12:05
FERB-2	AZL0435-05	Water	12/08/16 14:50	12/09/16 12:05

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.: AZL0435
Client ID: HGWA-5
Date/Time Sampled: 12/8/2016 10:44:00AM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0435-01
Date/Time Received: 12/9/2016 12:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	116	25	10	mg/L	SM 2540 C		1	12/13/16 11:20	12/13/16 11:20	6120356	JPT
Inorganic Anions											
Chloride	2.0	0.25	0.01	mg/L	EPA 300.0		1	12/22/16 16:55	12/23/16 12:53	6120712	RNB
Fluoride	0.08	0.30	0.02	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 12:53	6120712	RNB
Sulfate	20	1.0	0.05	mg/L	EPA 300.0		1	12/22/16 16:55	12/23/16 12:53	6120712	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:18	6120445	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:18	6120445	CSW
Barium	0.0496	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:18	6120445	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:18	6120445	CSW
Boron	0.0083	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 20:18	6120445	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:18	6120445	CSW
Calcium	23.5	5.00	0.311	mg/L	EPA 6020B		10	12/15/16 09:05	12/22/16 17:10	6120445	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:18	6120445	CSW
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 20:18	6120445	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:18	6120445	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:18	6120445	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:18	6120445	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:18	6120445	CSW
Lithium	0.0027	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 20:18	6120445	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 14:50	6120426	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.: AZL0435
Client ID: HGWA-6
Date/Time Sampled: 12/8/2016 12:47:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0435-02
Date/Time Received: 12/9/2016 12:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	235	25	10	mg/L	SM 2540 C		1	12/13/16 11:20	12/13/16 11:20	6120356	JPT
Inorganic Anions											
Chloride	1.6	0.25	0.01	mg/L	EPA 300.0		1	12/22/16 16:55	12/23/16 13:14	6120712	RNB
Fluoride	0.06	0.30	0.02	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 13:14	6120712	RNB
Sulfate	36	1.0	0.05	mg/L	EPA 300.0		1	12/22/16 16:55	12/23/16 13:14	6120712	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:23	6120445	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:23	6120445	CSW
Barium	0.162	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:23	6120445	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:23	6120445	CSW
Boron	0.0159	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 20:23	6120445	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:23	6120445	CSW
Calcium	49.2	25.0	1.55	mg/L	EPA 6020B		50	12/15/16 09:05	12/22/16 17:47	6120445	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:23	6120445	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:23	6120445	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:23	6120445	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:23	6120445	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:23	6120445	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:23	6120445	CSW
Lithium	0.0100	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 20:23	6120445	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 14:53	6120426	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.: AZL0435
Client ID: HGWC-18
Date/Time Sampled: 12/8/2016 2:17:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0435-03
Date/Time Received: 12/9/2016 12:05:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1930	25	10	mg/L	SM 2540 C		1	12/13/16 11:20	12/13/16 11:20	6120356	JPT
Inorganic Anions											
Chloride	300	25	1.4	mg/L	EPA 300.0		100	12/22/16 16:55	12/24/16 16:05	6120712	RNB
Fluoride	0.63	0.30	0.02	mg/L	EPA 300.0		1	12/22/16 16:55	12/23/16 13:35	6120712	RNB
Sulfate	910	100	5.1	mg/L	EPA 300.0		100	12/22/16 16:55	12/24/16 16:05	6120712	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:29	6120445	CSW
Arsenic	0.0070	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:29	6120445	CSW
Barium	0.0339	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:29	6120445	CSW
Beryllium	0.0033	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:29	6120445	CSW
Boron	7.15	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:29	6120445	CSW
Cadmium	0.0024	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:29	6120445	CSW
Calcium	366	50.0	3.11	mg/L	EPA 6020B		100	12/15/16 09:05	12/22/16 17:53	6120445	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:29	6120445	CSW
Cobalt	0.206	0.0100	0.0005	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:29	6120445	CSW
Lead	0.0017	0.0050	0.0001	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 20:29	6120445	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:29	6120445	CSW
Selenium	0.0373	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:29	6120445	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:29	6120445	CSW
Lithium	0.0144	0.0500	0.0021	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 20:29	6120445	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 14:55	6120426	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.: AZL0435
Client ID: FB-2
Date/Time Sampled: 12/8/2016 2:40:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0435-04
Date/Time Received: 12/9/2016 12:05:00PM

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 11:20	12/13/16 11:20	6120356	JPT
Inorganic Anions											
Chloride	0.15	0.25	0.01	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 14:17	6120712	RNB
Fluoride	0.03	0.30	0.02	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 14:17	6120712	RNB
Sulfate	0.47	1.0	0.05	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 14:17	6120712	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:35	6120445	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:35	6120445	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:35	6120445	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:35	6120445	CSW
Boron	0.0245	0.0400	0.0064	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 20:35	6120445	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:35	6120445	CSW
Calcium	0.0797	0.500	0.0311	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 20:35	6120445	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:35	6120445	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:35	6120445	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:35	6120445	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:35	6120445	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:35	6120445	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:35	6120445	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:35	6120445	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 14:57	6120426	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.: AZL0435
Client ID: FERB-2
Date/Time Sampled: 12/8/2016 2:50:00PM
Matrix: Water

Project: CCR Event
Lab Number ID: AZL0435-05
Date/Time Received: 12/9/2016 12:05:00PM

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 11:20	12/13/16 11:20	6120356	JPT
Inorganic Anions											
Chloride	0.05	0.25	0.01	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 14:39	6120712	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	12/22/16 16:55	12/23/16 14:39	6120712	RNB
Sulfate	0.14	1.0	0.05	mg/L	EPA 300.0	J	1	12/22/16 16:55	12/23/16 14:39	6120712	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:52	6120445	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:52	6120445	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:52	6120445	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:52	6120445	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:52	6120445	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:52	6120445	CSW
Calcium	0.0321	0.500	0.0311	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 20:52	6120445	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:52	6120445	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:52	6120445	CSW
Lead	0.0003	0.0050	0.0001	mg/L	EPA 6020B	J	1	12/15/16 09:05	12/16/16 20:52	6120445	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:52	6120445	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:52	6120445	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:52	6120445	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	12/15/16 09:05	12/16/16 20:52	6120445	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	12/15/16 10:35	12/15/16 15:00	6120426	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.: AZL0435

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120356 - SM 2540 C											
Blank (6120356-BLK1)						Prepared & Analyzed: 12/13/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6120356-BS1)						Prepared & Analyzed: 12/13/16					
Total Dissolved Solids	411	25	10	mg/L	400.00		103	84-108			
Duplicate (6120356-DUP1)		**Source: AZL0406-04**				Prepared & Analyzed: 12/13/16					
Total Dissolved Solids	974	25	10	mg/L		980			0.6	10	
Duplicate (6120356-DUP2)		**Source: AZL0435-04**				Prepared & Analyzed: 12/13/16					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	

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.: AZL0435

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120712 - EPA 300.0											
Blank (6120712-BLK1)						Prepared: 12/22/16 Analyzed: 12/23/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
LCS (6120712-BS1)						Prepared: 12/22/16 Analyzed: 12/23/16					
Chloride	10.2	0.25	0.01	mg/L	10.010		102	90-110			
Fluoride	10.5	0.30	0.02	mg/L	10.020		105	90-110			
Sulfate	10.2	1.0	0.05	mg/L	10.020		101	90-110			
Matrix Spike (6120712-MS1)			**Source: AZL0418-01**			Prepared: 12/22/16 Analyzed: 12/23/16					
Chloride	15.6	0.25	0.01	mg/L	10.010	6.97	87	90-110			QM-02
Fluoride	9.22	0.30	0.02	mg/L	10.020	0.09	91	90-110			
Sulfate	70.7	1.0	0.05	mg/L	10.020	68.3	24	90-110			QM-02
Matrix Spike (6120712-MS2)			**Source: AZL0435-03**			Prepared: 12/22/16 Analyzed: 12/23/16					
Chloride	182	0.25	0.01	mg/L	10.010	199	NR	90-110			QM-02
Fluoride	13.4	0.30	0.02	mg/L	10.020	0.63	127	90-110			QM-05
Sulfate	415	1.0	0.05	mg/L	10.020	440	NR	90-110			QM-02
Matrix Spike Dup (6120712-MSD1)			**Source: AZL0418-01**			Prepared: 12/22/16 Analyzed: 12/23/16					
Chloride	16.5	0.25	0.01	mg/L	10.010	6.97	95	90-110	5	15	
Fluoride	10.1	0.30	0.02	mg/L	10.020	0.09	100	90-110	9	15	
Sulfate	70.9	1.0	0.05	mg/L	10.020	68.3	25	90-110	0.2	15	QM-02

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.: AZL0435

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120426 - EPA 7470A											
Blank (6120426-BLK1)						Prepared & Analyzed: 12/15/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6120426-BS1)						Prepared & Analyzed: 12/15/16					
Mercury	0.00245	0.00050	0.000041	mg/L	2.5000E-3		98	80-120			
Matrix Spike (6120426-MS1)		**Source: AZL0406-04**				Prepared & Analyzed: 12/15/16					
Mercury	0.00243	0.00050	0.000041	mg/L	2.5000E-3	ND	97	75-125			
Matrix Spike Dup (6120426-MSD1)		**Source: AZL0406-04**				Prepared & Analyzed: 12/15/16					
Mercury	0.00242	0.00050	0.000041	mg/L	2.5000E-3	ND	97	75-125	0.3	20	
Post Spike (6120426-PS1)		**Source: AZL0406-04**				Prepared & Analyzed: 12/15/16					
Mercury	1.77			ug/L	1.6667	-0.0161	106	80-120			
Batch 6120445 - EPA 3005A											
Blank (6120445-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							

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.: AZL0435

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120445 - EPA 3005A											
LCS (6120445-BS1)						Prepared: 12/15/16 Analyzed: 12/16/16					
Antimony	0.116	0.0030	0.0008	mg/L	0.10000		116	80-120			
Arsenic	0.105	0.0050	0.0016	mg/L	0.10000		105	80-120			
Barium	0.105	0.0100	0.0004	mg/L	0.10000		105	80-120			
Beryllium	0.111	0.0030	0.00008	mg/L	0.10000		111	80-120			
Boron	1.05	0.0400	0.0064	mg/L	1.0000		105	80-120			
Cadmium	0.104	0.0010	0.00007	mg/L	0.10000		104	80-120			
Calcium	1.07	0.500	0.0311	mg/L	1.0000		107	80-120			
Chromium	0.104	0.0100	0.0009	mg/L	0.10000		104	80-120			
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000		105	80-120			
Copper	0.103	0.0250	0.0005	mg/L	0.10000		103	80-120			
Lead	0.104	0.0050	0.0001	mg/L	0.10000		104	80-120			
Molybdenum	0.106	0.0100	0.0017	mg/L	0.10000		106	80-120			
Nickel	0.105	0.0100	0.0006	mg/L	0.10000		105	80-120			
Selenium	0.102	0.0100	0.0010	mg/L	0.10000		102	80-120			
Silver	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Thallium	0.105	0.0010	0.0002	mg/L	0.10000		105	80-120			
Vanadium	0.107	0.0100	0.0071	mg/L	0.10000		107	80-120			
Zinc	0.106	0.0100	0.0021	mg/L	0.10000		106	80-120			
Lithium	0.106	0.0500	0.0021	mg/L	0.10000		106	80-120			
Matrix Spike (6120445-MS1)		**Source: AZL0418-01**				Prepared: 12/15/16 Analyzed: 12/16/16					
Antimony	0.115	0.0030	0.0008	mg/L	0.10000	ND	115	75-125			
Arsenic	0.105	0.0050	0.0016	mg/L	0.10000	ND	105	75-125			
Barium	0.174	0.0100	0.0004	mg/L	0.10000	0.0781	95	75-125			
Beryllium	0.0958	0.0030	0.00008	mg/L	0.10000	ND	96	75-125			
Boron	1.01	0.0400	0.0064	mg/L	1.0000	0.224	79	75-125			
Cadmium	0.104	0.0010	0.00007	mg/L	0.10000	ND	104	75-125			
Calcium	78.8	25.0	1.55	mg/L	1.0000	74.0	480	75-125			QM-02
Chromium	0.104	0.0100	0.0009	mg/L	0.10000	ND	104	75-125			
Cobalt	0.108	0.0100	0.0005	mg/L	0.10000	0.0005	107	75-125			
Copper	0.102	0.0250	0.0005	mg/L	0.10000	ND	102	75-125			
Lead	0.101	0.0050	0.0001	mg/L	0.10000	ND	101	75-125			
Molybdenum	0.110	0.0100	0.0017	mg/L	0.10000	ND	110	75-125			
Nickel	0.106	0.0100	0.0006	mg/L	0.10000	ND	106	75-125			
Selenium	0.102	0.0100	0.0010	mg/L	0.10000	ND	102	75-125			
Silver	0.103	0.0100	0.0005	mg/L	0.10000	ND	103	75-125			
Thallium	0.104	0.0010	0.0002	mg/L	0.10000	ND	104	75-125			
Vanadium	0.107	0.0100	0.0071	mg/L	0.10000	ND	107	75-125			
Zinc	0.111	0.0100	0.0021	mg/L	0.10000	ND	111	75-125			
Lithium	0.0967	0.0500	0.0021	mg/L	0.10000	ND	97	75-125			

PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

December 28, 2016

Report No.: AZL0435

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6120445 - EPA 3005A											
Matrix Spike Dup (6120445-MSD1)		**Source: AZL0418-01**			Prepared: 12/15/16 Analyzed: 12/16/16						
Antimony	0.118	0.0030	0.0008	mg/L	0.10000	ND	118	75-125	3	20	
Arsenic	0.109	0.0050	0.0016	mg/L	0.10000	ND	109	75-125	3	20	
Barium	0.176	0.0100	0.0004	mg/L	0.10000	0.0781	98	75-125	1	20	
Beryllium	0.0929	0.0030	0.00008	mg/L	0.10000	ND	93	75-125	3	20	
Boron	0.979	0.0400	0.0064	mg/L	1.0000	0.224	76	75-125	3	20	
Cadmium	0.104	0.0010	0.00007	mg/L	0.10000	ND	104	75-125	0.4	20	
Calcium	81.3	25.0	1.55	mg/L	1.0000	74.0	728	75-125	3	20	QM-02
Chromium	0.106	0.0100	0.0009	mg/L	0.10000	ND	106	75-125	2	20	
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000	0.0005	102	75-125	5	20	
Copper	0.101	0.0250	0.0005	mg/L	0.10000	ND	101	75-125	1	20	
Lead	0.101	0.0050	0.0001	mg/L	0.10000	ND	101	75-125	0.5	20	
Molybdenum	0.112	0.0100	0.0017	mg/L	0.10000	ND	112	75-125	2	20	
Nickel	0.103	0.0100	0.0006	mg/L	0.10000	ND	103	75-125	3	20	
Selenium	0.104	0.0100	0.0010	mg/L	0.10000	ND	104	75-125	2	20	
Silver	0.104	0.0100	0.0005	mg/L	0.10000	ND	104	75-125	1	20	
Thallium	0.103	0.0010	0.0002	mg/L	0.10000	ND	103	75-125	1	20	
Vanadium	0.108	0.0100	0.0071	mg/L	0.10000	ND	108	75-125	0.3	20	
Zinc	0.106	0.0100	0.0021	mg/L	0.10000	ND	106	75-125	4	20	
Lithium	0.0925	0.0500	0.0021	mg/L	0.10000	ND	92	75-125	4	20	
Post Spike (6120445-PS1)		**Source: AZL0418-01**			Prepared: 12/15/16 Analyzed: 12/16/16						
Antimony	109			ug/L	100.00	0.375	108	80-120			
Arsenic	110			ug/L	100.00	1.00	109	80-120			
Barium	178			ug/L	100.00	78.1	100	80-120			
Beryllium	96.0			ug/L	100.00	0.0417	96	80-120			
Boron	1010			ug/L	1000.0	224	78	80-120			QM-02
Cadmium	106			ug/L	100.00	0.0408	106	80-120			
Calcium	81800			ug/L	1000.0	74000	782	80-120			QM-02
Chromium	103			ug/L	100.00	0.152	103	80-120			
Cobalt	104			ug/L	100.00	0.524	103	80-120			
Copper	101			ug/L	100.00	0.266	101	80-120			
Lead	99.8			ug/L	100.00	0.0576	100	80-120			
Molybdenum	110			ug/L	100.00	0.410	110	80-120			
Nickel	103			ug/L	100.00	0.424	103	80-120			
Selenium	105			ug/L	100.00	0.274	105	80-120			
Silver	101			ug/L	100.00	0.0079	101	80-120			
Thallium	102			ug/L	100.00	0.0281	102	80-120			
Vanadium	109			ug/L	100.00	-1.15	109	80-120			
Zinc	108			ug/L	100.00	1.45	106	80-120			
Lithium	92.8			ug/L	100.00	0.782	92	80-120			

PACE ANALYTICAL SERVICES, LLC.

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).

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 Hammond - AP 1&2

PROJECT #: CCR

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals Part 257 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							
12/08/16	10:44	W		X	HGWA-5	3		1	1	1						1	
12/08/16	12:47	W		X	HGWA-6	3		1	1	1						2	
12/08/16	14:17	W		X	HGWC-18	3		1	1	1						3	
12/08/16	14:40	W		X	FB-2	3		1	1	1						4	
12/08/16	14:50	W		X	FERB-2	3		1	1	1						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: T.Wardell TW W.Virgo WFV | DATE/TIME:

RELINQUISHED BY: [signature] | DATE/TIME: 12.9.16 / 1205

RECEIVED BY: | DATE/TIME:

RELINQUISHED BY: | DATE/TIME:

RECEIVED BY LAB: [signature] | DATE/TIME: 12/9/16 1205

Checked: Yes No NA | Ice: Yes No NA | Temperature: 0.5°C Min. 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 #: AZL0435
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: 12/12/2016 10:56:35AM**

Attn: Mr. Joju Abraham

Client: Georgia Power
Project: CCR Event
Date Received: 12/09/16 12:05

Work Order: AZL0435
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 5 **#Containers:** 15

Minimum Temp(C): 0.5 **Maximum Temp(C):** 0.5 **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	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 Hammond
Pace Project No.: 30205173

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 Hammond
Pace Project No.: 30205173

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 Hammond
Pace Project No.: 30205173

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30205173001	**HGWA-5**	Water	12/08/16 10:44	12/12/16 09:20
30205173002	**HGWA-6**	Water	12/08/16 12:47	12/12/16 09:20
30205173003	**HGWC-18**	Water	12/08/16 14:17	12/12/16 09:20
30205173004	**FB-2**	Water	12/08/16 14:40	12/12/16 09:20
30205173005	**FERB-2**	Water	12/08/16 14:50	12/12/16 09:20

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

SAMPLE ANALYTE COUNT

Project: Plant Hammond
Pace Project No.: 30205173

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30205173001	**HGWA-5**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205173002	**HGWA-6**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205173003	**HGWC-18**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205173004	**FB-2**	EPA 9315	LAL	1
		EPA 9320	JAL	1
		Total Radium Calculation	RMK	1
30205173005	**FERB-2**	EPA 9315	LAL	1
		EPA 9320	JAL	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: Plant Hammond
Pace Project No.: 30205173

Sample: HGWA-5 **Lab ID: 30205173001** Collected: 12/08/16 10:44 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	**-0.0453 ± 0.134 (0.422) C:80% T:NA**	pCi/L	01/17/17 09:29	13982-63-3	
Radium-228	EPA 9320	**0.905 ± 0.432 (0.722) C:64% T:93%**	pCi/L	01/22/17 16:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.905 ± 0.566 (1.14)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: HGWA-6 **Lab ID: 30205173002** Collected: 12/08/16 12:47 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	**0.120 ± 0.152 (0.306) C:86% T:NA**	pCi/L	01/17/17 09:29	13982-63-3	
Radium-228	EPA 9320	**0.301 ± 0.395 (0.843) C:70% T:82%**	pCi/L	01/22/17 16:00	15262-20-1	
Total Radium	Total Radium Calculation	**0.421 ± 0.547 (1.15)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: HGWC-18 **Lab ID: 30205173003** Collected: 12/08/16 14:17 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	**0.945 ± 0.345 (0.297) C:95% T:NA**	pCi/L	01/17/17 09:29	13982-63-3	
Radium-228	EPA 9320	**1.26 ± 0.570 (0.974) C:64% T:89%**	pCi/L	01/22/17 16:02	15262-20-1	
Total Radium	Total Radium Calculation	**2.21 ± 0.915 (1.27)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: FB-2 **Lab ID: 30205173004** Collected: 12/08/16 14:40 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	**0.0661 ± 0.159 (0.382) C:79% T:NA**	pCi/L	01/17/17 09:29	13982-63-3	
Radium-228	EPA 9320	**0.350 ± 0.497 (1.07) C:57% T:87%**	pCi/L	01/22/17 16:02	15262-20-1	
Total Radium	Total Radium Calculation	**0.416 ± 0.656 (1.45)**	pCi/L	01/23/17 12:09	7440-14-4	

Sample: FERB-2 **Lab ID: 30205173005** Collected: 12/08/16 14:50 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 ± 0.196 (0.435) C:81% T:NA**	pCi/L	01/17/17 09:29	13982-63-3	
Radium-228	EPA 9320	**0.168 ± 0.401 (0.892) C:64% T:87%**	pCi/L	01/22/17 16:02	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: Plant Hammond
Pace Project No.: 30205173

Sample: FERB-2 **Lab ID: 30205173005** Collected: 12/08/16 14:50 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	**0.289 ± 0.597 (1.33)**	pCi/L	01/23/17 12:09	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 Hammond
Pace Project No.: 30205173

QC Batch: 245742 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30205173003, 30205173004, 30205173005

METHOD BLANK: 1208865 Matrix: Water
Associated Lab Samples: 30205173003, 30205173004, 30205173005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.683 ± 0.424 (0.798) C:67% T:93%	pCi/L	01/22/17 16:02	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30205173

QC Batch: 245740 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30205173001, 30205173002

METHOD BLANK: 1208859 Matrix: Water
Associated Lab Samples: 30205173001, 30205173002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.612 ± 0.377 (0.695) C:68% T:93%	pCi/L	01/22/17 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
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30205173

QC Batch: 245741 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30205173003, 30205173004, 30205173005

METHOD BLANK: 1208863 Matrix: Water
Associated Lab Samples: 30205173003, 30205173004, 30205173005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.106 ± 0.218 (0.506) C:79% T:NA	pCi/L	01/17/17 09:29	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond
Pace Project No.: 30205173

QC Batch: 245739 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30205173001, 30205173002

METHOD BLANK: 1208851 Matrix: Water
Associated Lab Samples: 30205173001, 30205173002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0563 ± 0.118 (0.277) C:97% T:NA	pCi/L	01/17/17 08:09	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: Plant Hammond
Pace Project No.: 30205173

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: AZL0435 Workorder Name: Plant Hammond 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#:30205173

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	HGWA-5	G	12/8/2016 10:44	AZL0435-01	GW	1	X	001
2	HGWA-6	G	12/8/2016 12:47	AZL0435-02	GW	1	X	002
3	HGWC-18	G	12/8/2016 14:17	AZL0435-03	GW	1	X	003
4	FB-2	G	12/8/2016 14:40	AZL0435-04	W	1	X	004
5	FERB-2	G	12/8/2016 14:50	AZL0435-05	W	1	X	005
6								
7								
8								
9								
10								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			Karen Hill	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.

30205173

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 Hammond - AP 1&2
PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Part 257 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		
12/08/16	10:44	W		X	HGWA-5	3	1	1	1	1	
12/08/16	12:47	W		X	HGWA-6	3	1	1	1	2	
12/08/16	14:17	W		X	HGWC-18	3	1	1	1	3	
12/08/16	14:40	W		X	FB-2	3	1	1	1	4	
12/08/16	14:50	W		X	FERB-2	3	1	1	1	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: T.Wardell TW W.Virgo WFV
DATE/TIME:
RELINQUISHED BY: [signature]
DATE/TIME: 12-9-16/1205
RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:
RECEIVED BY LAB: [signature]
DATE/TIME: 12/9/16 1205
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT (circled) OTHER FS
pH checked: Yes (circled) No NA
Ice: Yes (circled) No NA
Temperature: 0.5°C Min. Max.
Custody Seal: Intact Broken Not Present N/A
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: A2L0435
Entered into LIMS: MR
Tracking #:

2016 12 08 Hammond Huff COCs.xlsx

Sample Condition Upon Receipt Pittsburgh

30205173 1

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. 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: DMR 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: DMR 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:	1/13/2017
Worklist:	33371
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1208859
MB concentration:	0.612
M/B Counting Uncertainty:	0.360
MB MDC:	0.695
MB Numerical Performance Indicator:	3.33
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS33371	LCSD33371
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):	0.808	
Target Conc. (pCi/L, g, F):	6.307	
Uncertainty (Calculated):	0.454	
Result (pCi/L, g, F):	6.561	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.798	
Numerical Performance Indicator:	0.54	
Percent Recovery:	104.03%	
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.:	30205168004	
Duplicate Sample I.D.	30205168004DUP	
Sample Result (pCi/L, g, F):	0.344	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.356	
Sample Duplicate Result (pCi/L, g, F):	0.439	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.335	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.382	30205168004
Duplicate RPD:	24.32%	30205168004DUP
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:

1/23/17

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	1/16/2017
Worklist:	33370
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	1208851
MB concentration:	0.056
M/B Counting Uncertainty:	0.118
MB MDC:	0.277
MB Numerical Performance Indicator:	0.94
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	N
	LCS33370	LCSD33370
Count Date:	1/17/2017	
Spike I.D.:	16-026	
Spike Concentration (pCi/mL):	44.671	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.506	
Target Conc. (pCi/L, g, F):	8.828	
Uncertainty (Calculated):	0.415	
Result (pCi/L, g, F):	7.998	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.881	
Numerical Performance Indicator:	-1.67	
Percent Recovery:	90.60%	
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.:	30205168004	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30205168004DUP	
Sample Result (pCi/L, g, F):	0.189	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.188	
Sample Duplicate Result (pCi/L, g, F):	0.204	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.195	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.110	30205168004
Duplicate RPD:	7.72%	30205168004DUP
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:

1/23/2

Quality Control Sample Performance Assessment

Test: Ra-228
Analyst: JAL
Date: 1/13/2017
Worklist: 33373
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1208865
MB concentration:	0.683
M/B Counting Uncertainty:	0.406
MB MDC:	0.798
MB Numerical Performance Indicator:	3.30
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS33373	LCSD33373
Count Date:	1/22/2017	
Spike I.D.:	16-027	
Spike Concentration (pCi/mL):	25.495	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.810	
Target Conc. (pCi/L, g, F):	6.292	
Uncertainty (Calculated):	0.453	
Result (pCi/L, g, F):	7.232	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.801	
Numerical Performance Indicator:	2.00	
Percent Recovery:	114.95%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

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.:	30205268003	
Duplicate Sample I.D.	30205268003DUP	
Sample Result (pCi/L, g, F):	0.166	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.335	
Sample Duplicate Result (pCi/L, g, F):	0.662	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.361	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	-1.972	30205268003
Duplicate RPD:	119.81%	30205268003DUP
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

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

October 14, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Hammond AP 1&2 CCR
Pace Project No.: 30195129

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.

Report resissued 10/14/16 to reflect correction of Client Sample ID's.

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 Hammond AP 1&2 CCR
Pace Project No.: 30195129

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 Hammond AP 1&2 CCR
Pace Project No.: 30195129

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30195129001	**HGWC-7**	Water	09/01/16 09:20	09/06/16 08:50
30195129002	**HGWC-8**	Water	09/01/16 08:50	09/06/16 08:50
30195129003	**HGWC-9**	Water	09/01/16 09:32	09/06/16 08:50
30195129004	**HGWC-10**	Water	09/01/16 10:18	09/06/16 08:50
30195129005	**HGWC-11**	Water	09/01/16 10:48	09/06/16 08:50
30195129006	**HGWC-12**	Water	09/01/16 11:34	09/06/16 08:50
30195129007	**HGWC-13**	Water	09/01/16 11:20	09/06/16 08:50
30195129008	**HGWC-14**	Water	09/01/16 12:07	09/06/16 08:50
30195129009	**HGWC-15**	Water	09/01/16 12:58	09/06/16 08:50
30195129010	**HGWC-16**	Water	09/01/16 12:50	09/06/16 08:50
30195129011	**HGWC-17**	Water	09/01/16 14:45	09/06/16 08:50
30195129012	**HGWC-18**	Water	09/01/16 14:32	09/06/16 08:50
30195129013	**FB-1**	Water	09/01/16 09:21	09/06/16 08:50
30195129014	**FB-2**	Water	09/01/16 12:18	09/06/16 08:50
30195129015	**FERB-1**	Water	09/01/16 14:00	09/06/16 08:50
30195129016	**FERB-2**	Water	09/01/16 15:28	09/06/16 08:50
30195129017	**DUP-1**	Water	09/01/16 00:01	09/06/16 08:50
30195129018	**DUP-2**	Water	09/01/16 00:01	09/06/16 08:50

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

SAMPLE ANALYTE COUNT

Project: Plant Hammond AP 1&2 CCR
Pace Project No.: 30195129

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30195129001	**HGWC-7**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195129002	**HGWC-8**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195129003	**HGWC-9**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195129004	**HGWC-10**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195129005	**HGWC-11**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195129006	**HGWC-12**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195129007	**HGWC-13**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195129008	**HGWC-14**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195129009	**HGWC-15**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195129010	**HGWC-16**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195129011	**HGWC-17**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195129012	**HGWC-18**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195129013	**FB-1**	EPA 9315	WRR	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: Plant Hammond AP 1&2 CCR
Pace Project No.: 30195129

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195129014	**FB-2**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195129015	**FERB-1**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195129016	**FERB-2**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195129017	**DUP-1**	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195129018	**DUP-2**	EPA 9315	WRR	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 Hammond AP 1&2 CCR
Pace Project No.: 30195129

Sample: HGWC-7 **Lab ID: 30195129001** Collected: 09/01/16 09:20 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	**0.125 ± 0.115 (0.216) C:89% T:NA**	pCi/L	09/28/16 09:33	13982-63-3	
Radium-228	EPA 9320	**0.578 ± 0.487 (0.971) C:65% T:72%**	pCi/L	09/23/16 12:39	15262-20-1	
Total Radium	Total Radium Calculation	**0.703 ± 0.602 (1.19)**	pCi/L	10/04/16 15:09	7440-14-4	

Sample: HGWC-8 **Lab ID: 30195129002** Collected: 09/01/16 08:50 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	**0.169 ± 0.119 (0.200) C:94% T:NA**	pCi/L	09/28/16 09:34	13982-63-3	
Radium-228	EPA 9320	**0.649 ± 0.451 (0.866) C:65% T:83%**	pCi/L	09/23/16 12:39	15262-20-1	
Total Radium	Total Radium Calculation	**0.818 ± 0.570 (1.07)**	pCi/L	10/04/16 15:09	7440-14-4	

Sample: HGWC-9 **Lab ID: 30195129003** Collected: 09/01/16 09:32 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	**0.132 ± 0.114 (0.209) C:91% T:NA**	pCi/L	09/28/16 09:34	13982-63-3	
Radium-228	EPA 9320	**0.630 ± 0.400 (0.733) C:65% T:82%**	pCi/L	09/23/16 12:40	15262-20-1	
Total Radium	Total Radium Calculation	**0.762 ± 0.514 (0.942)**	pCi/L	10/04/16 15:09	7440-14-4	

Sample: HGWC-10 **Lab ID: 30195129004** Collected: 09/01/16 10:18 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	**0.139 ± 0.104 (0.167) C:90% T:NA**	pCi/L	09/28/16 09:34	13982-63-3	
Radium-228	EPA 9320	**0.705 ± 0.428 (0.778) C:72% T:74%**	pCi/L	09/23/16 12:40	15262-20-1	
Total Radium	Total Radium Calculation	**0.844 ± 0.532 (0.945)**	pCi/L	10/04/16 15:09	7440-14-4	

Sample: HGWC-11 **Lab ID: 30195129005** Collected: 09/01/16 10:48 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	**0.120 ± 0.113 (0.215) C:92% T:NA**	pCi/L	09/28/16 09:34	13982-63-3	
Radium-228	EPA 9320	**0.141 ± 0.390 (0.872) C:75% T:82%**	pCi/L	09/23/16 12:42	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: Plant Hammond AP 1&2 CCR
Pace Project No.: 30195129

Sample: HGWC-11 **Lab ID: 30195129005** Collected: 09/01/16 10:48 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	**0.261 ± 0.503 (1.09)**	pCi/L	10/04/16 15:09	7440-14-4	

Sample: HGWC-12 **Lab ID: 30195129006** Collected: 09/01/16 11:34 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	**0.309 ± 0.163 (0.235) C:81% T:NA**	pCi/L	09/28/16 09:34	13982-63-3	
Radium-228	EPA 9320	**0.924 ± 0.412 (0.640) C:73% T:78%**	pCi/L	09/23/16 16:42	15262-20-1	
Total Radium	Total Radium Calculation	**1.23 ± 0.575 (0.875)**	pCi/L	10/04/16 15:09	7440-14-4	

Sample: HGWC-13 **Lab ID: 30195129007** Collected: 09/01/16 11:20 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	**0.288 ± 0.160 (0.243) C:94% T:NA**	pCi/L	09/28/16 09:34	13982-63-3	
Radium-228	EPA 9320	**0.307 ± 0.321 (0.661) C:77% T:80%**	pCi/L	09/23/16 16:42	15262-20-1	
Total Radium	Total Radium Calculation	**0.595 ± 0.481 (0.904)**	pCi/L	10/04/16 15:09	7440-14-4	

Sample: HGWC-14 **Lab ID: 30195129008** Collected: 09/01/16 12:07 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	**0.402 ± 0.188 (0.270) C:95% T:NA**	pCi/L	09/28/16 09:34	13982-63-3	
Radium-228	EPA 9320	**1.24 ± 0.512 (0.806) C:71% T:82%**	pCi/L	09/23/16 16:42	15262-20-1	
Total Radium	Total Radium Calculation	**1.64 ± 0.700 (1.08)**	pCi/L	10/04/16 15:09	7440-14-4	

Sample: HGWC-15 **Lab ID: 30195129009** Collected: 09/01/16 12:58 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	**0.186 ± 0.122 (0.180) C:85% T:NA**	pCi/L	09/28/16 09:08	13982-63-3	
Radium-228	EPA 9320	**0.580 ± 0.413 (0.802) C:75% T:82%**	pCi/L	09/23/16 16:42	15262-20-1	
Total Radium	Total Radium Calculation	**0.766 ± 0.535 (0.982)**	pCi/L	10/04/16 15:09	7440-14-4	

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Hammond AP 1&2 CCR
Pace Project No.: 30195129

Sample: HGWC-16 **Lab ID: 30195129010** Collected: 09/01/16 12:50 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	**0.172 ± 0.114 (0.172) C:94% T:NA**	pCi/L	09/28/16 09:08	13982-63-3	
Radium-228	EPA 9320	**1.06 ± 0.460 (0.715) C:72% T:76%**	pCi/L	09/23/16 16:43	15262-20-1	
Total Radium	Total Radium Calculation	**1.23 ± 0.574 (0.887)**	pCi/L	10/04/16 15:21	7440-14-4	

Sample: HGWC-17 **Lab ID: 30195129011** 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	**0.0922 ± 0.0996 (0.194) C:87% T:NA**	pCi/L	09/28/16 09:08	13982-63-3	
Radium-228	EPA 9320	**0.765 ± 0.399 (0.697) C:75% T:86%**	pCi/L	09/23/16 16:43	15262-20-1	
Total Radium	Total Radium Calculation	**0.857 ± 0.499 (0.891)**	pCi/L	10/04/16 15:21	7440-14-4	

Sample: HGWC-18 **Lab ID: 30195129012** Collected: 09/01/16 14:32 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	**0.594 ± 0.231 (0.223) C:84% T:NA**	pCi/L	09/28/16 09:08	13982-63-3	
Radium-228	EPA 9320	**0.914 ± 0.526 (0.967) C:78% T:75%**	pCi/L	09/23/16 12:42	15262-20-1	
Total Radium	Total Radium Calculation	**1.51 ± 0.757 (1.19)**	pCi/L	10/04/16 15:21	7440-14-4	

Sample: FB-1 **Lab ID: 30195129013** Collected: 09/01/16 09:21 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	**0.0634 ± 0.102 (0.225) C:77% T:NA**	pCi/L	09/28/16 09:08	13982-63-3	
Radium-228	EPA 9320	**0.976 ± 0.427 (0.668) C:73% T:79%**	pCi/L	09/23/16 16:43	15262-20-1	
Total Radium	Total Radium Calculation	**1.04 ± 0.529 (0.893)**	pCi/L	10/04/16 15:21	7440-14-4	

Sample: FB-2 **Lab ID: 30195129014** Collected: 09/01/16 12:18 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	**0.00973 ± 0.0706 (0.193) C:78% T:NA**	pCi/L	09/28/16 09:08	13982-63-3	
Radium-228	EPA 9320	**0.364 ± 0.361 (0.743) C:76% T:84%**	pCi/L	09/23/16 16:44	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: Plant Hammond AP 1&2 CCR
Pace Project No.: 30195129

Sample: FB-2 **Lab ID: 30195129014** Collected: 09/01/16 12:18 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	**0.374 ± 0.432 (0.936)**	pCi/L	10/04/16 15:21	7440-14-4	

Sample: FERB-1 **Lab ID: 30195129015** Collected: 09/01/16 14:00 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	**0.0600 ± 0.0849 (0.177) C:76% T:NA**	pCi/L	09/28/16 11:34	13982-63-3	
Radium-228	EPA 9320	**0.0879 ± 0.406 (0.920) C:71% T:81%**	pCi/L	09/23/16 16:44	15262-20-1	
Total Radium	Total Radium Calculation	**0.148 ± 0.491 (1.10)**	pCi/L	10/04/16 15:21	7440-14-4	

Sample: FERB-2 **Lab ID: 30195129016** Collected: 09/01/16 15:28 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	**-0.0571 ± 0.0460 (0.203) C:84% T:NA**	pCi/L	09/28/16 11:34	13982-63-3	
Radium-228	EPA 9320	**1.31 ± 0.583 (0.970) C:73% T:78%**	pCi/L	09/23/16 16:45	15262-20-1	
Total Radium	Total Radium Calculation	**1.31 ± 0.629 (1.17)**	pCi/L	10/04/16 15:21	7440-14-4	

Sample: DUP-1 **Lab ID: 30195129017** 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	**0.235 ± 0.155 (0.243) C:70% T:NA**	pCi/L	09/28/16 11:34	13982-63-3	
Radium-228	EPA 9320	**0.924 ± 0.499 (0.905) C:82% T:78%**	pCi/L	09/23/16 22:37	15262-20-1	
Total Radium	Total Radium Calculation	**1.16 ± 0.654 (1.15)**	pCi/L	10/04/16 15:21	7440-14-4	

Sample: DUP-2 **Lab ID: 30195129018** 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	**0.106 ± 0.124 (0.255) C:78% T:NA**	pCi/L	09/28/16 11:34	13982-63-3	
Radium-228	EPA 9320	**0.581 ± 0.480 (0.964) C:69% T:87%**	pCi/L	09/23/16 22:37	15262-20-1	
Total Radium	Total Radium Calculation	**0.687 ± 0.604 (1.22)**	pCi/L	10/04/16 15:21	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 Hammond AP 1&2 CCR
Pace Project No.: 30195129

QC Batch: 232984 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30195129001, 30195129002, 30195129003, 30195129004

METHOD BLANK: 1141814 Matrix: Water
Associated Lab Samples: 30195129001, 30195129002, 30195129003, 30195129004

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.

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Hammond AP 1&2 CCR
Pace Project No.: 30195129

QC Batch: 232979 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30195129005, 30195129006, 30195129007, 30195129008, 30195129009, 30195129010, 30195129011, 30195129012, 30195129013, 30195129014, 30195129015, 30195129016, 30195129017, 30195129018

METHOD BLANK: 1141799 Matrix: Water
Associated Lab Samples: 30195129005, 30195129006, 30195129007, 30195129008, 30195129009, 30195129010, 30195129011, 30195129012, 30195129013, 30195129014, 30195129015, 30195129016, 30195129017, 30195129018

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0354 ± 0.0753 (0.177) C:94% T:NA	pCi/L	09/28/16 09:34	

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: Plant Hammond AP 1&2 CCR
Pace Project No.: 30195129

QC Batch: 232985 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30195129005, 30195129006, 30195129007, 30195129008, 30195129009, 30195129010, 30195129011, 30195129012, 30195129013, 30195129014, 30195129015, 30195129016, 30195129017, 30195129018

METHOD BLANK: 1141817 Matrix: Water
Associated Lab Samples: 30195129005, 30195129006, 30195129007, 30195129008, 30195129009, 30195129010, 30195129011, 30195129012, 30195129013, 30195129014, 30195129015, 30195129016, 30195129017, 30195129018

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.293 ± 0.388 (0.829) C:78% T:83%	pCi/L	09/23/16 12:42	

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: Plant Hammond AP 1&2 CCR
Pace Project No.: 30195129

QC Batch: 232978 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30195129001, 30195129002, 30195129003, 30195129004

METHOD BLANK: 1141797 Matrix: Water
Associated Lab Samples: 30195129001, 30195129002, 30195129003, 30195129004

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.

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

QUALIFIERS

Project: Plant Hammond AP 1&2 CCR
Pace Project No.: 30195129

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#:30195129

CHAIN OF CUSTODY RECORD

Pace Analytical®

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

30195129

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 Hammond AP 1&2

PROJECT #: 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		
09/01/16	09:20	GW		X	HGWC-7	4	1	1	2		001
09/01/16	08:50	GW		X	HGWC-8	3	1	1	1		002
09/01/16	09:32	GW		X	HGWC-9	3	1	1	1		003
09/01/16	10:18	GW		X	HGWC-10	3	1	1	1		004
09/01/16	10:48	GW		X	HGWC-11	3	1	1	1		005
09/01/16	11:34	GW		X	HGWC-12	3	1	1	1		006
09/01/16	11:20	GW		X	HGWC-13	3	1	1	1		007
09/01/16	12:07	GW		X	HGWC-14	3	1	1	1		008
09/01/16	12:58	GW		X	HGWC-15	3	1	1	1		009
09/01/16	12:50	GW		X	HGWC-16	3	1	1	1		010
09/01/16	14:45	GW		X	HGWC-17	3	1	1	1		011
09/01/16	14:32	GW		X	HGWC-18	4	1	1	2		012

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: EEM-M.R.; M.T.: EMSERVICES-T.W.

DATE/TIME: 09/01/16 16:00

RELINQUISHED BY:

DATE/TIME: 09/02/16 1240

RECEIVED BY:

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 #:

30195129

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 Hammond AP 1&2

PROJECT #: 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		
09/01/16	09:21	W		X	FB-1	3		1	1	1		013
09/01/16	12:18	W		X	FB-2	3		1	1	1		014
09/01/16	14:00	W		X	FERB-1	3		1	1	1		015
09/01/16	15:28	W		X	FERB-2	3		1	1	1		016
09/01/16	—	GW		X	DUP-1	3		1	1	1		017
09/01/16	—	GW		X	DUP-2	3		1	1	1		018

ANALYSIS REQUESTED

SAMPLED BY AND TITLE: ERM-M.R., M.T.; EMSERVICES-T.W. DATE/TIME: 09/01/16 16:00

RELINQUISHED BY: DATE/TIME: 09/02/16 1240

RECEIVED BY: 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:

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

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

30195129

Sample Condition Upon Receipt Pittsburgh

Pace Analytical

Client Name: Pace, GA Project #

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

Tracking #: 6812 5098 8849

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

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

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

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 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. 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:	9/23/2016
Worklist:	31360
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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	

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	

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:

10/4/16

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	WRR
Date:	9/23/2016
Worklist:	31361
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1141799
MB concentration:	0.035
M/B Counting Uncertainty:	0.075
MB MDC:	0.177
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
	LCS31361	LCSD31361
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):	0.500	
Target Conc. (pCi/L, g, F):	8.927	
Uncertainty (Calculated):	0.420	
Result (pCi/L, g, F):	7.724	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.658	
Numerical Performance Indicator:	-3.02	
Percent Recovery:	86.52%	
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.:	30195129012	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30195129012DUP	
Sample Result (pCi/L, g, F):	0.594	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.214	
Sample Duplicate Result (pCi/L, g, F):	0.519	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.243	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.453	30195129012
Duplicate RPD:	13.44%	30195129012DUP
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

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	

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	

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

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	JLW
Date:	9/15/2016
Worklist:	31366
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1141817
MB concentration:	0.293
M/B Counting Uncertainty:	0.385
MB MDC:	0.829
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)?	N
	LCS31366	LCSD31366
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):	0.802	
Target Conc. (pCi/L, g, F):	6.387	
Uncertainty (Calculated):	0.460	
Result (pCi/L, g, F):	6.021	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.942	
Numerical Performance Indicator:	-0.68	
Percent Recovery:	94.27%	
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.:	30195129012	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30195129012DUP	
Sample Result (pCi/L, g, F):	0.914	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.500	
Sample Duplicate Result (pCi/L, g, F):	0.752	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.514	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	0.443	30195129012
Duplicate RPD:	19.46%	30195129012DUP
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:

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

June 14, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAE0736 Plant Hammond
Pace Project No.: 30219762

Dear Maria Padilla:
Enclosed are the analytical results for sample(s) received by the laboratory on May 24, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures

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

CERTIFICATIONS

Project: AAE0736 Plant Hammond
Pace Project No.: 30219762

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: AAE0736 Plant Hammond
Pace Project No.: 30219762

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30219762001	**HGWA-1**	Water	05/22/17 13:15	05/24/17 10:10
30219762002	**HGWA-2**	Water	05/22/17 14:20	05/24/17 10:10
30219762003	**HGWA-3**	Water	05/22/17 15:10	05/24/17 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: AAE0736 Plant Hammond
Pace Project No.: 30219762

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30219762001	**HGWA-1**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30219762002	**HGWA-2**	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30219762003	**HGWA-3**	EPA 9315	LAL	1
		EPA 9320	JLW	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: AAE0736 Plant Hammond
Pace Project No.: 30219762

Sample: HGWA-1 **Lab ID: 30219762001** Collected: 05/22/17 13:15 Received: 05/24/17 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	**0.0631 ± 0.104 (0.231) C:87% T:NA**	pCi/L	06/05/17 08:27	13982-63-3	
Radium-228	EPA 9320	**0.491 ± 0.391 (0.772) C:71% T:81%**	pCi/L	06/09/17 15:33	15262-20-1	
Total Radium	Total Radium Calculation	**0.554 ± 0.495 (1.00)**	pCi/L	06/13/17 11:19	7440-14-4	

Sample: HGWA-2 **Lab ID: 30219762002** Collected: 05/22/17 14:20 Received: 05/24/17 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	**0.0750 ± 0.111 (0.239) C:81% T:NA**	pCi/L	06/05/17 08:27	13982-63-3	
Radium-228	EPA 9320	**0.563 ± 0.384 (0.731) C:72% T:83%**	pCi/L	06/09/17 15:33	15262-20-1	
Total Radium	Total Radium Calculation	**0.638 ± 0.495 (0.970)**	pCi/L	06/13/17 11:19	7440-14-4	

Sample: HGWA-3 **Lab ID: 30219762003** Collected: 05/22/17 15:10 Received: 05/24/17 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	**0.181 ± 0.150 (0.269) C:82% T:NA**	pCi/L	06/05/17 08:28	13982-63-3	
Radium-228	EPA 9320	**0.563 ± 0.383 (0.727) C:73% T:79%**	pCi/L	06/09/17 15:33	15262-20-1	
Total Radium	Total Radium Calculation	**0.744 ± 0.533 (0.996)**	pCi/L	06/13/17 11:19	7440-14-4	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: AAE0736 Plant Hammond
Pace Project No.: 30219762

QC Batch: 259988 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30219762001, 30219762002, 30219762003

METHOD BLANK: 1280841 Matrix: Water
Associated Lab Samples: 30219762001, 30219762002, 30219762003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.00323 ± 0.0673 (0.196) C:92% T:NA	pCi/L	06/05/17 08:26	

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: AAE0736 Plant Hammond
Pace Project No.: 30219762

QC Batch: 260238 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30219762001, 30219762002, 30219762003

METHOD BLANK: 1281814 Matrix: Water
Associated Lab Samples: 30219762001, 30219762002, 30219762003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.0265 ± 0.372 (0.866) C:69% T:91%	pCi/L	06/09/17 15:32	

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

QUALIFIERS

Project: AAE0736 Plant Hammond
Pace Project No.: 30219762

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.

30219762

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: AAE0736 Workorder Name: Plant Hammond Owner Received Date: Results Requested By: 5/16/2017

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

WO#: 30219762

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3	Requested Analysis: Radium 226, 228, Total	LAB USE ONLY
1	HGWA-1	G	5/22/2017 13:15	AAE0736-01	GW	2	X	001
2	HGWA-2	G	5/22/2017 14:20	AAE0736-02	GW	2	X	002
3	HGWA-3	G	5/22/2017 15:10	AAE0736-03	GW	2	X	003
4								
5								
6								
7								
8								
9								
10								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	5/2017	RBig Pace	5/24/17 10	10 EQuIS deliverable required (Profile 7564).
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.

30219762

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: Lauren Petty
CC: Maria Padilla, Heath McCorkle
REQUESTED COMPLETION DATE:
PO #: laburch@southernco.com
PROJECT NAME/STATE: Plant Hammond - AP 1&2
PROJECT #: CCR

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals Part 257 Appendix III/IV (EPA 6020/7470) (Container P, Pres. 3)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C) (Container P, Pres. 7)	Radium 226 & 228 (SW-846 9315/9320) (Container P, Pres. 3)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
05/22/17	13:15	W		X	HGWA-1	4	1	1	2	1	
05/22/17	14:20	W		X	HGWA-2	4	1	1	2	2	
05/22/17	15:10	W		X	HGWA-3	4	1	1	2	3	

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: Markevious Thomas MT — DATE/TIME: 5/22/2017 - 1530
RELINQUISHED BY: (ERM) Will Vigo — DATE/TIME: 5/22/17 1900
RECEIVED BY: — DATE/TIME:
RELINQUISHED BY: — DATE/TIME:
RECEIVED BY LAB: M Rahman — DATE/TIME: 05/23/17 1340
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS — Pace
Custody Seal: Yes No NA — Ice: Yes No NA — Temperature: 2.5 / 2.5
FOR LAB USE ONLY: LAB #: AAE0736 — Entered into LIMS: MR — Tracking #:

Hammond Groundwater Sampling Forms.xlsx

Sample Condition Upon Receipt Pittsburgh

30219762 RTB

Pace Analytical

Client Name: Pace GA Project #

Courier: [X] Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace Other

Tracking #: TORN

Custody Seal on Cooler/Box Present: [ ] yes [X] 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 5/24/17

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC: -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.
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 RTB 5/24/17 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: 5/24/17

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:	6/6/2017
Worklist:	35947
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1281814
MB concentration:	-0.026
M/B Counting Uncertainty:	0.372
MB MDC:	0.866
MB Numerical Performance Indicator:	-0.14
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS35947	LCSD35947
Count Date:	6/9/2017	6/9/2017
Spike I.D.:	17-005	17-005
Spike Concentration (pCi/mL):	24.332	24.332
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.806	0.808
Target Conc. (pCi/L, g, F):	6.039	6.023
Uncertainty (Calculated):	0.435	0.434
Result (pCi/L, g, F):	7.214	7.008
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.766	0.721
Numerical Performance Indicator:	2.62	2.29
Percent Recovery:	119.46%	116.34%
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.:	LCS35947	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD35947	
Sample Result (pCi/L, g, F):	7.214	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.766	
Sample Duplicate Result (pCi/L, g, F):	7.008	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.721	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	0.384	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	2.64%	
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:

CMC 6/14/17

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:	6/1/2017
Worklist:	35892
Matrix:	DW

Method Blank Assessment	
MB Sample ID	1280841
MB concentration:	-0.003
M/B Counting Uncertainty:	0.067
MB MDC:	0.196
MB Numerical Performance Indicator:	-0.09
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS35892	LCSD35892
Count Date:	6/5/2017	
Spike I.D.:	13-033	
Spike Concentration (pCi/mL):	19.848	
Volume Used (mL):	0.40	
Aliquot Volume (L, g, F):	0.498	
Target Conc. (pCi/L, g, F):	15.942	
Uncertainty (Calculated):	0.750	
Result (pCi/L, g, F):	14.675	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.939	
Numerical Performance Indicator:	-2.07	
Percent Recovery:	92.05%	
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.:	30219827005	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30219827005DUP	
Sample Result (pCi/L, g, F):	0.120	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.125	
Sample Duplicate Result (pCi/L, g, F):	0.048	
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:	0.907	30219827005
Duplicate RPD:	85.84%	30219827005DUP
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:

2mb6

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

Omce/14/17

ERM

GROUND WATER SAMPLING LOG SHEET

Client: ERM | Project No.: 0337351 | Sampling Date: 7/11/16

Site/Location: Plant Hammond | Sampler's Name: M. Thomas

Well ID: HGWA-1 | Pump Type/Model: Alexis Peristaltic | Sample Collection Time: 1542

Total Depth (ft)[1]: 32.6 | Tubing Material: Silicon | Sample Purge Rate (L/min)[3]: 0.1

Depth to Water (ft): 19.56 | Pump Intake Depth (ft): 27.0 | Sample ID: HGWA-1

Well Diameter (in): 2 | Start/Stop Purge Time: 1157/1537 | QA/QC Collected? NO

Well Volume (gal) = 0.041d²h: 2.13 8.06(L) | Purge Rate (L/min)[2]: 0.1 | QA/QC I.D.

d = well diameter (inches) h = length of water column (feet) | Total Purge Volume (L): 4.5 gal est | Laboratory Analyses: See chain

Well Condition: Good | Sampling Method (check all that apply): ☐ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☑ pump head discharge (Inorganics including cyanide)

Purge Method: Low flow to Low volume | ☐ Bladder pump = pump discharge (all analytes) ☐ Bailer (only used if necessary)

Time	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L) cumulative	H_2O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1457	36.31	0.00	6.60	7.48	97.80	.33	.5	19.90	
1502	23.51	532.50	.32	7.09	31.40	.33	1.0	19.85	
1507	22.23	552.60	.60	7.08	25.50	.09	1.5	19.86	
1512	22.22	557.30	.70	7.08	25.30	.10	2.0	19.87	
1517	22.55	562.70	.65	7.10	26.60	.09	2.5	19.87	
1522	22.09	562.00	.61	7.07	28.00	.58	3.0	19.87	
1527	22.22	560.30	.44	7.08	26.90	.09	3.5	19.87	
1532	22.40	569.30	.39	7.06	30.00	.32	4.0	19.87	
1537	22.54	570.40	.34	7.06	30.70	.25	4.5	19.87	
		Parameters stabilized							
		Sample collected at 1542							
Stabilizing Criteria[5]	+/- 1°C	+/- 3%	+/- 10% (see note below)[7]	+/- 0.1 unit	+/- 10 mV (see note below)[8]	+/- 10% or <10 NTUs	(see note below)[4]	(see note below)[6]	

(1) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
(2) - Purge rate to be 0.5 lpm or less.
(3) - Sampling rate to be 0.25 lpm or less.
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft.
(7) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.
(8) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

Product Name: Low-Flow System

Date: 2016-07-11 16:28:38

Project Information:		Pump Information:	
Operator Name	Andreas Shoredits	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Hammond	Tubing Diameter	0.17 in
Site Name	GPC-Hammond	Tubing Length	29.0 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463072		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	23.0 ft

Well Information:		Pumping Information:	
Well ID	HGWA-2	Final Pumping Rate	140 mL/min
Well diameter	2.00 in	Total System Volume	0.3394393 L
Well Total Depth	27.9 ft	Calculated Sample Rate	300 sec
Screen Length	10.0 ft	Stabilization Drawdown	1.7 in
Depth to Water	8.60 ft	Total Volume Pumped	11.9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	16:02:50	3899.97	22.04	5.74	225.82	0.45	8.69	0.10	18.77
Last 5	16:07:51	4200.97	22.09	5.72	220.95	2.21	8.70	0.10	22.15
Last 5	16:12:51	4500.97	21.99	5.71	211.63	0.57	8.70	0.10	24.88
Last 5	16:17:51	4800.97	21.91	5.70	207.03	1.73	8.70	0.10	25.38
Last 5	16:22:51	5100.97	21.98	5.68	211.48	0.95	8.70	0.10	27.87
Variance 0			-0.09	-0.01	-9.32			0.00	2.73
Variance 1			-0.09	-0.01	-4.61			-0.00	0.50
Variance 2			0.07	-0.02	4.46			-0.00	2.49

Notes

Parameters stable after three consecutive readings; turbidity is less than 5.0 NTU; minimal drawdown; sample time is 16:25

Grab Samples

GWCA-2

Groundwater sample

Product Name: Low-Flow System

Date: 2016-07-12 09:23:07

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Hammond AP	Tubing Diameter	.17 in
Site Name	Plant Hammond AP	Tubing Length	48 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444107		
Turbidity Make/Model	Lamotte	Pump placement from TOC	39 ft

Well Information:		Pumping Information:	
Well ID	HGWA-3	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4242443 L
Well Total Depth	44.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.2 in
Depth to Water	8.5 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			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:05:42	300.14	20.03	7.17	398.70	5.67	8.52	0.30	-126.43
Last 5	09:10:42	600.01	20.35	7.28	399.75	2.74	8.52	0.21	-132.66
Last 5	09:15:42	900.01	20.32	7.31	403.54	2.23	8.52	0.18	-132.33
Last 5	09:20:42	1200.00	19.99	7.32	408.70	1.79	8.52	0.17	-130.72
Last 5									
Variance 0			0.32	0.10	1.05			-0.09	-6.23
Variance 1			-0.03	0.03	3.79			-0.03	0.33
Variance 2			-0.33	0.01	5.16			-0.02	1.61

Notes

Using cellphone app

Parameters stable

Grab Samples

HGWA-3

Sampling at 924

GROUNDWATER SAMPLING LOG SHEET

ERM

Client: GPC
Site: Hammond AP
Well ID: HGWA-4
Total Depth (ft)[1]: 25.7
Depth to Water (ft): 8.60
Well Diameter (in): 2
Well Volume (gal) = 0.041d²h:
Well Volume (L) = gal * 3.785:
d = well diameter (inches) h = length of water column (feet)

Project No.:
Location: AP
Pump Type/Model: Alexis Pro
Tubing Material: LDPE
Pump Intake Depth (ft): 20
Start/Stop Purge Time: 1435
Purge Rate (L/min)[2]: .2
Total Purge Volume (L): 6
Purge Method: (Low-Flow) Well Volume Other:
Sampling Method: (Pump Discharge) Other:

Sampling Date: 7/11/16
Sampler's Name: MRogers
Sample Collection Time: 1509
Sample Purge Rate (L/min)[3]: .2
Sample ID: HGWA-4
Laboratory Analyses:

QA/QC Collected? No
QA/QC I.D.

Well Type: Flush (Stick Up) broken Lid
Well Lock: (Yes) No
Well Bolted: Yes (No) Bolts Needed:
Well Cap Condition: (Good) Replace Other
Well Tag Present: (Yes) No Water in Vault: Yes No

All sample containers requiring chemical preservation properly preserved prior to demob from well? (Yes) No

Time	Temp. (°C)	Spec. Cond. (mS/cm) (µS/cm)	DO (%)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H_2O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1440	24.05	447.9	1.13	6.65	95	8.04	200	1	8.90	
1445	23.88	444.2	1.06	6.68	92.7	6.09	↓	2	8.92	
1450	23.37	445.2	1.03	6.69	91.6	5.15		3	8.92	Parameters stable, waiting on turbidity
1455	23.53	441.3	1.01	6.68	89.5	4.68		4	8.93	
1500	23.45	429	0.98	6.67	89.4	4.88		5	8.93	
1505	23.48	422.3	0.95	6.65	88.9	4.91		6	8.93	
All	Parameters	Stable								
			Sampling @ 1509							
Stabilizing Criteria[4,5]		+/- 5%	0.2 mg/L or 10% whichever is greater (9)	+/- 0.2 unit		<5 NTUs	>100 mL < 250 mL	>3L	<0.33 ft	

(1) - Maximum purge rate of 250 mL/min
(2) - Sample rate to be between 100 mL/min and 250 mL/min
(3) - Collect sample from pump discharge without tubing contacting sample container
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft.
(7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed
(8) - Preserve all samples as appropriate immediately following collection
(9) - DO 0.2 mg/L or 10% whichever is greater (no criteria apply if DO < 0.5 mg/L)

Purge Log QA/QC'd By:
Date:

Purge Log QA/QC'd By:
Date:

Product Name: Low-Flow System

Date: 2016-07-11 15:41:50

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Hammond AP 4	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	25 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444575		
Turbidity Make/Model	LaMotte	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	HGWA-5	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.2015856 L
Well Total Depth	27.4 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	5.52 in
Depth to Water	7.53 ft	Total Volume Pumped	8.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	15:26:49	540.02	21.15	6.54	249.35	6.29	7.98	1.17	34.27
Last 5	15:29:49	720.02	21.15	6.53	251.17	4.03	7.98	1.05	39.03
Last 5	15:32:49	900.02	21.11	6.55	252.93	4.25	7.99	0.94	31.27
Last 5	15:35:49	1080.02	21.15	6.54	250.91	3.15	7.99	0.88	46.13
Last 5	15:38:49	1260.02	21.15	6.54	252.73	2.63	7.99	0.79	37.48
Variance 0			-0.05	0.02	1.76			-0.11	-7.76
Variance 1			0.04	-0.00	-2.02			-0.06	14.86
Variance 2			0.00	-0.01	1.81			-0.09	-8.65

Notes

Started purging at 15:05

This is the real HGWA-5. The first file is for HGWA-6.

Grab Samples

HGWA-5

Sample time 15:41

GROUNDWATER SAMPLING LOG SHEET

ERM

Client: GR - Plant Hammond
Site: Hammond AP
Well ID: HGWA-6
Total Depth (ft)[1]: (sol) 50.35
Depth to Water (ft): 7.15
Well Diameter (in): 2
Well Volume (gal) = 0.041d²h: 6.98
Well Volume (L) = gal * 3.785: 26.44
d = well diameter (inches) h = length of water column (feet)

Project No.:
Location: Rome, GA
Pump Type/Model: Alexis Peristaltic
Tubing Material: ~~PE~~ LPPE
Pump Intake Depth (ft): ~~1407~~ 22
Start/Stop Purge Time: ~~0250~~ 1407 / 1426
Purge Rate (L/min)[2]: ~~47~~ 0.250
Total Purge Volume (L): 4.75
Purge Method: (Low-Flow) Well Volume Other:
Sampling Method: (Pump Discharge) Other:

Sampling Date: 7/11/16
Sampler's Name: Tracy Wardle
Sample Collection Time: 1430
Sample Purge Rate (L/min)[3]: 0.250
Sample ID: HGWA-6
Laboratory Analyses: TDS, Cl, F, SO4, Metals (cads)
QA/QC Collected? Yes
QA/QC I.D. Yes for lab only no special ID, just one extra bottle

Well Type: Flush (Stick Up)
Well Lock: (Yes) No
Well Bolted: Yes N/A No Bolts Needed:
Well Cap Condition: (Good) Replace Other
Well Tag Present: (Yes) No Water in Vault: Yes N/A No

All sample containers requiring chemical preservation properly preserved prior to demob from well? Yes No

Time	Temp. (°C)	Spec. Cond. (mS/cm) (µS/cm)	DO (%)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H_2O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1417	21.22	357.3	0.20	7.35	73.3	0.57	250	2.50	8.28	
1420	21.02	356.2	0.18	7.36	73.0	0.44	250	3.25	8.45	
1423	21.06	357.8	0.17	7.35	73.4	0.48	250	4.00	8.49	
1426	21.10	356.6	0.15	7.32	71.0	0.51	250	4.75	8.53	
										labeled as HGWC-6
										Smartroll shows HGWA-5 + depth data for it, but I really did have 50' of tubing and set @ 45' read wrong line on table when typing in initial data
Stabilizing Criteria[4,5]		+/- 5%	0.2 mg/L or 10% whichever is greater [9]	+/- 0.2 unit		<5 NTUs	>100 mL < 250 mL	>3L	<0.33 ft	

(1) - Maximum purge rate of 250 mL/min
(2) - Sample rate to be between 100 mL/min and 250 mL/min
(3) - Collect sample from pump discharge without tubing contacting sample container
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft.
(7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed
(8) - Preserve all samples as appropriate immediately following collection
(9) - DO 0.2 mg/L or 10% whichever is greater (no criteria apply if DO < 0.5 mg/L)

Purge Log QA/QC'd By:
Date:

Purge Log QA/QC'd By:
Date:

Product Name: Low-Flow System

Date: 2016-07-12 10:15:43

Project Information:		Pump Information:	
Operator Name	M.Thomas	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC- Plant Hammond	Tubing Diameter	.17 in
Site Name	Default Site	Tubing Length	35 ft
Latitude	34º 15' 14.4"		
Longitude	-85º -20' -20.6"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	25 ft

Well Information:		Pumping Information:	
Well ID	HGWC-7	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.3962198 L
Well Total Depth	29.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	4.62 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			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:50:09	1200.01	22.73	7.12	675.36	0.21	4.71	0.28	64.88
Last 5	09:55:09	1500.00	22.49	7.12	675.86	0.06	4.71	0.34	63.36
Last 5	10:00:09	1800.00	22.72	7.12	676.37	0.04	4.71	0.35	60.80
Last 5	10:05:09	2100.00	22.78	7.12	675.78	0.04	4.71	0.34	62.06
Last 5	10:10:09	2400.00	22.85	7.13	677.91	0.00	4.71	0.37	64.44
Variance 0			0.23	0.00	0.52			0.01	-2.56
Variance 1			0.05	-0.01	-0.60			-0.01	1.26
Variance 2			0.07	0.01	2.13			0.03	2.38

Notes

All parameters stable.

Grab Samples

Product Name: Low-Flow System

Date: 2016-07-12 10:45:05

Project Information:		Pump Information:	
Operator Name	Andreas Shoredits	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Hammond	Tubing Diameter	0.17 in
Site Name	GPC-Hammond	Tubing Length	26.0 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463072		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	19.0 ft

Well Information:		Pumping Information:	
Well ID	HGWC-8	Final Pumping Rate	150 mL/min
Well diameter	2.00 in	Total System Volume	0.326049 L
Well Total Depth	24.7 ft	Calculated Sample Rate	300 sec
Screen Length	10.0 ft	Stabilization Drawdown	0.2 in
Depth to Water	3.75 ft	Total Volume Pumped	14.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:14:43	3299.99	21.80	6.87	975.20	0.35	3.76	0.12	74.00
Last 5	10:19:43	3599.99	21.97	6.87	917.74	0.23	3.76	0.18	74.32
Last 5	10:24:43	3899.99	21.95	6.88	889.12	0.28	3.76	0.28	72.47
Last 5	10:29:43	4199.99	22.00	6.87	920.77	0.13	3.76	0.43	73.97
Last 5	10:34:43	4499.99	21.83	6.88	923.30	0.30	3.76	0.39	72.48
Variance 0			-0.01	0.01	-28.62			0.10	-1.85
Variance 1			0.05	-0.00	31.65			0.15	1.50
Variance 2			-0.17	0.00	2.53			-0.04	-1.49

Notes

Parameters are stable for three consecutive readings; turbidity is < 5.0 NTU; drawdown is minimal; Sample time is 10:40

Grab Samples

HGWC-8

Groundwater sample

Product Name: Low-Flow System

Date: 2016-07-12 10:02:59

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Hammond AP	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444575		
Turbidity Make/Model	LaMotte	Pump placement from TOC	41.5 ft

Well Information:		Pumping Information:	
Well ID	HGWC-9	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.290854 L
Well Total Depth	46.60 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	0.48 in
Depth to Water	14.06 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			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100
Last 5	09:51:09	180.12	20.80	6.83	1139.59	0.60	14.10	0.24	29.32
Last 5	09:54:09	360.02	20.66	6.83	1147.68	0.54	14.10	0.21	26.35
Last 5	09:57:09	540.02	20.84	6.86	1150.64	0.57	14.10	0.19	20.25
Last 5	10:00:09	720.02	20.89	6.87	1143.45	0.61	14.10	0.18	27.07
Last 5									
Variance 0			-0.14	0.01	8.10			-0.03	-2.97
Variance 1			0.18	0.03	2.96			-0.02	-6.11
Variance 2			0.05	0.01	-7.19			-0.02	6.83

Notes

Started purge at 0940

Great recharge. Pulled Dup-1 here.

Grab Samples

HGWC-9

10:00

Dup-1

10:05

HGWC-9

Sample Tim e 10:05

Product Name: Low-Flow System

Date: 2016-07-12 11:20:20

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Hammond AP	Tubing Diameter	.17 in
Site Name	Plant Hammond AP	Tubing Length	26 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444107		
Turbidity Make/Model	Lamotte	Pump placement from TOC	17 ft

Well Information:		Pumping Information:	
Well ID	HGWC-10	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.326049 L
Well Total Depth	22.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.7 in
Depth to Water	14.17 ft	Total Volume Pumped	18.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:58:36	1800.00	19.54	6.58	933.08	--	--	0.06	83.74
Last 5	11:03:36	2099.99	19.66	6.58	932.88	--	--	0.06	83.15
Last 5	11:08:36	2399.99	19.90	6.58	955.83	4.82	14.24	0.09	82.89
Last 5	11:13:36	2699.99	21.28	6.58	935.92	2.42	14.24	0.12	82.82
Last 5	11:18:36	2999.98	21.64	6.58	934.12	2.70	14.24	0.12	82.37
Variance 0			0.24	-0.01	22.96			0.03	-0.26
Variance 1			1.38	0.01	-19.91			0.03	-0.07
Variance 2			0.36	0.00	-1.81			0.00	-0.45

Notes

Starting in well screen so must purge 3 well volumes at 500ml/min. Will decrease to 200 after 3rd well volume.
Parameters stable

Grab Samples

HGWC-10

Sampling at 1121

Product Name: Low-Flow System

Date: 2016-07-12 11:33:32

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Hammond AP	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	25 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444575		
Turbidity Make/Model	LaMotte	Pump placement from TOC	19 ft

Well Information:		Pumping Information:	
Well ID	HGWC-11	Final Pumping Rate	500 mL/min
Well diameter	2 in	Total System Volume	0.2015856 L
Well Total Depth	22.3 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	15.17 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			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	11:19:28	1080.01	20.41	6.02	861.14	0.62	15.27	1.31	70.54
Last 5	11:22:28	1260.01	20.32	6.04	865.26	0.47	15.27	1.27	69.08
Last 5	11:25:28	1440.01	20.39	6.03	867.25	0.49	15.27	1.30	68.86
Last 5	11:28:28	1620.01	20.40	6.05	865.22	0.24	15.27	1.23	68.40
Last 5	11:31:28	1800.01	20.46	6.04	863.45	0.23	15.27	1.30	68.30
Variance 0			0.07	-0.01	1.99			0.03	-0.22
Variance 1			0.01	0.02	-2.03			-0.07	-0.46
Variance 2			0.05	-0.01	-1.77			0.07	-0.10

Notes

Purging volume. Started at 1053, will slow to 250 mL/min for sampling
Reduced flow to 250 mL/min for sampling. Great recharge.

Grab Samples

HGWC-11

Sample time 11:35

Product Name: Low-Flow System

Date: 2016-07-12 12:27:28

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Hammond AP	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	32 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444575		
Turbidity Make/Model	LaMotte	Pump placement from TOC	30 ft

Well Information:		Pumping Information:	
Well ID	HGWC-12	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.2328295 L
Well Total Depth	35.1 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	0.24 in
Depth to Water	15.16 ft	Total Volume Pumped	4.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	12:16:18	180.09	21.46	6.91	1227.15	0.27	15.18	0.22	36.89
Last 5	12:19:18	360.02	21.46	6.91	1224.09	0.21	15.18	0.20	37.18
Last 5	12:22:18	540.02	21.57	6.87	1231.42	0.21	15.18	0.18	36.66
Last 5	12:25:18	720.02	21.64	6.87	1231.66	0.20	15.18	0.17	37.17
Last 5									
Variance 0			0.00	-0.00	-3.06			-0.02	0.29
Variance 1			0.10	-0.04	7.33			-0.02	-0.52
Variance 2			0.07	0.01	0.24			-0.02	0.51

Notes

Started purge at 1206

Extra volume for lab QC pulled here - 1/2 gallon for rads (lab request). Great recharge

Grab Samples

Product Name: Low-Flow System

Date: 2016-07-12 12:53:20

Project Information:		Pump Information:	
Operator Name	Andreas Shoredits	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Hammond	Tubing Diameter	0.17 in
Site Name	GPC-Hammond	Tubing Length	46.0 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463072		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	40.0 ft

Well Information:		Pumping Information:	
Well ID	HGWC-13	Final Pumping Rate	150 mL/min
Well diameter	2.00 in	Total System Volume	0.4153174 L
Well Total Depth	44.6 ft	Calculated Sample Rate	300 sec
Screen Length	10.0 ft	Stabilization Drawdown	0.7 in
Depth to Water	17.46 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:54:54	900.01	22.30	7.02	825.84	1.25	17.53	0.19	-46.32
Last 5	11:59:54	1200.02	22.09	7.03	825.22	0.73	17.53	0.17	-43.88
Last 5	12:04:54	1500.09	22.20	7.04	763.27	1.10	17.52	0.52	-41.99
Last 5	12:09:54	1800.02	22.01	7.04	776.56	1.45	17.52	0.48	-40.98
Last 5	12:14:54	2100.02	22.18	7.04	759.86	1.76	17.52	0.49	-40.74
Variance 0			0.11	0.00	-61.94			0.35	1.89
Variance 1			-0.19	0.00	13.28			-0.04	1.01
Variance 2			0.16	0.00	-16.70			0.01	0.24

Notes

Parameters are stable after three consecutive readings; turbidity is < 5.0 NTU; drawdown is minimal; Sample time is 12:20; TD is 45.55 ft btoc

Grab Samples

HGWC-13

Groundwater sample

Product Name: Low-Flow System

Date: 2016-07-12 13:53:04

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC Plant Hammond	Tubing Diameter	.17 in
Site Name	GPC- Plant Hammond	Tubing Length	48 ft
Latitude	35º 6' 55.95"		
Longitude	-81º -3' -19.2"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	HGWC-14	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.4542443 L
Well Total Depth	43 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	24.37 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:30:23	1200.02	25.51	4.48	3439.63	2.69	24.40	0.28	355.72
Last 5	13:35:23	1500.02	25.43	4.47	3450.48	3.80	24.40	0.31	356.68
Last 5	13:40:23	1800.02	25.22	4.48	3465.14	1.62	24.40	0.26	350.37
Last 5	13:45:23	2100.02	25.28	4.48	3479.51	1.88	24.40	0.24	348.25
Last 5	13:50:23	2400.02	25.36	4.49	3486.12	1.37	24.40	0.24	342.16
Variance 0			-0.22	0.01	14.66			-0.04	-6.31
Variance 1			0.06	0.00	14.37			-0.02	-2.12
Variance 2			0.09	0.01	6.61			-0.01	-6.09

Notes

All parameters stable.

Grab Samples

Product Name: Low-Flow System

Date: 2016-07-12 12:31:24

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Hammond GW	Tubing Diameter	.17 in
Site Name	Plant Hammond AP	Tubing Length	42 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444107		
Turbidity Make/Model	Lamotte2020	Pump placement from TOC	33 ft

Well Information:		Pumping Information:	
Well ID	HGWC-15	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3974638 L
Well Total Depth	38 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	8.2 in
Depth to Water	16.39 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			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:15:04	300.06	22.38	6.22	1480.34	1.89	17.10	0.23	105.53
Last 5	12:20:04	600.02	22.40	6.21	1477.95	0.89	17.12	0.18	103.33
Last 5	12:25:04	900.02	22.36	6.19	1489.76	0.95	17.11	0.16	101.78
Last 5	12:30:04	1200.02	22.52	6.17	1481.99	0.98	17.11	0.15	101.43
Last 5									
Variance 0			0.02	-0.01	-2.39			-0.05	-2.19
Variance 1			-0.04	-0.02	11.82			-0.02	-1.55
Variance 2			0.16	-0.02	-7.77			-0.01	-0.35

Notes

Parameters stable

Grab Samples

HGWC-15

Sampling at 1235

Product Name: Low-Flow System

Date: 2016-07-12 15:06:28

Project Information:		Pump Information:	
Operator Name	Andreas Shoredits	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Hammond	Tubing Diameter	0.17 in
Site Name	GPC-Hammond	Tubing Length	34.0 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463072		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	28.0 ft

Well Information:		Pumping Information:	
Well ID	HGWC-16	Final Pumping Rate	100 mL/min
Well diameter	2.00 in	Total System Volume	0.3617564 L
Well Total Depth	33.0 ft	Calculated Sample Rate	300 sec
Screen Length	10.0 ft	Stabilization Drawdown	5.4 in
Depth to Water	11.93 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:03:46	1200.02	24.38	7.10	878.63	1.47	12.36	0.30	-68.77
Last 5	14:08:46	1500.02	24.44	7.11	874.58	2.48	12.36	0.28	-66.93
Last 5	14:13:46	1800.02	24.60	7.11	874.81	3.77	12.36	0.52	-65.93
Last 5	14:18:45	2099.96	24.89	7.10	834.14	4.96	12.36	0.59	-65.88
Last 5	14:23:45	2399.96	24.46	7.10	841.59	3.78	12.38	0.52	-63.80
Variance 0			0.16	0.00	0.23			0.24	1.00
Variance 1			0.29	-0.00	-40.67			0.07	0.05
Variance 2			-0.43	-0.00	7.45			-0.07	2.08

Notes

Parameter are stable after three consecutive readings; turbidity is < 5.0 NTU; drawdown initially large but stabilized; Sample time is 14:30; TD is 33.45 ft btoc

Grab Samples

HGWC-16

Groundwater sample

Product Name: Low-Flow System

Date: 2016-07-12 15:02:05

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Hammond AP	Tubing Diameter	0.17 in
Site Name	Plant Hammond	Tubing Length	25 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444575		
Turbidity Make/Model	LaMotte	Pump placement from TOC	23 ft

Well Information:		Pumping Information:	
Well ID	HGWC-17	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.2015856 L
Well Total Depth	27.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.8 in
Depth to Water	17.25 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			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	14:39:57	3000.01	22.45	6.10	1294.64	0.21	17.65	0.13	74.53
Last 5	14:44:57	3300.01	22.54	6.09	1294.16	0.26	17.65	0.12	74.45
Last 5	14:49:57	3600.01	22.65	6.10	1294.10	0.23	17.65	0.13	74.58
Last 5	14:54:57	3900.01	22.67	6.09	1287.37	0.22	17.65	0.12	74.56
Last 5	14:59:57	4200.01	22.73	6.09	1291.01	0.22	17.65	0.13	74.67
Variance 0			0.11	0.00	-0.06			0.00	0.13
Variance 1			0.02	-0.00	-6.73			-0.01	-0.02
Variance 2			0.07	0.00	3.64			0.01	0.11

Notes

WL at top of screen, so purging to volume

No issues. Good recharge. Purged to volume.

Grab Samples

HGWC-11

Sample time 15:04

Product Name: Low-Flow System

Date: 2016-07-12 15:19:56

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Hammond GW	Tubing Diameter	.17 in
Site Name	Plant Hammond AP	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444107		
Turbidity Make/Model	Lamotte2020	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	HGWC-18	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3439027 L
Well Total Depth	27.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.6 in
Depth to Water	17.04 ft	Total Volume Pumped	22.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:58:20	2403.02	21.76	4.55	2135.22	--	--	0.10	206.50
Last 5	15:03:21	2704.02	21.76	4.56	2125.70	--	--	0.09	203.17
Last 5	15:08:21	3004.02	22.36	4.54	2195.07	0.40	17.38	0.11	200.64
Last 5	15:13:21	3304.02	23.84	4.56	2134.10	0.49	17.20	0.14	199.95
Last 5	15:18:21	3604.02	23.70	4.58	2119.04	0.43	17.20	0.14	197.54
Variance 0			0.59	-0.02	69.37			0.03	-2.53
Variance 1			1.49	0.02	-60.96			0.02	-0.68
Variance 2			-0.15	0.01	-15.07			0.01	-2.42

Notes

Water level within 1 foot of screen. Purging 3well volumes
Parameters stable

Grab Samples

HGWC-18

Sampling at 1521

Product Name: Low-Flow System

Date: 2016-05-19 09:28:51

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Plant Hammond-AP	Tubing Diameter	.17 in
Site Name	Plant Hammond	Tubing Length	37 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449102		
Turbidity Make/Model	Hanna	Pump placement from TOC	27 ft

Well Information:		Pumping Information:	
Well ID	HGWA-1	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3751467 L
Well Total Depth	32.31 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6.4 in
Depth to Water	17.46 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			+/- 1000	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	09:06:35	900.02	17.33	7.28	686.12	3.44	18.09	0.83	60.59
Last 5	09:11:35	1200.02	17.35	7.27	680.43	2.69	18.09	0.71	50.84
Last 5	09:16:35	1500.03	17.36	7.27	683.50	2.68	18.09	0.64	42.05
Last 5	09:21:35	1800.02	17.50	7.27	669.27	2.17	18.09	0.58	39.87
Last 5	09:26:35	2100.02	17.41	7.27	661.79	2.10	18.09	0.55	40.30
Variance 0			0.02	-0.01	3.06			-0.07	-8.79
Variance 1			0.14	0.00	-14.22			-0.06	-2.19
Variance 2			-0.09	0.00	-7.49			-0.03	0.43

Notes

Sampling at 930.

Grab Samples

HGWA-1

Parameters stable

Product Name: Low-Flow System

Date: 2016-05-19 11:23:40

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Plant Hammond-AP	Tubing Diameter	.17 in
Site Name	Plant Hammond	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449102		
Turbidity Make/Model	Hanna	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	HGWA-2	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3439027 L
Well Total Depth	27.9 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.3 in
Depth to Water	8.17 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			+/- 1000	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	11:02:01	2100.02	19.34	5.89	219.49	4.64	8.54	0.31	86.31
Last 5	11:07:01	2400.02	19.26	5.85	213.57	4.15	8.54	0.29	91.41
Last 5	11:12:01	2700.02	19.33	5.83	210.72	3.99	8.54	0.26	93.63
Last 5	11:17:01	3000.02	19.31	5.82	207.42	3.77	8.54	0.22	97.13
Last 5	11:22:01	3300.02	19.28	5.81	205.52	3.68	8.54	0.20	98.11
Variance 0			0.07	-0.02	-2.86			-0.04	2.22
Variance 1			-0.01	-0.02	-3.29			-0.04	3.51
Variance 2			-0.04	-0.01	-1.91			-0.01	0.97

Notes

Sampling at 1126

Grab Samples

HGWA-2

All parameters stable

Product Name: Low-Flow System

Date: 2016-05-19 16:08:00

Project Information:		Pump Information:	
Operator Name	Andreas Shoredits	Pump Model/Type	Alexis Peristaltic V2.0
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Hammond	Tubing Diameter	0.17 in
Site Name	Hammond	Tubing Length	37 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	450141		
Turbidity Make/Model	Hanna HI 98703	Pump placement from TOC	5 ft

Well Information:		Pumping Information:	
Well ID	HGWA-3	Final Pumping Rate	100 mL/min
Well diameter	2.00 in	Total System Volume	0.3751467 L
Well Total Depth	44.6 ft	Calculated Sample Rate	300 sec
Screen Length	10.0 ft	Stabilization Drawdown	0 in
Depth to Water	7.96 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			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 1000
Last 5	15:39:39	900.02	20.43	7.50	459.74	3.85	7.96	0.42	-131.29
Last 5	15:44:39	1200.02	20.36	7.47	478.35	3.53	7.96	0.44	-124.99
Last 5	15:49:39	1500.02	20.28	7.46	483.74	4.10	7.96	0.27	-122.34
Last 5	15:54:39	1800.00	20.27	7.45	490.59	4.88	7.96	0.27	-120.00
Last 5	15:59:39	2100.00	20.33	7.45	490.23	3.35	7.96	0.19	-117.25
Variance 0			-0.08	-0.01	5.40			-0.17	2.64
Variance 1			-0.01	-0.01	6.84			0.00	2.35
Variance 2			0.05	-0.00	-0.35			-0.08	2.75

Notes

TD measured after sampling,see field notes

DUP-1 taken on this well

Grab Samples

HGWA-3

Groundwater Sample

Product Name: Low-Flow System

Date: 2016-05-19 17:34:52

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Plant Hammond-AP	Tubing Diameter	.17 in
Site Name	Plant Hammond	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449102		
Turbidity Make/Model	Hanna	Pump placement from TOC	20 ft

Well Information:		Pumping Information:	
Well ID	HGWA-4	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3439027 L
Well Total Depth	25.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.1 in
Depth to Water	7.69 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			+/- 1000	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	17:12:39	3300.01	18.84	6.46	230.85	2.89	8.10	0.38	87.08
Last 5	17:17:39	3600.01	19.07	6.48	233.48	2.72	8.10	0.36	85.17
Last 5	17:22:39	3900.01	19.09	6.48	232.17	2.71	8.10	0.36	84.69
Last 5	17:27:39	4200.01	19.06	6.49	236.67	2.70	8.10	0.36	83.07
Last 5	17:32:39	4500.01	18.97	6.51	237.55	2.54	8.10	0.36	81.54
Variance 0			0.02	0.00	-1.31			-0.01	-0.47
Variance 1			-0.03	0.01	4.51			0.01	-1.62
Variance 2			-0.09	0.02	0.87			-0.00	-1.53

Notes

Sample at 1737

Grab Samples

HGWA-4

Parameters stable

Product Name: Low-Flow System

Date: 2016-05-19 10:27:20

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	Pegasus Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Plant Hammond CCR	Tubing Diameter	0.17 in
Site Name	Default Site	Tubing Length	24 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444107		
Turbidity Make/Model	Hanna	Pump placement from TOC	22.4 ft

Well Information:		Pumping Information:	
Well ID	HGWA-5	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.1971222 L
Well Total Depth	27.4 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	5.28 in
Depth to Water	6.56 ft	Total Volume Pumped	7.35 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 1000
Last 5	10:12:32	1800.02	18.61	6.60	262.86	9.54	7.01	0.14	7.28
Last 5	10:15:32	1980.02	18.67	6.62	266.30	8.68	7.00	0.15	5.11
Last 5	10:18:32	2160.02	18.66	6.62	267.57	4.45	7.00	0.15	4.57
Last 5	10:21:32	2340.02	18.64	6.61	267.85	1.59	7.00	0.15	4.87
Last 5	10:24:32	2520.02	18.66	6.62	268.83	1.82	7.00	0.15	5.14
Variance 0			-0.01	-0.00	1.27			0.00	-0.53
Variance 1			-0.02	-0.00	0.28			-0.01	0.29
Variance 2			0.02	0.00	0.98			0.00	0.27

Notes

Well tag says HGWC-5

Slowed purge rate to 100 mL/min for turbidity

Grab Samples

HGWA-5

Sample time 1027

Product Name: Low-Flow System

Date: 2016-05-20 09:22:27

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Hammond AP	Tubing Diameter	0.17 in
Site Name	GPC-Plant Hammond-Hammond AP	Tubing Length	47 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444107		
Turbidity Make/Model	Hanna	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	HGWA-6	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.2997809 L
Well Total Depth	50.00 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	11.16 in
Depth to Water	6.25 ft	Total Volume Pumped	3.45 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:08:48	540.03	17.57	7.57	375.35	0.09	7.11	0.26	-96.45
Last 5	09:11:48	720.02	17.54	7.57	374.69	0.07	7.16	0.24	-92.14
Last 5	09:14:48	900.02	17.52	7.56	374.58	0.03	7.18	0.23	-89.42
Last 5	09:17:48	1080.03	17.50	7.57	375.27	0.02	7.18	0.22	-90.01
Last 5	09:20:48	1260.03	17.49	7.58	375.59	0.01	7.18	0.21	-90.95
Variance 0			-0.02	-0.01	-0.10			-0.01	2.72
Variance 1			-0.02	0.00	0.69			-0.01	-0.60
Variance 2			-0.01	0.01	0.32			-0.01	-0.94

Notes

Grab Samples
HGWA-6
Sample time 0923

Product Name: Low-Flow System

Date: 2016-05-20 09:11:17

Project Information:		Pump Information:	
Operator Name	Andreas Shoredits	Pump Model/Type	Alexis Peristaltic V2.0
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Hammond	Tubing Diameter	0.17 in
Site Name	Hammond	Tubing Length	25.0 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	450141		
Turbidity Make/Model	Hanna HI 98703	Pump placement from TOC	5.0 ft

Well Information:		Pumping Information:	
Well ID	HGWA-7	Final Pumping Rate	100 mL/min
Well diameter	2.00 in	Total System Volume	0.3215856 L
Well Total Depth	29.8 ft	Calculated Sample Rate	300 sec
Screen Length	10.0 ft	Stabilization Drawdown	0.5 in
Depth to Water	4.85 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			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 1000
Last 5	08:42:12	600.02	18.55	7.13	798.85	0.49	4.94	0.20	40.08
Last 5	08:47:12	900.02	18.45	7.14	799.39	0.65	4.94	0.15	36.86
Last 5	08:52:12	1200.02	18.44	7.15	799.20	0.39	4.94	0.13	35.86
Last 5	08:57:12	1500.02	18.40	7.14	799.04	0.49	4.94	0.12	33.67
Last 5	09:02:12	1800.02	18.36	7.14	799.26	0.43	4.94	0.11	34.53
Variance 0			-0.02	0.00	-0.19			-0.02	-1.01
Variance 1			-0.04	-0.00	-0.16			-0.01	-2.18
Variance 2			-0.03	-0.00	0.22			-0.01	0.85

Notes

TD measured after sampling, see field notes

Grab Samples

HGWA-7

Groundwater Sample

Product Name: Low-Flow System

Date: 2016-05-20 09:11:17

Project Information:		Pump Information:	
Operator Name	Andreas Shoredits	Pump Model/Type	Alexis Peristaltic V2.0
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Hammond	Tubing Diameter	0.17 in
Site Name	Hammond	Tubing Length	25.0 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	450141		
Turbidity Make/Model	Hanna HI 98703	Pump placement from TOC	5.0 ft

Well Information:		Pumping Information:	
Well ID	HGWC-7	Final Pumping Rate	100 mL/min
Well diameter	2.00 in	Total System Volume	0.3215856 L
Well Total Depth	29.8 ft	Calculated Sample Rate	300 sec
Screen Length	10.0 ft	Stabilization Drawdown	0.5 in
Depth to Water	4.85 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			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 1000
Last 5	08:42:12	600.02	18.55	7.13	798.85	0.49	4.94	0.20	40.08
Last 5	08:47:12	900.02	18.45	7.14	799.39	0.65	4.94	0.15	36.86
Last 5	08:52:12	1200.02	18.44	7.15	799.20	0.39	4.94	0.13	35.86
Last 5	08:57:12	1500.02	18.40	7.14	799.04	0.49	4.94	0.12	33.67
Last 5	09:02:12	1800.02	18.36	7.14	799.26	0.43	4.94	0.11	34.53
Variance 0			-0.02	0.00	-0.19			-0.02	-1.01
Variance 1			-0.04	-0.00	-0.16			-0.01	-2.18
Variance 2			-0.03	-0.00	0.22			-0.01	0.85

Notes

TD measured after sampling, see field notes

Grab Samples

HGWA-7

Groundwater Sample

Product Name: Low-Flow System

Date: 2016-05-20 09:07:03

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Plant Hammond-AP	Tubing Diameter	.17 in
Site Name	Plant Hammond	Tubing Length	28 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449102		
Turbidity Make/Model	Hanna	Pump placement from TOC	19 ft

Well Information:		Pumping Information:	
Well ID	HGWC-8	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3349758 L
Well Total Depth	24.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.39 in
Depth to Water	4.11 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			+/- 1000	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	08:43:55	300.09	18.63	7.00	959.01	7.26	4.15	0.26	98.72
Last 5	08:48:55	600.02	18.59	6.99	959.94	4.99	4.15	0.17	76.19
Last 5	08:53:55	900.02	18.61	6.99	960.44	2.73	4.15	0.14	69.86
Last 5	08:58:55	1200.02	18.55	6.99	961.50	2.02	4.15	0.13	67.01
Last 5	09:03:55	1500.02	18.53	6.99	962.52	1.46	4.15	0.12	65.65
Variance 0			0.02	0.00	0.49			-0.03	-6.33
Variance 1			-0.06	-0.00	1.06			-0.01	-2.85
Variance 2			-0.03	0.00	1.02			-0.01	-1.36

Notes

Sampling at 909

Grab Samples

HGWA-8

Parameters stable

Product Name: Low-Flow System

Date: 2016-05-23 11:58:51

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Plant Hammond-AP	Tubing Diameter	.17 in
Site Name	Plant Hammond	Tubing Length	50 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449102		
Turbidity Make/Model	Hanna	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	HGWC-9	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4331712 L
Well Total Depth	46.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.03 in
Depth to Water	13.60 ft	Total Volume Pumped	13 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	11:37:29	2700.01	20.57	7.23	1253.08	5.30	13.63	0.13	10.80
Last 5	11:42:29	3000.01	20.48	7.23	1257.20	5.58	13.63	0.13	7.98
Last 5	11:47:29	3300.01	20.66	7.23	1256.37	4.82	13.63	0.13	12.59
Last 5	11:52:29	3600.01	20.81	7.23	1250.29	3.37	13.63	0.12	8.95
Last 5	11:57:29	3900.01	20.96	7.23	1246.94	3.12	13.63	0.12	12.77
Variance 0			0.18	-0.00	-0.83			-0.01	4.61
Variance 1			0.15	0.00	-6.08			-0.00	-3.64
Variance 2			0.15	-0.00	-3.35			-0.01	3.82

Notes

Sampling at 1200

Grab Samples

HGWC-9

All parameters stable

Product Name: Low-Flow System

Date: 2016-05-23 14:05:57

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Plant Hammond-AP	Tubing Diameter	.17 in
Site Name	Plant Hammond	Tubing Length	27 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449102		
Turbidity Make/Model	Hanna	Pump placement from TOC	17 ft

Well Information:		Pumping Information:	
Well ID	HGWA-10	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3305124 L
Well Total Depth	22.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.05 in
Depth to Water	13.48 ft	Total Volume Pumped	19.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	13:42:17	2700.02	20.00	6.83	1005.55	2.52	13.54	0.06	61.02
Last 5	13:47:17	3000.02	19.77	6.84	992.28	2.15	13.54	0.06	59.04
Last 5	13:52:17	3300.02	21.37	6.83	994.96	1.79	13.53	0.09	60.28
Last 5	13:57:17	3600.01	21.53	6.83	994.39	1.28	13.53	0.09	58.90
Last 5	14:02:17	3900.01	21.69	6.83	1001.69	1.12	13.53	0.10	58.12
Variance 0			1.60	-0.01	2.69			0.03	1.24
Variance 1			0.16	-0.00	-0.58			-0.00	-1.38
Variance 2			0.15	-0.00	7.30			0.00	-0.78

Notes

Sampling at 1406. Water level in screen so purged 3 WV. 5.6 L per well volume. 1st at 1325 2nd at 1336 3rd at 1347. Purged at 500ml/min then decreased to 200 at 1347 and for sampling

Grab Samples

HGWC-10

All parameters stable

Product Name: Low-Flow System

Date: 2016-05-23 14:05:57

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Plant Hammond-AP	Tubing Diameter	.17 in
Site Name	Plant Hammond	Tubing Length	27 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449102		
Turbidity Make/Model	Hanna	Pump placement from TOC	17 ft

Well Information:		Pumping Information:	
Well ID	HGWC-10	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3305124 L
Well Total Depth	22.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.05 in
Depth to Water	13.48 ft	Total Volume Pumped	19.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	13:42:17	2700.02	20.00	6.83	1005.55	2.52	13.54	0.06	61.02
Last 5	13:47:17	3000.02	19.77	6.84	992.28	2.15	13.54	0.06	59.04
Last 5	13:52:17	3300.02	21.37	6.83	994.96	1.79	13.53	0.09	60.28
Last 5	13:57:17	3600.01	21.53	6.83	994.39	1.28	13.53	0.09	58.90
Last 5	14:02:17	3900.01	21.69	6.83	1001.69	1.12	13.53	0.10	58.12
Variance 0			1.60	-0.01	2.69			0.03	1.24
Variance 1			0.16	-0.00	-0.58			-0.00	-1.38
Variance 2			0.15	-0.00	7.30			0.00	-0.78

Notes

Sampling at 1406. Water level in screen so purged 3 WV. 5.6 L per well volume. 1st at 1325 2nd at 1336 3rd at 1347. Purged at 500ml/min then decreased to 200 at 1347 and for sampling

Grab Samples

HGWC-10

All parameters stable

Product Name: Low-Flow System

Date: 2016-05-23 12:09:54

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Hammond AP	Tubing Diameter	0.17 in
Site Name	GPC-Plant Hammond-Hammond AP	Tubing Length	20 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444107		
Turbidity Make/Model	Hanna	Pump placement from TOC	18.5 ft

Well Information:		Pumping Information:	
Well ID	HGWC-11	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.1792685 L
Well Total Depth	22.3 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	1.08 in
Depth to Water	14.66 ft	Total Volume Pumped	18.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:55:03	3060.02	19.28	6.21	864.78	0.12	14.75	1.65	104.70
Last 5	11:58:03	3240.02	19.27	6.21	858.76	0.10	14.75	1.61	104.29
Last 5	12:01:03	3420.02	19.15	6.23	875.95	0.10	14.75	1.52	102.96
Last 5	12:04:03	3600.02	19.06	6.24	875.64	0.12	14.75	1.49	102.81
Last 5	12:07:03	3780.02	19.15	6.22	864.28	0.10	14.75	1.58	102.12
Variance 0			-0.13	0.01	17.19			-0.09	-1.33
Variance 1			-0.09	0.02	-0.31			-0.03	-0.15
Variance 2			0.09	-0.02	-11.36			0.08	-0.69

Notes

Purging to 3 wv as wl is in screened zone

Purged to 3 wv as water was in screened interval. Pulled DUP-2 here

Grab Samples

HGWC-11

Sample time 1210

DUP-2

Sample time 1210

Product Name: Low-Flow System

Date: 2016-05-23 13:49:13

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Hammond AP	Tubing Diameter	0.17 in
Site Name	GPC-Plant Hammond-Hammond AP	Tubing Length	32 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444107		
Turbidity Make/Model	Hanna	Pump placement from TOC	30 ft

Well Information:		Pumping Information:	
Well ID	HGWC-12	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2328295 L
Well Total Depth	35.1 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	0.48 in
Depth to Water	14.72 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:39:05	180.03	20.61	7.15	1331.66	0.35	14.76	0.16	60.59
Last 5	13:42:05	360.02	20.35	7.15	1334.46	0.41	14.76	0.14	58.51
Last 5	13:45:05	540.02	20.30	7.16	1326.91	0.27	14.76	0.14	57.92
Last 5	13:48:05	720.02	20.26	7.15	1330.12	0.22	14.76	0.13	56.99
Last 5									
Variance 0			-0.27	0.00	2.80			-0.01	-2.08
Variance 1			-0.05	0.00	-7.55			-0.01	-0.59
Variance 2			-0.04	-0.00	3.21			-0.01	-0.94

Notes

Grab Samples
HGWC-12
Sample time 1352

Product Name: Low-Flow System

Date: 2016-05-23 15:14:07

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Hammond AP	Tubing Diameter	0.17 in
Site Name	GPC-Plant Hammond-Hammond AP	Tubing Length	42 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444107		
Turbidity Make/Model	Hanna	Pump placement from TOC	40 ft

Well Information:		Pumping Information:	
Well ID	HGWC-13	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2774638 L
Well Total Depth	44.6 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	1.2 in
Depth to Water	18.5 ft	Total Volume Pumped	5.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:59:58	360.02	20.53	7.14	979.74	4.86	18.60	0.16	-6.50
Last 5	15:02:58	540.02	20.57	7.14	981.51	6.19	18.60	0.15	-5.25
Last 5	15:05:58	720.02	20.42	7.14	982.48	1.90	18.60	0.15	-5.34
Last 5	15:08:58	900.02	20.44	7.14	982.15	1.50	18.60	0.14	-3.06
Last 5	15:11:58	1080.02	20.31	7.14	985.94	1.45	18.60	0.13	-5.46
Variance 0			-0.15	0.00	0.97			-0.00	-0.09
Variance 1			0.02	0.00	-0.33			-0.00	2.28
Variance 2			-0.13	0.00	3.79			-0.01	-2.40

Notes

Grab Samples
HGWC-13
Sample time 1515

Product Name: Low-Flow System

Date: 2016-05-23 12:26:29

Project Information:		Pump Information:	
Operator Name	Will Virgo	Pump Model/Type	Alexis Peristaltic V2.0
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Hammond AP	Tubing Diameter	0.17 in
Site Name	Hammond	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	450141		
Turbidity Make/Model	Hanna HI 98703	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	HGWC-14	Final Pumping Rate	200 mL/min
Well diameter	2.00 in	Total System Volume	0.410854 L
Well Total Depth	43 ft	Calculated Sample Rate	300 sec
Screen Length	10.0 ft	Stabilization Drawdown	0.84 in
Depth to Water	24.24 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			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 1000
Last 5	12:03:14	900.02	22.22	4.48	3702.35	7.76	24.31	0.29	371.35
Last 5	12:08:14	1200.02	22.28	4.50	3667.64	3.58	24.31	0.27	354.79
Last 5	12:13:14	1500.02	22.36	4.53	3700.87	2.48	24.31	0.23	335.93
Last 5	12:18:14	1800.02	22.48	4.54	3675.91	1.74	24.31	0.17	326.14
Last 5	12:23:14	2100.02	22.36	4.56	3671.65	1.18	24.31	0.16	316.25
Variance 0			0.08	0.03	33.23			-0.04	-18.87
Variance 1			0.12	0.02	-24.96			-0.06	-9.78
Variance 2			-0.12	0.02	-4.27			-0.02	-9.90

Notes

Well parameters stable @ 1223.

Grab Samples

HGWC-14

Sample Time 1228

Product Name: Low-Flow System

Date: 2016-05-23 13:57:26

Project Information:		Pump Information:	
Operator Name	Will Virgo	Pump Model/Type	Alexis Peristaltic V2.0
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Hammond AP	Tubing Diameter	0.17 in
Site Name	Hammond	Tubing Length	40 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	450141		
Turbidity Make/Model	Hanna HI 98703	Pump placement from TOC	33 ft

Well Information:		Pumping Information:	
Well ID	HGWC-15	Final Pumping Rate	200 mL/min
Well diameter	2.00 in	Total System Volume	0.3885369 L
Well Total Depth	38 ft	Calculated Sample Rate	300 sec
Screen Length	10.0 ft	Stabilization Drawdown	11.52 in
Depth to Water	15.81 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			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 1000
Last 5	13:34:15	900.02	20.31	6.25	1554.97	3.88	16.75	0.89	196.93
Last 5	13:39:15	1200.02	19.82	6.21	1559.00	2.92	16.76	0.71	171.89
Last 5	13:44:16	1501.02	19.55	6.20	1565.98	2.91	16.76	0.63	158.45
Last 5	13:49:16	1801.02	19.77	6.18	1570.72	1.83	16.77	0.51	140.76
Last 5	13:54:16	2101.02	19.94	6.17	1569.70	1.83	16.77	0.49	136.38
Variance 0			-0.27	-0.01	6.98			-0.08	-13.44
Variance 1			0.22	-0.02	4.74			-0.11	-17.68
Variance 2			0.17	-0.01	-1.03			-0.02	-4.39

Notes

Purge started @13:19 @ 200 mL/min

Well parameters stable @ 13:54. Sample rate 200 mL/min

Grab Samples

HGWC-15

Sample Time: 13:59

Product Name: Low-Flow System

Date: 2016-05-23 15:22:58

Project Information:		Pump Information:	
Operator Name	Will Virgo	Pump Model/Type	Alexis Peristaltic V2.0
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Hammond AP	Tubing Diameter	0.17 in
Site Name	Hammond	Tubing Length	35 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	450141		
Turbidity Make/Model	Hanna HI 98703	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	HGWC-16	Final Pumping Rate	200 mL/min
Well diameter	2.00 in	Total System Volume	0.3662198 L
Well Total Depth	33 ft	Calculated Sample Rate	300 sec
Screen Length	10.0 ft	Stabilization Drawdown	7.8 in
Depth to Water	11.62 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			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 1000
Last 5	15:00:08	600.02	21.30	7.13	896.07	3.39	12.22	0.68	-66.46
Last 5	15:05:08	900.02	20.13	7.15	854.96	3.75	12.23	0.15	-76.09
Last 5	15:10:08	1200.02	19.97	7.15	850.45	1.60	12.25	0.15	-76.78
Last 5	15:15:08	1500.02	19.96	7.15	852.23	2.65	12.26	0.13	-75.28
Last 5	15:20:08	1800.07	19.87	7.15	843.46	0.00	1227.00	0.13	-74.46
Variance 0			-0.16	0.00	-4.51			-0.00	-0.69
Variance 1			-0.01	-0.00	1.78			-0.01	1.49
Variance 2			-0.09	0.00	-8.77			0.00	0.82

Notes

Purge started @ 14:50. Purge Rate: 200 mL/min
Well parameters stable @ 15:20. Sampled @ 200 mL/min

Grab Samples

HGWC-16

Sample Time: 1525

Product Name: Low-Flow System

Date: 2016-05-23 16:20:25

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Plant Hammond-AP	Tubing Diameter	.17 in
Site Name	Plant Hammond	Tubing Length	32 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449102		
Turbidity Make/Model	Hanna	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	HGWC-17	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3528295 L
Well Total Depth	27.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	5 in
Depth to Water	16.9 ft	Total Volume Pumped	24.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	15:56:46	2404.02	20.01	6.40	1423.19	6.91	17.70	0.07	88.66
Last 5	16:01:46	2704.02	21.54	6.40	1420.83	5.99	17.52	0.11	88.85
Last 5	16:06:46	3004.02	21.65	6.40	1426.01	4.67	17.40	0.11	88.56
Last 5	16:11:46	3304.01	21.99	6.40	1421.79	4.58	17.40	0.10	89.13
Last 5	16:16:46	3604.01	21.84	6.40	1412.11	4.68	17.40	0.10	88.21
Variance 0			0.11	-0.00	5.18			-0.00	-0.29
Variance 1			0.35	-0.00	-4.22			-0.00	0.56
Variance 2			-0.16	0.00	-9.68			-0.00	-0.92

Notes

Within screen interval so purging 3 well volumes at 500ml/ min then decrease to 200
1st well volume at 1529. 2nd at 1543 3rd at 1556

Grab Samples

HGWC-17

All parameters stable

Product Name: Low-Flow System

Date: 2016-05-24 10:25:21

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Plant Hammond-AP	Tubing Diameter	.17 in
Site Name	Plant Hammond	Tubing Length	32 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449102		
Turbidity Make/Model	Hanna	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	HGWA-18	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3528295 L
Well Total Depth	27.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.3 in
Depth to Water	16.67 ft	Total Volume Pumped	30.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1000	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	09:57:09	4200.00	18.52	4.83	2020.74	6.00	16.90	0.14	197.21
Last 5	10:02:09	4500.00	18.63	4.81	2032.26	5.52	16.90	0.14	199.88
Last 5	10:07:09	4800.00	18.57	4.84	2022.27	3.89	16.90	0.15	196.84
Last 5	10:12:09	5100.00	18.79	4.83	2023.12	3.52	16.90	0.14	194.94
Last 5	10:17:09	5400.00	18.75	4.83	2025.36	3.11	16.90	0.14	196.56
Variance 0			-0.06	0.02	-9.99			0.02	-3.04
Variance 1			0.22	-0.00	0.84			-0.01	-1.90
Variance 2			-0.05	-0.00	2.25			-0.00	1.62

Notes

If WL drops .3inches will be one foot above screen and will purge 3 WV at 500ml/min. Then decrease back to 200ml/min
Purged 3 WV at 500ml/min. 1st at 900 2nd at914 3rd at 928

Grab Samples

HGWC-18

Parameters stable

Product Name: Low-Flow System

Date: 2016-08-30 12:47:38

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Ash Ponds 1 & 2	Tubing Diameter	.17 in
Site Name	GPC-Hammond	Tubing Length	37 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444108		
Turbidity Make/Model	HI 98703	Pump placement from TOC	27.6 ft

Well Information:		Pumping Information:	
Well ID	HGWA-1	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2551467 L
Well Total Depth	32.5 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6 in
Depth to Water	20.99 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:10:18	1800.02	21.07	7.29	514.13	5.41	21.50	0.11	-22.19
Last 5	12:15:18	2100.02	21.28	7.28	516.10	5.22	21.50	0.11	-22.21
Last 5	12:20:18	2400.02	21.06	7.28	516.68	4.24	21.50	0.10	-18.71
Last 5	12:25:18	2699.99	21.31	7.27	524.23	4.54	21.50	0.10	-18.55
Last 5	12:30:18	2999.99	21.20	7.28	516.64	4.62	21.50	0.09	-16.66
Variance 0			-0.22	0.00	0.57			-0.01	3.50
Variance 1			0.25	-0.01	7.55			-0.00	0.16
Variance 2			-0.11	0.01	-7.59			-0.01	1.89

Notes

1140 purge started @200mL/min,1230 well parameters stable, 1235 well sampled @ 200mL/min

Grab Samples

HGWA-1

.5gal, 1qt, 250ml

Product Name: Low-Flow System

Date: 2016-08-30 13:40:17

Project Information:		Pump Information:	
Operator Name	M. Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	AP 1&2	Tubing Diameter	.17 in
Site Name	GPC- Hammond	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	450141		
Turbidity Make/Model	Hanna	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	HGWA-2	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3439027 L
Well Total Depth	27.9 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.11 in
Depth to Water	9.76 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:19:19	300.09	30.40	5.77	226.60	0.89	9.86	2.38	11.42
Last 5	13:24:19	600.02	26.21	5.66	228.56	2.54	9.87	0.31	36.64
Last 5	13:29:19	900.02	26.24	5.65	224.88	2.28	9.87	0.23	32.61
Last 5	13:34:19	1200.02	26.70	5.63	226.12	2.00	9.87	0.20	26.86
Last 5									
Variance 0			-4.19	-0.11	1.96			-2.06	25.21
Variance 1			0.03	-0.01	-3.68			-0.08	-4.03
Variance 2			0.46	-0.02	1.24			-0.03	-5.74

Notes

All parameters stable.

Grab Samples

HGWA-2

Sampling at 1340 at 200ml/min

Product Name: Low-Flow System

Date: 2016-08-30 14:37:31

Project Information:		Pump Information:	
Operator Name	M. Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	AP 1&2	Tubing Diameter	.17 in
Site Name	GPC- Hammond	Tubing Length	46 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	450141		
Turbidity Make/Model	Hanna	Pump placement from TOC	39 ft

Well Information:		Pumping Information:	
Well ID	HGWA-3	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4153174 L
Well Total Depth	45.19 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.02 in
Depth to Water	9.68 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:21:02	300.01	25.56	7.32	355.37	0.94	9.68	0.29	-117.09
Last 5	14:26:02	600.00	24.78	7.41	357.03	1.00	9.68	0.19	-119.51
Last 5	14:31:02	900.00	24.68	7.43	364.11	0.72	9.68	0.16	-119.47
Last 5	14:36:02	1200.00	24.81	7.43	367.67	0.88	9.68	0.13	-118.58
Last 5									
Variance 0			-0.77	0.09	1.66			-0.09	-2.43
Variance 1			-0.11	0.02	7.08			-0.04	0.04
Variance 2			0.13	-0.00	3.56			-0.02	0.89

Notes

All parameters stable

Grab Samples

HGWA-3

Sampling at 1439 at 200ml/min

Product Name: Low-Flow System

Date: 2016-08-30 14:37:20

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Ash Ponds 1 & 2	Tubing Diameter	.17 in
Site Name	GPC-Hammond	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444108		
Turbidity Make/Model	HI 98703	Pump placement from TOC	20.7 ft

Well Information:		Pumping Information:	
Well ID	HGWA-4	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2239027 L
Well Total Depth	25.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3 in
Depth to Water	10.37 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 100
Last 5	14:10:25	900.02	24.45	7.17	490.80	1.87	10.61	0.18	44.27
Last 5	14:15:25	1200.02	24.56	7.15	487.27	1.54	10.61	0.15	44.07
Last 5	14:20:25	1500.05	24.71	7.14	487.49	1.58	10.61	0.14	43.68
Last 5	14:25:25	1800.04	24.30	7.14	484.89	1.75	10.61	0.12	43.50
Last 5	14:30:25	2100.02	24.65	7.14	476.87	1.71	10.61	0.11	43.28
Variance 0			0.15	-0.01	0.22			-0.01	-0.39
Variance 1			-0.41	-0.01	-2.60			-0.01	-0.18
Variance 2			0.35	0.00	-8.03			-0.01	-0.22

Notes

1355 start purge @ 200mL/min, 1430 all parameters stable, 1435 sampled @ 200mL/min

Grab Samples

HGWA-4

Sampled at 1435

Product Name: Low-Flow System

Date: 2016-08-30 11:20:14

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	AP 3 & 4	Tubing Diameter	0.17 in
Site Name	GPC - Hammond	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444107		
Turbidity Make/Model	Hanna 98703	Pump placement from TOC	22.5 ft

Well Information:		Pumping Information:	
Well ID	HGWA-5	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.2239027 L
Well Total Depth	27.40 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	9.96 in
Depth to Water	8.31 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			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100
Last 5	11:04:46	900.02	20.78	6.14	215.52	0.33	9.06	0.15	18.21
Last 5	11:07:46	1080.02	20.81	6.21	217.69	0.38	9.08	0.14	13.84
Last 5	11:10:46	1260.02	20.88	6.28	221.35	0.42	9.10	0.14	11.26
Last 5	11:13:46	1440.02	20.88	6.33	221.87	0.27	9.12	0.13	11.31
Last 5	11:16:46	1620.02	20.99	6.38	221.12	0.26	9.14	0.13	7.94
Variance 0			0.08	0.08	3.66			-0.00	-2.58
Variance 1			-0.00	0.04	0.53			-0.00	0.05
Variance 2			0.11	0.05	-0.75			-0.01	-3.37

Notes

Started pump at 1040

No issues. Started purge at 1040, delay just because of setting up first well of the day. Sample rate also 250 mL/min. File indicates AP 3/4 but should be for AP 1/2

Grab Samples
HGWA-5
Sample time 11:21

Product Name: Low-Flow System

Date: 2016-08-30 12:08:42

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	AP 1 & 2	Tubing Diameter	0.17 in
Site Name	GPC - Hammond	Tubing Length	52 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444107		
Turbidity Make/Model	Hanna 98703	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	HGWA-6	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.322098 L
Well Total Depth	50.00 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	16.32 in
Depth to Water	8.40 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			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	11:57:20	180.09	21.12	7.65	358.88	0.74	9.70	0.21	-124.97
Last 5	12:00:20	360.02	21.02	7.66	357.58	0.49	9.73	0.19	-124.00
Last 5	12:03:20	540.02	20.95	7.67	359.62	0.35	9.75	0.18	-126.04
Last 5	12:06:20	720.02	20.90	7.69	358.13	0.32	9.76	0.17	-125.37
Last 5									
Variance 0			-0.10	0.01	-1.30			-0.02	0.96
Variance 1			-0.07	0.02	2.03			-0.01	-2.03
Variance 2			-0.06	0.01	-1.49			-0.01	0.67

Notes

Started pump at 1149. No issues. Clear, no odor, sample rate also 250 mL/ min

Grab Samples

HGWA-6

Sample time 1210

Product Name: Low-Flow System

Date: 2016-09-01 09:23:28

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Ash Ponds 1 & 2	Tubing Diameter	.17 in
Site Name	GPC-Hammond	Tubing Length	35 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444108		
Turbidity Make/Model	HI 98703	Pump placement from TOC	24.9 ft

Well Information:		Pumping Information:	
Well ID	HGWC-7	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2462198 L
Well Total Depth	29.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2 in
Depth to Water	5.11 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	08:55:24	300.08	22.49	7.16	704.10	4.64	5.21	0.32	21.09
Last 5	09:00:24	600.02	22.02	7.26	708.62	2.22	5.21	0.21	24.02
Last 5	09:05:24	900.01	21.87	7.28	705.92	1.83	5.22	0.16	21.10
Last 5	09:10:24	1200.01	21.73	7.29	709.45	1.53	5.22	0.15	21.11
Last 5	09:15:24	1500.01	21.73	7.29	707.64	1.04	5.22	0.13	19.00
Variance 0			-0.16	0.02	-2.70			-0.05	-2.92
Variance 1			-0.13	0.01	3.53			-0.02	0.01
Variance 2			-0.00	0.01	-1.81			-0.01	-2.11

Notes

0855 start purge@200mL/min, 0915 all parameters stable, 0920 sampled@200mL/min

Grab Samples

HGWC-7

Sampled at 0920; .5gal, 1qt, 250mL

DUP-1

Sampled at 0920; .5gal, 1qt, 250mL

2nd Rad

Sampled at 0920; .5gal

Product Name: Low-Flow System

Date: 2016-09-01 08:47:16

Project Information:		Pump Information:	
Operator Name	M. Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	AP 1&2	Tubing Diameter	.17 in
Site Name	GPC- Hammond	Tubing Length	27 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	450141		
Turbidity Make/Model	Hanna	Pump placement from TOC	20 ft

Well Information:		Pumping Information:	
Well ID	HGWC-8	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3305124 L
Well Total Depth	24.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.01 in
Depth to Water	4.19 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	08:30:54	300.11	22.02	6.61	994.20	1.66	4.20	0.24	98.55
Last 5	08:35:54	600.02	21.77	6.69	996.66	1.16	4.20	0.17	87.19
Last 5	08:40:54	900.02	21.65	6.72	1003.62	0.92	4.20	0.16	82.49
Last 5	08:45:54	1200.02	21.74	6.73	998.32	0.90	4.20	0.12	79.99
Last 5									
Variance 0			-0.25	0.08	2.45			-0.07	-11.35
Variance 1			-0.12	0.02	6.96			-0.01	-4.70
Variance 2			0.09	0.01	-5.30			-0.04	-2.51

Notes

All parameters stable

Grab Samples

HGWC-8

Sampling at 0850 at 200ml/min

GROUNDWATER SAMPLING LOG SHEET

Client: GPC - Hammond
Site: AP 1+2
Well ID: HGWC-9
Total Depth (ft)[1]: (46.6) 47.69
Depth to Water (ft): 19.68
Well Diameter (in): 2"
Well Volume (gal) = 0.041d²h: 5.20
Well Volume (L) = gal * 3.785: 19.69
d = well diameter (inches) h = length of water column (feet)

Project No.: 0337351
Location: Rome, GA
Pump Type/Model: Alexis Peristaltic
Tubing Material: LDPE
Pump Intake Depth (ft): 41.5
Start/Stop Purge Time: 0912/0928
Purge Rate (L/min)[2]: 0.250
Total Purge Volume (L): 4.00
Purge Method: (Low-Flow) Well Volume Other:
Sampling Method: (Pump Discharge) Other:

Sampling Date: 09/01/16
Sampler's Name: Tracy Wardell
Sample Collection Time: ~~0930~~ TW 0932
Sample Purge Rate (L/min)[3]: 0.250
Sample ID: HGWC-9
Laboratory Analyses: Cl, F, SO_4, TDS metals Rads
QA/QC Collected? Yes
QA/QC I.D. FB-1

Well Type: Flush (Stick Up)
Well Lock: (Yes) No
Well Bolted: Yes N/A No Bolts Needed:
Well Cap Condition: (Good) Replace Other
Well Tag Present: (Yes) No Water in Vault: Yes N/A No

All sample containers requiring chemical preservation properly preserved prior to demob from well? (Yes) No

Time	Temp. (°C)	Spec. Cond. (mS/cm) (µS/cm)	DO (%) mg/L	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H_2O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
0919	20.44	1129.0	0.37	7.13	91.1	0.47	250	1.75	14.71	
0922	20.13	1152.7	0.24	7.14	50.1	0.43	250	2.50	14.71	
0925	20.15	1159.5	0.20	7.14	39.7	0.46	250	3.25	14.71	
0928	20.16	1158.9	0.17	7.15	30.9	0.41	250	4.00	14.71	
										clear, no odor
										for FB-1 @ 0921 poured DI water into containers, left lids off while purging + sampling
Stabilizing Criteria[4, 5]		+/- 5%	0.2 mg/L or 10% whichever is greater [9]	+/- 0.2 unit		<5 NTUs	>100 mL < 250 mL	>3L	<0.33 ft	

(1) - Maximum purge rate of 250 mL/min
(2) - Sample rate to be between 100 mL/min and 250 mL/min
(3) - Collect sample from pump discharge without tubing contacting sample container
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft.
(7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed
(8) - Preserve all samples as appropriate immediately following collection
(9) - DO 0.2 mg/L or 10% whichever is greater (no criteria apply if DO < 0.5 mg/L)

Purge Log QA/QC'd By:
Date:

Purge Log QA/QC'd By:
Date:

Product Name: Low-Flow System

Date: 2016-09-01 10:15:53

Project Information:		Pump Information:	
Operator Name	M. Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	AP 1&2	Tubing Diameter	.17 in
Site Name	GPC- Hammond	Tubing Length	24 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	450141		
Turbidity Make/Model	Hanna	Pump placement from TOC	17 ft

Well Information:		Pumping Information:	
Well ID	HGWC-10	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3171222 L
Well Total Depth	22.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.04 in
Depth to Water	14.82 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:54:14	1200.02	20.49	6.53	959.43	1.30	14.90	0.05	81.43
Last 5	09:59:14	1500.02	20.40	6.53	955.26	1.54	14.90	0.04	80.39
Last 5	10:04:14	1800.02	20.39	6.53	977.98	0.94	14.90	0.06	80.23
Last 5	10:09:14	2100.02	22.20	6.54	962.47	0.48	14.87	0.11	86.14
Last 5	10:14:14	2400.02	22.44	6.54	955.89	0.52	14.86	0.11	86.80
Variance 0			-0.00	-0.00	22.72			0.02	-0.17
Variance 1			1.81	0.00	-15.51			0.05	5.92
Variance 2			0.24	0.00	-6.59			-0.00	0.66

Notes

All parameters stable. Had to purge 3 well volumes. 1st at 944, 2nd at 954 and 3rd at 1004

Grab Samples

HGWC-10

Sampling at 1018 at 200ml/min

Product Name: Low-Flow System

Date: 2016-09-01 10:46:35

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	AP 1 & 2	Tubing Diameter	0.17 in
Site Name	GPC - Hammond	Tubing Length	28 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444107		
Turbidity Make/Model	Hanna 98703	Pump placement from TOC	21 ft

Well Information:		Pumping Information:	
Well ID	HGWC-11	Final Pumping Rate	500 mL/min
Well diameter	2 in	Total System Volume	0.2149758 L
Well Total Depth	25.99 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	1.68 in
Depth to Water	15.76 ft	Total Volume Pumped	19.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	10:32:31	900.01	22.22	6.23	754.61	0.86	15.90	1.14	129.26
Last 5	10:35:31	1080.01	22.23	6.25	760.24	0.71	15.90	1.02	125.66
Last 5	10:38:31	1260.01	22.27	6.27	757.09	0.50	15.90	1.06	123.54
Last 5	10:41:31	1440.01	22.22	6.23	752.21	0.40	15.90	1.22	124.11
Last 5	10:44:31	1620.02	22.32	6.26	752.50	0.35	15.90	1.15	121.55
Variance 0			0.04	0.02	-3.15			0.04	-2.13
Variance 1			-0.04	-0.04	-4.88			0.16	0.57
Variance 2			0.09	0.03	0.29			-0.07	-2.56

Notes

3wv, so purging 500 ml/min. Will slow to 250 for sampling. Also provided depth is 22.6, however I know the well is 26, so that is what I'm using for calculations and tubing length, otherwise we're short.

No issues; clear, no odor. Slowed rate to 250 mL/min for sampling.

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-01 11:32:55

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	AP 1 & 2	Tubing Diameter	0.17 in
Site Name	GPC - Hammond	Tubing Length	37 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444107		
Turbidity Make/Model	Hanna 98703	Pump placement from TOC	30 ft

Well Information:		Pumping Information:	
Well ID	HGWC-12	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.2551467 L
Well Total Depth	34.95 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	15.85 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			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	11:21:38	180.08	21.74	7.19	1181.25	1.63	15.88	0.22	51.31
Last 5	11:24:38	360.02	21.73	7.20	1187.16	0.29	15.88	0.19	50.92
Last 5	11:27:38	540.02	21.80	7.19	1186.03	0.15	15.88	0.17	51.54
Last 5	11:30:38	720.02	21.75	7.20	1182.59	0.24	15.88	0.16	52.02
Last 5									
Variance 0			-0.02	0.01	5.91			-0.04	-0.39
Variance 1			0.07	-0.00	-1.13			-0.01	0.62
Variance 2			-0.05	0.01	-3.43			-0.01	0.47

Notes

Started pump at 1111

No issues; clear, no odor. Sample rate 250 mL/min

Grab Samples

HGWC-12

Sample time 1134

Product Name: Low-Flow System

Date: 2016-09-01 11:32:55

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	AP 1 & 2	Tubing Diameter	0.17 in
Site Name	GPC - Hammond	Tubing Length	37 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444107		
Turbidity Make/Model	Hanna 98703	Pump placement from TOC	30 ft

Well Information:		Pumping Information:	
Well ID	HGWC-12	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.2551467 L
Well Total Depth	34.95 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	15.85 ft	Total Volume Pumped	~~0~~ 4.75 L ACR 9/1/16

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	11:21:38	180.08	21.74	7.19	1181.25	1.63	15.88	0.22	51.31
Last 5	11:24:38	360.02	21.73	7.20	1187.16	0.29	15.88	0.19	50.92
Last 5	11:27:38	540.02	21.80	7.19	1186.03	0.15	15.88	0.17	51.54
Last 5	11:30:38	720.02	21.75	7.20	1182.59	0.24	15.88	0.16	52.02
Last 5 Variance 0			-0.02	0.01	5.91			-0.04	-0.39
Variance 1			0.07	-0.00	-1.13			-0.01	0.62
Variance 2			-0.05	0.01	-3.43			-0.01	0.47

Notes

Started pump at 1111

No issues; clear, no odor. Sample rate 250 mL/min

Grab Samples

HGWC-12

Sample time 1134

Product Name: Low-Flow System

Date: 2016-09-01 11:18:52

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Ash Ponds 1 & 2	Tubing Diameter	.17 in
Site Name	GPC-Hammond	Tubing Length	50 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444108		
Turbidity Make/Model	HI 98703	Pump placement from TOC	39.6 ft

Well Information:		Pumping Information:	
Well ID	HGWC-13	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3131711 L
Well Total Depth	44.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1 in
Depth to Water	17.65 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:55:30	300.05	25.78	7.25	883.43	2.59	17.75	0.49	-60.41
Last 5	11:00:30	600.02	24.49	7.24	914.11	4.00	17.75	0.24	-58.99
Last 5	11:05:30	900.02	24.81	7.23	929.52	2.45	17.75	0.21	-59.09
Last 5	11:10:30	1200.02	25.13	7.24	915.67	1.54	17.75	0.18	-56.84
Last 5	11:15:30	1500.02	25.24	7.24	908.65	2.01	17.75	0.16	-55.51
Variance 0			0.32	-0.01	15.41			-0.03	-0.10
Variance 1			0.32	0.01	-13.84			-0.03	2.25
Variance 2			0.11	0.00	-7.02			-0.02	1.33

Notes

1050 start purge@200mL/min, 1115 all parameters stable, 1120 sampled @200mL/min

Grab Samples

HGWC-13

Sampled at 1120

Product Name: Low-Flow System

Date: 2016-09-01 12:03:54

Project Information:		Pump Information:	
Operator Name	M. Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	AP 1&2	Tubing Diameter	.17 in
Site Name	GPC- Hammond	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	450141		
Turbidity Make/Model	Hanna	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	HGWC-14	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.410854 L
Well Total Depth	43 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.03 in
Depth to Water	24.97 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:47:45	300.05	24.75	4.56	3240.72	6.24	24.97	0.40	256.48
Last 5	11:52:45	600.02	24.33	4.54	3231.83	3.14	25.00	0.25	252.82
Last 5	11:57:45	900.02	24.35	4.54	3234.17	3.83	25.00	0.21	248.63
Last 5	12:02:45	1200.02	24.60	4.54	3221.25	1.71	25.00	0.19	245.66
Last 5									
Variance 0			-0.43	-0.03	-8.89			-0.15	-3.66
Variance 1			0.02	0.00	2.33			-0.04	-4.19
Variance 2			0.26	-0.00	-12.92			-0.02	-2.98

Notes

All parameters stable

Grab Samples

HGWC-10

Sampling at 1207 at 20ml/min

Product Name: Low-Flow System

Date: 2016-09-01 12:03:54

Project Information:	
Operator Name	M. Rogers
Company Name	ERM
Project Name	AP 1&2
Site Name	GPC- Hammond
Latitude	0º 0' 0"
Longitude	0º 0' 0"
Sonde SN	450141
Turbidity Make/Model	Hanna

Pump Information:	
Pump Model/Type	Alexis peristaltic
Tubing Type	LDPE
Tubing Diameter	.17 in
Tubing Length	45 ft
Pump placement from TOC	38 ft

Well Information:	
Well ID	HGWC-14
Well diameter	2 in
Well Total Depth	43 ft
Screen Length	10 ft
Depth to Water	24.97 ft

Pumping Information:	
Final Pumping Rate	200 mL/min
Total System Volume	0.410854 L
Calculated Sample Rate	300 sec
Stabilization Drawdown	0.03 ~~in~~ ft/0.36 in ACR 9/1/16
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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:47:45	300.05	24.75	4.56	3240.72	6.24	24.97	0.40	256.48
Last 5	11:52:45	600.02	24.33	4.54	3231.83	3.14	25.00	0.25	252.82
Last 5	11:57:45	900.02	24.35	4.54	3234.17	3.83	25.00	0.21	248.63
Last 5	12:02:45	1200.02	24.60	4.54	3221.25	1.71	25.00	0.19	245.66
Last 5 Variance 0			-0.43	-0.03	-8.89			-0.15	-3.66
Variance 1			0.02	0.00	2.33			-0.04	-4.19
Variance 2			0.26	-0.00	-12.92			-0.02	-2.98

Notes

All parameters stable

Grab Samples ACR 9/1/16

HGWC-~~10~~ 14

Sampling at 1207 at ~~20ml/min~~ 200 mL/min ACR 9/1/16

Product Name: Low-Flow System

Date: 2016-09-01 12:56:28

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	AP 1 & 2	Tubing Diameter	0.17 in
Site Name	GPC - Hammond	Tubing Length	41 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444107		
Turbidity Make/Model	Hanna 98703	Pump placement from TOC	33 ft

Well Information:		Pumping Information:	
Well ID	HGWC-15	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.2730004 L
Well Total Depth	38.0 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	10.56 in
Depth to Water	17.36 ft	Total Volume Pumped	6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	12:40:56	359.98	21.32	6.48	1475.84	0.59	18.21	0.18	100.81
Last 5	12:43:56	539.98	21.19	6.41	1456.00	0.63	18.22	0.18	110.26
Last 5	12:46:56	719.97	21.12	6.30	1461.18	0.45	18.23	0.18	119.68
Last 5	12:49:56	899.98	21.19	6.23	1456.83	0.45	18.24	0.16	125.27
Last 5	12:52:56	1079.98	21.11	6.22	1464.95	0.41	18.24	0.17	125.08
Variance 0			-0.07	-0.11	5.18			0.00	9.42
Variance 1			0.08	-0.07	-4.35			-0.02	5.59
Variance 2			-0.08	-0.01	8.12			0.01	-0.19

Notes

Started pump at 1228

No issues; clear, no odor. Sample rate 250mL/min. Poured FB-2 here. DI water into bottles. Left lids off bottles while purging and sampling.

Grab Samples

HGWC-15

Sample time 1258

FB-2

Sample time 1218

Product Name: Low-Flow System

Date: 2016-09-01 12:52:29

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Ash Ponds 1 & 2	Tubing Diameter	.17 in
Site Name	GPC-Hammond	Tubing Length	38 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444108		
Turbidity Make/Model	HI 98703	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	HGWC-16	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2596101 L
Well Total Depth	33.0 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	11 in
Depth to Water	12.15 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:25:33	300.08	26.11	7.31	896.72	0.48	12.85	0.48	-53.62
Last 5	12:30:33	600.02	24.24	7.29	914.34	0.97	12.92	0.26	-60.26
Last 5	12:35:33	900.02	23.88	7.28	911.61	0.64	12.97	0.19	-62.57
Last 5	12:40:33	1200.02	23.75	7.29	902.02	0.51	12.97	0.16	-63.92
Last 5	12:45:33	1500.02	22.85	7.29	898.09	1.70	12.97	0.14	-62.49
Variance 0			-0.36	-0.00	-2.73			-0.07	-2.31
Variance 1			-0.13	0.00	-9.59			-0.03	-1.36
Variance 2			-0.90	0.00	-3.93			-0.02	1.43

Notes

1220 start purge@200mL/min, 1245 all parameters stable, 1250 sampled@200mL/min

Grab Samples

HGWC-16

Sampled at 1250

Product Name: Low-Flow System

Date: 2016-09-01 14:54:40

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	Ash Ponds 1 & 2	Tubing Diameter	.17 in
Site Name	GPC-Hammond	Tubing Length	33 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	444108		
Turbidity Make/Model	HI 98703	Pump placement from TOC	23 ft

Well Information:		Pumping Information:	
Well ID	HGWC-17	Final Pumping Rate	500 mL/min
Well diameter	2 in	Total System Volume	0.237293 L
Well Total Depth	27.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	10 in
Depth to Water	17.00 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:20:01	1800.04	21.11	6.36	1346.17	2.72	17.79	0.08	79.15
Last 5	14:25:01	2100.04	21.08	6.36	1349.12	2.07	17.80	0.08	77.57
Last 5	14:30:01	2400.04	21.20	6.36	1350.19	1.58	17.80	0.09	76.39
Last 5	14:35:01	2700.04	21.06	6.36	1350.17	1.31	17.80	0.09	75.43
Last 5	14:40:01	3000.04	20.92	6.35	1350.76	1.79	17.80	0.09	74.49
Variance 0			0.12	0.00	1.07			0.01	-1.18
Variance 1			-0.13	-0.01	-0.02			-0.00	-0.96
Variance 2			-0.14	-0.01	0.59			-0.00	-0.94

Notes

1350 start purge@250mL/min, 1400 increase purge rate to 400mL/min, 1405 all parameters stable,1410 increase purge rate to 500mL/min, 1440 decrease purge rate to 250mL/min 1445 sampled @250mL/min

Grab Samples

HGWC-17

Sampled at 1445

Product Name: Low-Flow System

Date: 2016-09-01 14:29:34

Project Information:		Pump Information:	
Operator Name	M. Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	AP 1&2	Tubing Diameter	.17 in
Site Name	GPC- Hammond	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	450141		
Turbidity Make/Model	Hanna	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	HGWC-18	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3439027 L
Well Total Depth	27.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.33 in
Depth to Water	16.77 ft	Total Volume Pumped	23 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:07:39	2100.02	22.68	4.50	2166.30	4.41	17.11	0.08	268.42
Last 5	14:12:39	2400.02	22.80	4.51	2173.48	5.74	17.11	0.08	269.14
Last 5	14:17:39	2700.01	22.85	4.50	2225.61	4.49	17.10	0.08	264.62
Last 5	14:22:39	3000.02	24.42	4.50	2186.50	4.12	17.00	0.10	261.55
Last 5	14:27:39	3299.98	24.55	4.51	2155.09	3.61	17.00	0.12	265.77
Variance 0			0.05	-0.01	52.13			0.00	-4.52
Variance 1			1.57	0.01	-39.10			0.02	-3.07
Variance 2			0.13	0.01	-31.41			0.02	4.22

Notes

Purging 3 well volumes

All parameters stable. Purged 3 well volumes. Will be taking an extra 1/2 gallon radium sample here

Grab Samples

HGWC-18

Sampling at 1432 at 200 ml/min

Product Name: Low-Flow System

Date: 2016-10-19 11:37:17

Project Information:		Pump Information:	
Operator Name	Andreas Shoredits	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	34 ft
Latitude	34º 15' 29.61"		
Longitude	-85º -20' -38.32"		
Sonde SN	364455		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	27 ft

Well Information:		Pumping Information:	
Well ID	HGWA-1	Final Pumping Rate	400 mL/min
Well diameter	2.00 in	Total System Volume	0.8131928 L
Well Total Depth	32.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	10.2 in
Depth to Water	21.95 ft	Total Volume Pumped	22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:46:47	3000.02	19.29	7.02	546.18	0.89	22.79	0.23	-1.70
Last 5	10:51:47	3300.02	18.99	7.03	550.66	0.77	22.75	0.29	-2.96
Last 5	10:56:47	3599.98	20.37	7.00	556.34	0.80	22.65	0.25	-6.38
Last 5	11:01:47	3899.98	19.13	7.02	558.60	0.77	22.80	0.21	-5.82
Last 5	11:06:47	4199.98	19.73	7.02	568.55	0.63	22.70	0.23	-4.86
Variance 0			1.38	-0.02	5.68			-0.04	-3.43
Variance 1			-1.25	0.02	2.26			-0.04	0.56
Variance 2			0.60	-0.00	9.95			0.02	0.96

Notes

Parameters stable after three consecutive readings with turbidity < 5 NTU; Three well volume purge method used as water level is within screened interval; Initial purge rate of 100 ml/min increased to 300 ml/min @ 10:01, to 400 ml/min @ 10:16, and lowered to 200 ml/min @ 10:51 after three volume removal; Sample time is 11:15 sampled at 200 ml/min

Grab Samples
HGWA-1
Groundwater sample

Product Name: Low-Flow System

Date: 2016-10-19 13:57:56

Project Information:		Pump Information:	
Operator Name	Andreas Shoredits	Pump Model/Type	Dedicated Bladder Pump
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	28 ft
Latitude	34º 15' 15.19"		
Longitude	-85º -20' -59.65"		
Sonde SN	364455		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	HGWA-2	Final Pumping Rate	200 mL/min
Well diameter	2.00 in	Total System Volume	0.7552765 L
Well Total Depth	27.9 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.1 in
Depth to Water	10.28 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:48:39	900.02	23.50	5.61	216.28	2.70	10.36	0.60	58.54
Last 5	13:03:39	1800.02	22.96	5.51	207.11	0.51	10.36	0.33	59.08
Last 5	13:08:39	2100.10	24.15	5.50	203.21	0.56	10.35	0.29	59.75
Last 5	13:13:39	2400.01	23.27	5.48	204.82	0.53	10.36	0.21	61.35
Last 5	13:18:39	2700.02	22.27	5.46	204.83	0.56	10.37	0.16	61.29
Variance 0			1.18	-0.01	-3.90			-0.04	0.67
Variance 1			-0.87	-0.02	1.61			-0.09	1.59
Variance 2			-1.01	-0.01	0.02			-0.05	-0.05

Notes

Parameter stable after three consecutive readings and turbidity < 5 NTU; Purge rate remained constant at 200 ml/min; Start purge at 12:33 and stop at13:18; No readings at 12:38, 12:53, and 12:58 due to faulty instrumentation; Sample time is 13:25 at a sample rate of 200 ml/min

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-19 15:25:38

Project Information:		Pump Information:	
Operator Name	Andreas Shoredits	Pump Model/Type	Dedicated Bladder Pump
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	45 ft
Latitude	34º 15' 15.27"		
Longitude	-85º -20' -59.53"		
Sonde SN	364455		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	39 ft

Well Information:		Pumping Information:	
Well ID	HGWA-3	Final Pumping Rate	200 mL/min
Well diameter	2.00 in	Total System Volume	0.9193729 L
Well Total Depth	44.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	10.17 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:44:16	900.02	21.31	7.05	379.12	1.33	10.17	0.18	-78.83
Last 5	14:49:16	1200.02	20.94	7.04	397.81	0.88	10.17	0.16	-83.26
Last 5	14:54:16	1500.01	20.64	7.03	413.18	0.66	10.17	0.13	-86.16
Last 5	14:59:16	1800.02	20.55	7.03	422.04	0.56	10.17	0.12	-90.16
Last 5	15:04:16	2099.99	20.65	7.03	428.00	0.57	10.17	0.12	-95.64
Variance 0			-0.30	-0.01	15.37			-0.03	-2.90
Variance 1			-0.09	-0.00	8.87			-0.01	-4.00
Variance 2			0.10	-0.01	5.96			-0.00	-5.48

Notes

Parameters are stable after three consecutive readings and turbidity < 5 NTU; Constant purge rate maintained @ 200 ml/min with no drawdown; Sulfurous odor to water; Sample time is 15:10 at a sample rate of 200 ml/min; Specific conductivity jumped after purging 4 L

Grab Samples

HGWA-3

Groundwater sample

Product Name: Low-Flow System

Date: 2016-10-19 15:22:06

Project Information:		Pump Information:	
Operator Name	M. Rogers	Pump Model/Type	Geotech Bladder pump
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC- Plant Hammond	Tubing Diameter	.25 in
Site Name	AP 1&2	Tubing Length	25 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	20 ft

Well Information:		Pumping Information:	
Well ID	HGWA-4	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.7263182 L
Well Total Depth	25.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3 in
Depth to Water	11.00 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			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	14:59:50	1800.05	22.43	7.09	474.28	6.87	11.30	0.08	35.38
Last 5	15:04:50	2100.04	22.45	7.09	474.94	6.15	11.30	0.08	39.74
Last 5	15:09:50	2400.04	22.36	7.09	473.88	4.84	11.30	0.08	43.11
Last 5	15:14:50	2700.04	22.54	7.09	473.22	4.81	11.30	0.08	45.74
Last 5	15:19:50	3000.04	22.45	7.08	474.32	3.76	11.30	0.08	48.81
Variance 0			-0.09	0.01	-1.06			0.00	3.37
Variance 1			0.18	-0.01	-0.66			0.00	2.62
Variance 2			-0.09	-0.00	1.10			0.00	3.07

Notes

Parameters stable

Grab Samples

HGWA-4

Sampling at 1522

Product Name: Low-Flow System

Date: 2016-10-20 11:07:31

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	QED Dedicated Bladder
Company Name	ERM	Tubing Type	PTFE-lined LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.17 in
Site Name	AP 1&2	Tubing Length	29 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	22.4 ft

Well Information:		Pumping Information:	
Well ID	HGWA-5	Final Pumping Rate	240 mL/min
Well diameter	2 in	Total System Volume	0.6144392 L
Well Total Depth	27.4 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	9.6 in
Depth to Water	8.34 ft	Total Volume Pumped	17.52 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	10:53:21	3420.00	19.81	6.50	209.94	6.17	9.14	0.14	10.46
Last 5	10:56:21	3600.00	19.81	6.51	211.64	5.85	9.14	0.13	9.10
Last 5	10:59:21	3780.00	19.89	6.52	213.34	4.97	9.14	0.13	7.78
Last 5	11:02:21	3960.00	19.89	6.52	211.72	4.82	9.14	0.13	9.33
Last 5	11:05:21	4140.00	19.90	6.52	213.20	4.71	9.14	0.12	8.75
Variance 0			0.07	0.01	1.69			-0.00	-1.32
Variance 1			0.00	0.00	-1.61			-0.00	1.55
Variance 2			0.01	-0.00	1.48			-0.00	-0.58

Notes

Started purge at 0949

Sample rate 240mL/min; clear, no odor; initially cloudy but eventually cleared. 15psi, ref12.5, dis 2.5

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-20 13:06:55

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	QED Dedicated Bladder
Company Name	ERM	Tubing Type	PTFE-lined LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.17 in
Site Name	AP 1&2	Tubing Length	49 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	HGWA-6	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.7037078 L
Well Total Depth	50.0 ft	Calculated Sample Rate	180 sec
Screen Length	10 ft	Stabilization Drawdown	20.64 in
Depth to Water	8.53 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			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	12:51:39	3780.00	19.14	7.42	355.23	5.34	10.25	0.09	-114.36
Last 5	12:54:39	3960.00	19.17	7.42	355.10	5.26	10.25	0.09	-114.80
Last 5	12:57:39	4140.00	19.10	7.43	355.30	4.98	10.25	0.09	-115.23
Last 5	13:00:39	4320.00	19.18	7.43	354.94	4.82	10.25	0.09	-115.84
Last 5	13:03:39	4500.00	19.15	7.43	355.56	4.96	10.25	0.09	-116.08
Variance 0			-0.06	0.00	0.20			0.00	-0.43
Variance 1			0.08	0.00	-0.36			-0.00	-0.61
Variance 2			-0.04	0.00	0.62			0.00	-0.25

Notes

Started purge at 11:27. Attempt #2 after hitting the end low flow icon
Sample rate 250 mL/min; Clear, no odor. Excruciatingly slow turbidity drop. 24PSI, 10 ref, 5 dis

Grab Samples

HGWA-6

Sample time 1308

Product Name: Low-Flow System

Date: 2016-10-20 12:42:02

Project Information:		Pump Information:	
Operator Name	Andreas Shoredits	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	27 ft
Latitude	34º 15' 30.77"		
Longitude	-85º -20' -31.64"		
Sonde SN	364455		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	24 ft

Well Information:		Pumping Information:	
Well ID	HGWC-7	Final Pumping Rate	200 mL/min
Well diameter	2.00 in	Total System Volume	0.7456238 L
Well Total Depth	29.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.84 in
Depth to Water	4.94 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:09:46	600.03	22.21	7.19	689.67	1.10	5.00	0.64	46.46
Last 5	12:14:46	900.02	21.93	7.15	694.45	1.59	5.00	0.26	45.24
Last 5	12:19:46	1200.02	21.93	7.13	693.76	1.50	5.01	0.19	42.34
Last 5	12:24:46	1500.01	22.02	7.10	694.20	1.03	5.01	0.17	41.35
Last 5 Variance 0			-0.28	-0.05	4.78			-0.38	-1.22
Variance 1			0.01	-0.02	-0.69			-0.07	-2.89
Variance 2			0.09	-0.02	0.44			-0.02	-1.00

Notes

Parameters are stable after three consecutive readings and turbidity < 5 NTU; Purge start 11:59, purge stop 12:24; Initial purge rate of 180 ml/min increased to 200 ml/min @ 12:04; First reading @ 12:04 not taken due to Bluetooth connectivity problem; Sample time is 12:30 @ a rate of 200

Grab Samples

HGWC-7

Groundwater sample

Product Name: Low-Flow System

Date: 2016-10-20 14:14:39

Project Information:		Pump Information:	
Operator Name	Andreas Shoredits	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	24 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364455		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	19 ft

Well Information:		Pumping Information:	
Well ID	HGWC-8	Final Pumping Rate	250 mL/min
Well diameter	2.00 in	Total System Volume	0.7166655 L
Well Total Depth	24.91 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	4.33 ft	Total Volume Pumped	5.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:30:28	300.09	22.90	7.19	1027.08	0.51	4.36	1.43	102.26
Last 5	13:35:28	600.02	23.18	6.98	1040.40	0.52	4.36	0.34	84.48
Last 5	13:40:28	900.02	22.71	6.93	1042.68	0.43	4.35	0.28	79.17
Last 5	13:45:28	1200.02	21.99	6.90	1044.87	0.49	4.35	0.22	74.46
Last 5	13:50:28	1500.02	22.22	6.90	1044.43	0.48	4.35	0.18	72.33
Variance 0			-0.47	-0.06	2.29			-0.07	-5.32
Variance 1			-0.72	-0.02	2.19			-0.06	-4.71
Variance 2			0.22	-0.01	-0.44			-0.03	-2.13

Notes

Parameters are stable after three consecutive readings and turbidity < 5 NTU; Purge start @ 13:25, and purge stop @ 13:50; Initial purge rate of 250 ml/min decreased to 200 ml/min @ 13:30, increased to 250 ml/min @ 13:40; Sample time is 13:55 at a sample rate of 200 ml/min; DUP-1

Grab Samples

HGWC-8

Groundwater sample

DUP-1

Duplicate groundwater sample

Product Name: Low-Flow System

Date: 2016-10-20 16:02:26

Project Information:		Pump Information:	
Operator Name	Andreas Shoredits	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	46 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364455		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	HGWC-9	Final Pumping Rate	200 mL/min
Well diameter	2.00 in	Total System Volume	0.9290257 L
Well Total Depth	46.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.12 in
Depth to Water	16.36 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	15:26:40	900.02	20.87	7.08	1209.45	1.47	16.37	0.80	39.95
Last 5	15:31:40	1200.02	20.67	7.06	1213.90	1.59	16.37	0.61	40.49
Last 5	15:36:40	1500.02	20.55	7.05	1215.66	1.38	16.37	0.48	41.01
Last 5	15:41:40	1800.02	20.48	7.05	1214.14	1.43	16.37	0.38	37.14
Last 5	15:46:40	2100.00	20.35	7.05	1213.65	0.93	16.37	0.32	34.30
Variance 0			-0.12	-0.01	1.77			-0.12	0.52
Variance 1			-0.07	-0.00	-1.52			-0.10	-3.87
Variance 2			-0.13	-0.00	-0.49			-0.06	-2.84

Notes

Parameters are stable after three consecutive readings and turbidity < 5 NTU; Start purge @ 15:11, and stop purge @ 15:46; Purge rate maintained @ 200 ml/min; Sample time is 15:50 with a sample rate of 200 ml/min

Grab Samples

HGWC-9

Groundwater sample

Product Name: Low-Flow System

Date: 2016-10-24 13:38:32

Project Information:		Pump Information:	
Operator Name	Andreas Shoredits	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	25 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	17 ft

Well Information:		Pumping Information:	
Well ID	HGWC-10	Final Pumping Rate	200 mL/min
Well diameter	2.00 in	Total System Volume	0.4613183 L
Well Total Depth	22.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	16.93 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:41:19	1499.99	21.20	6.59	1059.14	0.71	16.96	0.12	77.41
Last 5	12:46:19	1800.00	20.89	6.60	1053.90	0.60	16.96	0.09	78.73
Last 5	12:51:19	2100.05	21.37	6.60	1061.32	0.77	16.95	0.11	79.17
Last 5	12:56:19	2400.03	21.95	6.60	1052.12	0.67	16.94	0.08	79.28
Last 5	13:01:19	2700.00	22.28	6.59	1050.24	0.73	16.95	0.12	80.15
Variance 0			0.49	-0.00	7.42			0.02	0.44
Variance 1			0.58	0.00	-9.19			-0.02	0.11
Variance 2			0.32	-0.00	-1.88			0.04	0.87

Notes

Parameters stable after three consecutive readings and turbidity < 5 NTU; Water level within screened zone and three volume purge conducted; Purge start @ 12:15, purge stop @ 13:00; Initial purge rate of 200 ml/min increased to 300 ml/min @ 12:20, to 300 ml/min @ 12:25, to 400 ml/min @ 12:30; Purge rate lowered after third volume @ 12:45 to 200 ml/min; Sample time is 13:05 @ a rate of 200 ml/min; Measured TD is 22.70 ft

Grab Samples
HGWC-10
Groundwater sample

Product Name: Low-Flow System

Date: 2016-10-24 13:13:08

Project Information:		Pump Information:	
Operator Name	M. Rogers	Pump Model/Type	Alexis peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	AP 1&2	Tubing Diameter	.17 in
Site Name	Plant Hammond AP 1&2	Tubing Length	24 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	19 ft

Well Information:		Pumping Information:	
Well ID	HGWC-11	Final Pumping Rate	500 mL/min
Well diameter	2 in	Total System Volume	0.3171222 L
Well Total Depth	22.3 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.07 in
Depth to Water	18.16 ft	Total Volume Pumped	9.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	12:51:43	300.08	22.84	6.36	1139.09	7.23	18.25	0.35	91.13
Last 5	12:56:43	600.03	22.88	6.43	1160.99	4.21	18.28	0.20	71.48
Last 5	13:01:43	900.02	22.88	6.45	1164.94	0.85	18.28	0.18	58.32
Last 5	13:06:43	1200.02	23.97	6.52	1201.32	0.75	18.28	0.29	54.40
Last 5	13:11:43	1500.02	24.23	6.46	1173.56	0.97	18.23	0.22	55.61
Variance 0			0.00	0.02	3.95			-0.03	-13.16
Variance 1			1.08	0.08	36.39			0.11	-3.92
Variance 2			0.27	-0.06	-27.76			-0.07	1.21

Notes

Within screen so purging 3 well volumes. 2.5 liter volumes. Decrease purge rate to 200ml/min after 3rd

All parameters stable

Grab Samples

HGWC-11

Sampling at 1315

GROUNDWATER SAMPLING LOG SHEET

ERM

Client:	GPC	Project No.:		Sampling Date:	10-24-16
Site:	HGWC-12	Location:	AP142	Sampler's Name:	MR
Well ID:	AP142	Pump Type/Model:	Bladder	Sample Collection Time:	1445
Total Depth (ft)[1]:	35.1	Tubing Material:	LDPE	Sample Purge Rate (L/min)[3]:	.200 L/min
Depth to Water (ft):	18.13	Pump Intake Depth (ft):	30	Sample ID:	HGWC-12
Well Diameter (in):	2	Start/Stop Purge Time:	1415	Laboratory Analyses:	CCOC
Well Volume (gal) = 0.041d²h:	2.8 gal	Purge Rate (L/min)[2]:	.200 L/min		
Well Volume (L) = gal * 3.785:	10.6 L	Total Purge Volume (L):	5		
d = well diameter (inches) h = length of water column (feet)		Purge Method:	Low-Flow Well Volume Other:	QA/QC Collected?	No
Well Type:	Flush Stick Up	Sampling Method:	Pump Discharge Other:	QA/QC I.D.	
Well Lock:	Yes No				
Well Bolted:	Yes No	Bolts Needed:	No		
Well Cap Condition:	Good Replace	Other		All sample containers requiring chemical preservation properly preserved prior to demob from well?	Yes No
Well Tag Present:	Yes No	Water in Vault:	Yes No		

Time	Temp. (°C)	Spec. Cond. (mS/cm) (µS/cm)	DO (%)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H_2O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
~~1420~~ 1420	20.69	1249.3	0.32	7.10	155.4	.79	200	1	18.30	
1425	20.71	1251.4	0.37	7.1	230.6	.72	↓	2	18.30	
1430	21.04	1245.6	0.45	7.1	357.4	1.04		3	18.30	
1435	21.00	1246.9	0.51	7.09	384.7	.96		4	18.30	
1440	20.85	1252	0.54	7.10	433.00	.55		5	18.3	
				Parameters Stable						
							Sampling @ 1445			
Stabilizing Criteria[4,5]		+/- 5%	0.2 mg/L or 10% whichever is greater [9]	+/- 0.2 unit		<5 NTUs	>100 mL < 250 mL	>3L	<0.33 ft	

(1) - Maximum purge rate of 250 mL/min
(2) - Sample rate to be between 100 mL/min and 250 mL/min
(3) - Collect sample from pump discharge without tubing contacting sample container
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft.
(7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed
(8) - Preserve all samples as appropriate immediately following collection
(9) - DO 0.2 mg/L or 10% whichever is greater (no criteria apply if DO < 0.5 mg/L)

Purge Log QA/QC'd By:
Date:

Purge Log QA/QC'd By:
Date:

Product Name: Low-Flow System

Date: 2016-10-24 14:58:39

Project Information:		Pump Information:	
Operator Name	Andreas Shoredits	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	45 ft
Latitude	34º 15' 6.52"		
Longitude	-85º -20' -40.01"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	39 ft

Well Information:		Pumping Information:	
Well ID	HGWC-13	Final Pumping Rate	200 mL/min
Well diameter	2.00 in	Total System Volume	0.9193729 L
Well Total Depth	44.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.24 in
Depth to Water	18.46 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:15:46	300.03	23.25	7.06	997.50	1.57	18.48	1.71	70.77
Last 5	14:20:46	600.02	22.09	6.92	1046.27	2.14	18.48	0.60	61.60
Last 5	14:25:46	900.02	21.63	6.91	1048.74	1.48	18.48	0.50	50.51
Last 5	14:30:46	1200.01	21.51	6.91	1054.65	1.22	18.47	0.28	40.16
Last 5	14:35:46	1500.00	21.48	6.90	1056.29	1.27	18.47	0.21	28.98
Variance 0			-0.46	-0.02	2.47			-0.10	-11.09
Variance 1			-0.12	-0.00	5.91			-0.23	-10.35
Variance 2			-0.03	-0.01	1.64			-0.07	-11.18

Notes

Parameters are stable after three consecutive readings and turbidity < 5 NTU; Start purge @ 14:10, stop purge @ 14:35; Initial purge rate of 200 ml/min maintained throughout; DO below 0.5 mg/L and continued dropping after final reading; Sample time is 14:45 at a sample rate of 200 ml/min

Grab Samples

HGWC-13

Groundwater sample

Product Name: Low-Flow System

Date: 2016-10-24 16:21:01

Project Information:		Pump Information:	
Operator Name	Andreas Shoredits	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	45 ft
Latitude	34º 15' 7.08"		
Longitude	-85º -20' -40.14"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	HGWC-14	Final Pumping Rate	200 mL/min
Well diameter	2.00 in	Total System Volume	0.9193729 L
Well Total Depth	43.0 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	25.93 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	15:45:40	300.03	22.97	4.95	3430.28	1.63	25.97	1.57	99.65
Last 5	15:50:40	600.02	22.63	4.69	3442.14	1.33	25.97	0.48	102.36
Last 5	15:55:40	900.02	22.58	4.64	3433.66	1.20	25.97	0.30	99.60
Last 5	16:00:40	1199.99	22.49	4.63	3426.97	1.16	25.97	0.25	100.36
Last 5	16:05:40	1499.99	22.49	4.63	3412.60	1.54	25.96	0.22	102.87
Variance 0			-0.04	-0.05	-8.48			-0.17	-2.75
Variance 1			-0.09	-0.01	-6.69			-0.05	0.76
Variance 2			0.00	-0.00	-14.37			-0.03	2.50

Notes

Parameters are stable after three consecutive readings and turbidity < 5 NTU; Start purge @ 15:40, stop purge @ 16:05; Initial purge rate of 200 ml/min maintained throughout; Sample time is 16:10 at a sample rate of 200 ml/min

Grab Samples

HGWC-14

Groundwater sample

Product Name: Low-Flow System

Date: 2016-10-24 16:24:33

Project Information:		Pump Information:	
Operator Name	M. Rogers	Pump Model/Type	bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	AP 1&2	Tubing Diameter	in
Site Name	Plant Hammond AP 1&2	Tubing Length	38 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	HGWC-15	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.09 L
Well Total Depth	38 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	9.6 in
Depth to Water	19.1 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			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	16:08:01	300.02	20.07	6.01	1494.70	0.53	19.82	1.16	25.04
Last 5	16:13:01	600.02	20.05	5.97	1487.04	0.47	19.87	0.85	63.75
Last 5	16:18:01	900.02	20.20	5.98	1494.61	0.39	19.87	0.78	86.21
Last 5	16:23:01	1200.02	20.16	5.97	1499.42	0.33	19.87	0.72	105.04
Last 5 Variance 0			-0.02	-0.04	-7.66			-0.31	38.71
Variance 1			0.15	0.01	7.57			-0.07	22.46
Variance 2			-0.04	-0.00	4.81			-0.06	18.83

Notes

Parameters stable

Grab Samples

HGWC-15

Sampling at 1427

Product Name: Low-Flow System

Date: 2016-10-25 11:58:46

Project Information:		Pump Information:	
Operator Name	Andreas Shoredits	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	38 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	HGWC-16	Final Pumping Rate	200 mL/min
Well diameter	2.00 in	Total System Volume	0.8518038 L
Well Total Depth	33 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6.84 in
Depth to Water	12.55 ft	Total Volume Pumped	22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:07:58	5399.98	19.86	7.03	874.16	5.30	13.09	0.12	-70.74
Last 5	11:12:58	5699.96	19.98	7.03	875.97	5.46	13.08	0.13	-71.10
Last 5	11:17:58	5999.96	20.05	7.04	875.93	4.85	13.08	0.13	-71.06
Last 5	11:22:58	6299.95	20.09	7.04	876.93	4.77	13.07	0.13	-71.05
Last 5	11:27:58	6599.96	20.22	7.03	876.34	4.59	13.06	0.16	-71.96
Variance 0			0.07	0.01	-0.03			-0.01	0.04
Variance 1			0.04	0.00	0.99			0.00	0.01
Variance 2			0.13	-0.01	-0.59			0.04	-0.91

Notes

Parameters are stable after three consecutive readings and turbidity < 5 NTU; Initial drawdown stabilized after purging around 2 L; Start purge @ 9:37, stop purge @ 11:27; Initial purge rate of 200 ml/min maintained throughout; Well water is turbid white with fine grained suspended particles; Turbidity > 10 NTU until 10:32 (11 L) and dropped to < 5 NTU @ 11:17 (20 L); Sample time is 11:35 at a sample rate of 200 ml/min

Grab Samples
HGWC-16
    Groundwater sample
DUP-2
    Groundwater sample duplicate

Product Name: Low-Flow System

Date: 2016-10-25 12:33:43

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	QED Dedicated Bladder
Company Name	ERM	Tubing Type	PTFE-lined LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	26 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	23 ft

Well Information:		Pumping Information:	
Well ID	HGWC-17	Final Pumping Rate	430 mL/min
Well diameter	2 in	Total System Volume	0.735971 L
Well Total Depth	27.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	7.32 in
Depth to Water	17.14 ft	Total Volume Pumped	21.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	12:10:13	1500.02	20.17	6.23	1290.11	4.28	17.71	0.16	65.90
Last 5	12:15:13	1800.02	20.15	6.23	1290.72	2.51	17.72	0.16	67.81
Last 5	12:20:13	2100.02	20.16	6.23	1289.70	2.02	17.73	0.16	69.91
Last 5	12:25:13	2400.02	20.15	6.23	1289.07	1.64	17.74	0.17	71.75
Last 5	12:30:13	2700.02	20.35	6.23	1289.64	1.36	17.75	0.18	73.27
Variance 0			0.01	-0.00	-1.02			0.01	2.09
Variance 1			-0.01	0.00	-0.63			0.01	1.85
Variance 2			0.19	0.00	0.57			0.01	1.51

Notes

Started purge at 1140

Sample rate 250 mL/min. Initially 15 psi for purging, lowered to 10 psi for sampling. Ref 12.5, dis 2.5. Clear, no odor; no issues.

Grab Samples

HGWC-17

Sample time 1235

Product Name: Low-Flow System

Date: 2016-10-25 12:26:39

Project Information:		Pump Information:	
Operator Name	M. Rogers	Pump Model/Type	bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	AP 1&2	Tubing Diameter	in
Site Name	Plant Hammond AP 1&2	Tubing Length	28 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	HGWC-18	Final Pumping Rate	500 mL/min
Well diameter	2 in	Total System Volume	0.09 L
Well Total Depth	27.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.3 in
Depth to Water	16.81 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			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	12:05:01	900.02	21.65	4.51	2243.42	4.98	17.18	0.13	162.20
Last 5	12:10:01	1200.02	21.67	4.51	2250.66	2.35	17.18	0.13	176.51
Last 5	12:15:01	1500.02	21.97	4.52	2250.68	1.32	17.15	0.12	182.94
Last 5	12:20:02	1800.81	21.94	4.54	2250.39	1.04	17.15	0.14	198.31
Last 5	12:25:02	2100.81	21.99	4.53	2254.63	1.03	17.15	0.13	196.47
Variance 0			0.30	0.02	0.02			-0.01	6.43
Variance 1			-0.03	0.01	-0.29			0.01	15.37
Variance 2			0.05	-0.00	4.23			-0.01	-1.84

Notes

Water level less than 1 ft above screen so purging 3 well volumes. Decrease purge rate to 200ml/min after third well volume
Parameters stable

Grab Samples

HGWC-18

Sampling at 1230

Product Name: Low-Flow System

Date: 2016-12-06 10:17:52

Project Information:		Pump Information:	
Operator Name	M. Rogers	Pump Model/Type	QED bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.25 in
Site Name	Hammond - AP 1 & 2	Tubing Length	27 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	0 ft

Well Information:		Pumping Information:	
Well ID	HGWA-1	Final Pumping Rate	500 mL/min
Well diameter	2 in	Total System Volume	0.7456238 L
Well Total Depth	32.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	21.75 ft	Total Volume Pumped	24.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:56:09	2699.96	17.22	7.07	549.31	13.90	22.98	0.85	-3.06
Last 5	10:01:09	2999.96	17.23	7.07	551.17	5.26	22.74	0.79	-3.87
Last 5	10:06:09	3299.96	17.27	7.07	552.36	4.48	22.76	0.66	-4.54
Last 5	10:11:09	3599.96	17.22	7.08	551.13	2.58	22.80	0.57	-5.52
Last 5	10:16:09	3899.96	17.21	7.09	554.73	2.19	22.78	0.53	-6.38
Variance 0			0.03	0.00	1.19			-0.13	-0.67
Variance 1			-0.05	0.01	-1.23			-0.09	-0.98
Variance 2			-0.01	0.01	3.60			-0.04	-0.85

Notes

Purging 3 well volumes

Parameters stable. Purged 3 well volumes. Weather: raining cold

Grab Samples

HGWA-1

Sampling at 1020

GROUNDWATER SAMPLING LOG SHEET

ERM

Client: GPC
Site: Plant Hammond - AP1/2
Well ID: HGWA-2
Total Depth (ft)[1]: 22.9
Depth to Water (ft): 9.06
Well Diameter (in): 2
Well Volume (gal) = 0.041d²h: 3.09
Well Volume (L) = gal * 3.785: 11.694
d = well diameter (inches) h = length of water column (feet)

Project No.: 0372394
Location: Rome Rincon, Ga
Pump Type/Model: Bladder / QED
Tubing Material: LDPE
Pump Intake Depth (ft): 23
Start/Stop Purge Time: 1110/1145
Purge Rate (mL/min)[2]: 250
Total Purge Volume (L): 3.75
Purge Method: (Low-Flow) Well Volume Other:
Sampling Method: (Pump Discharge) Other:

Sampling Date: 12-6-16
Sampler's Name: M. Thomas
Sample Collection Time: 1140
Sample Purge Rate (mL/min)[3]: 250
Sample ID: HGWA-2
Laboratory Analyses: Metals App. III & IV (EPA 6020/7470), Cl, F, SO_4, & TDS (EPA 300.0 & SM 2540C), Radium 226 & 228 (SW-846 9315/9320)
QA/QC Collected? No
QA/QC I.D.

Well Type: Flush (Stick Up)
Well Lock: (Yes) No
Well Bolted: Yes (No) Bolts Needed:
Well Cap Condition: (Good) Replace Other
Well Tag Present: (Yes) No Water in Vault: Yes No

All sample containers requiring chemical preservation properly preserved prior to demob from well? (Yes) No

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H_2O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1115	20.43	196.50	0.13	5.45	59.40	3.63	250	1.25	9.20	
1120	20.45	190.90	0.16	5.40	60.20	4.89	250	1.25	9.20	
1125	20.42	185.50	0.15	5.39	63.20	2.83	250	1.25	9.20	
1130	20.47	183.90	0.14	5.39	63.90	2.65	250	1.25	9.20	
1135	20.46	178.60	0.14	5.39	64.80	1.56	250	1.25	9.20	
1140	20.47	179.80	0.14	5.57	65.80	1.30	250	1.25	9.20	
1145	20.46	173.10	0.14	5.38	66.40	1.31	250	1.25	9.20	
Stabilizing Criteria[4, 5]		+/- 5%	0.2 mg/L or 10% whichever is greater [9]	+/- 0.1 unit		<5 NTUs	>100 mL < 250 mL	>3L	<0.33 ft	

(1) - Maximum purge rate of 250 mL/min
(2) - Sample rate to be between 100 mL/min and 250 mL/min
(3) - Collect sample from pump discharge without tubing contacting sample container
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft.
(7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed
(8) - Preserve all samples as appropriate immediately following collection
(9) - DO 0.2 mg/L or 10% whichever is greater (no criteria apply if DO < 0.5 mg/L)

Purge Log QA/QC'd By:
Date:

Purge Log QA/QC'd By:
Date:

Product Name: Low-Flow System

Date: 2016-12-06 10:32:11

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	QED Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.25 in
Site Name	Hammond - AP 1 & 2	Tubing Length	35 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte2020we	Pump placement from TOC	35 ft

Well Information:		Pumping Information:	
Well ID	HGWA-3	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.8228456 L
Well Total Depth	44.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.5 in
Depth to Water	9.00 ft	Total Volume Pumped	6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:55:02	300.14	18.43	6.95	396.13	0.84	9.04	0.24	-8.44
Last 5	10:00:02	600.02	18.67	7.00	411.50	1.04	9.04	0.17	-32.04
Last 5	10:05:02	900.02	18.70	7.04	414.91	1.27	9.04	0.14	-49.23
Last 5	10:10:02	1200.00	18.62	7.06	415.65	0.74	9.05	0.14	-62.76
Last 5	10:15:02	1500.00	18.56	7.08	415.76	0.65	9.05	0.14	-73.15
Variance 0			0.03	0.04	3.41			-0.03	-17.18
Variance 1			-0.08	0.02	0.74			-0.00	-13.53
Variance 2			-0.06	0.02	0.11			-0.00	-10.39

Notes

0950 start purge@250mL/min. 1015 all parameters stable. 1020 sampled@250mL/min. Light/moderate rain 53F

Grab Samples

HGWA-3

Sampled@1020 2x.5gal, 1qt, 250mL

Product Name: Low-Flow System

Date: 2016-12-06 12:50:46

Project Information:		Pump Information:	
Operator Name	M. Rogers	Pump Model/Type	QED bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.25 in
Site Name	Hammond - AP 1 & 2	Tubing Length	20 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	0 ft

Well Information:		Pumping Information:	
Well ID	HGWA-4	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6780546 L
Well Total Depth	25.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.28 in
Depth to Water	9.03 ft	Total Volume Pumped	16.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:28:01	5099.94	19.86	6.98	464.73	7.85	9.21	0.85	23.19
Last 5	12:33:01	5399.94	19.79	6.98	462.62	5.79	9.21	0.94	23.91
Last 5	12:38:01	5699.95	19.68	7.00	461.30	4.93	9.21	0.97	23.51
Last 5	12:43:01	5999.94	19.59	7.01	460.31	4.87	9.21	1.01	23.29
Last 5	12:48:01	6299.94	19.46	7.00	457.55	4.88	9.22	1.01	23.31
Variance 0			-0.11	0.02	-1.32			0.04	-0.40
Variance 1			-0.09	0.01	-0.99			0.03	-0.21
Variance 2			-0.13	-0.00	-2.76			0.00	0.01

Notes

All parameters stable. Weather: raining cold

Grab Samples

HGWA-4

Sampling 1252

Product Name: Low-Flow System

Date: 2016-12-08 10:43:06

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	QED Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE/Teflon-lined LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	22.4 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	22.4 ft

Well Information:		Pumping Information:	
Well ID	HGWA-5	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.7012212 L
Well Total Depth	27.4 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	8.76 in
Depth to Water	7.21 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			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 20
Last 5	10:19:49	900.02	17.36	6.47	193.77	7.02	7.94	0.76	35.89
Last 5	10:24:49	1200.02	17.45	6.48	195.92	5.41	7.94	0.71	34.82
Last 5	10:29:49	1500.02	17.45	6.48	198.48	4.75	7.94	0.63	32.68
Last 5	10:34:49	1800.07	17.40	6.49	202.35	4.64	7.94	0.58	28.52
Last 5	10:39:49	2100.02	17.42	6.50	204.86	4.51	7.95	0.54	27.06
Variance 0			-0.00	-0.00	2.56			-0.08	-2.14
Variance 1			-0.05	0.01	3.87			-0.05	-4.16
Variance 2			0.02	0.01	2.51			-0.04	-1.47

Notes

Started purge at 0951. Took 10 mins to get settings right for bladder pump control.
Sample rate 250 mL/min. Weather - cloudy, 43. Water - clear, no odor. Control settings - ref 11, dis 4, 10 psi.

Grab Samples

HGWA-5

Sample time 1044

Product Name: Low-Flow System

Date: 2016-12-08 12:47:54

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	QED Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE/Teflon-lined LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	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	HGWA-6	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.9193729 L
Well Total Depth	50.0 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	14.04 in
Depth to Water	7.31 ft	Total Volume Pumped	23.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 20
Last 5	12:22:12	3900.02	17.09	7.53	373.25	5.34	8.48	0.33	-112.12
Last 5	12:27:12	4200.02	17.09	7.53	372.78	5.04	8.46	0.33	-112.61
Last 5	12:32:12	4500.02	17.04	7.55	371.93	4.91	8.48	0.32	-113.00
Last 5	12:37:12	4800.02	17.07	7.55	372.64	4.91	8.48	0.31	-113.53
Last 5	12:42:12	5100.03	16.91	7.56	372.02	4.89	8.48	0.28	-113.73
Variance 0			-0.05	0.01	-0.86			-0.01	-0.40
Variance 1			0.03	0.00	0.72			-0.01	-0.52
Variance 2			-0.16	0.01	-0.62			-0.03	-0.20

Notes

Started purge at 1109.

Sample rate 250mL/min. Weather - cloudy, 45. Water - clear, no odor. Control settings - ref 11, dis 4, 21 psi. Longer purge due to low but above 5 NTU since bladder pump installed.

Grab Samples
HGWA-6
Sample time 1247

Product Name: Low-Flow System

Date: 2016-12-06 15:34:13

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	QED Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.25 in
Site Name	Hammond - AP 1 & 2	Tubing Length	25 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte2020we	Pump placement from TOC	25 ft

Well Information:		Pumping Information:	
Well ID	HGWC-7	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.7263182 L
Well Total Depth	29.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1 in
Depth to Water	3.8 ft	Total Volume Pumped	24.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:50:18	4801.00	18.68	7.14	698.08	6.53	3.91	0.12	243.16
Last 5	14:55:18	5101.00	18.64	7.14	698.09	8.67	3.89	0.16	225.82
Last 5	15:00:18	5401.91	18.61	7.14	698.20	4.03	3.90	0.14	214.23
Last 5	15:05:18	5701.91	18.56	7.14	698.06	3.41	3.90	0.15	192.39
Last 5	15:20:18	6601.90	18.51	7.15	707.50	2.31	3.90	0.40	142.30
Variance 0			-0.02	0.00	0.11			-0.02	-11.59
Variance 1			-0.05	-0.00	-0.13			0.01	-21.84
Variance 2			-0.05	0.01	9.43			0.26	-50.09

Notes

1330 start purge@250mL/min, 1440 SmarTroll did not log parameters. 1450 lower purge rate to150mL/min, 1510 SmarTroll did not log parameters, 1515 SmarTroll did not log parameters, 1520 all parameters stable, 1525 sampled@150mL/min. Very light mist, windy, 61F

Grab Samples

HGWC-7

Sampled@1525 .5gal, 1qt, 250mL

Product Name: Low-Flow System

Date: 2016-12-06 14:05:50

Project Information:		Pump Information:	
Operator Name	M. Rogers	Pump Model/Type	QED bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.25 in
Site Name	Hammond - AP 1 & 2	Tubing Length	19 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	0 ft

Well Information:		Pumping Information:	
Well ID	HGWC-8	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6684019 L
Well Total Depth	24.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	3.36 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:49:16	300.03	19.38	7.00	1030.35	1.53	3.36	1.37	68.79
Last 5	13:54:16	599.96	19.37	6.98	1032.03	0.81	3.38	0.26	66.74
Last 5	13:59:16	899.95	19.59	7.00	1029.62	0.53	3.38	0.17	63.81
Last 5	14:04:16	1199.95	19.35	6.98	1034.02	0.90	3.39	0.14	62.89
Last 5									
Variance 0			-0.01	-0.02	1.67			-1.12	-2.05
Variance 1			0.22	0.02	-2.41			-0.08	-2.94
Variance 2			-0.24	-0.02	4.40			-0.03	-0.92

Notes

All parameters stable.

Grab Samples

HGWC-8

Sampling at 1408

Product Name: Low-Flow System

Date: 2016-12-06 15:12:57

Project Information:		Pump Information:	
Operator Name	M. Rogers	Pump Model/Type	QED bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.25 in
Site Name	Hammond - AP 1 & 2	Tubing Length	41 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	0 ft

Well Information:		Pumping Information:	
Well ID	HGWC-9	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.880762 L
Well Total Depth	46.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.48 in
Depth to Water	16.09 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:51:26	300.03	18.35	7.27	1174.80	0.41	16.15	1.81	6.88
Last 5	14:56:26	600.03	18.17	7.16	1188.11	0.42	16.14	0.27	23.30
Last 5	15:01:26	900.02	18.14	7.15	1190.79	0.40	16.14	0.15	25.22
Last 5	15:06:26	1200.03	18.08	7.15	1192.12	0.36	16.13	0.14	25.56
Last 5	15:11:26	1500.03	18.07	7.15	1193.92	0.33	16.13	0.11	25.40
Variance 0			-0.03	-0.00	2.68			-0.12	1.92
Variance 1			-0.06	-0.00	1.33			-0.02	0.33
Variance 2			-0.01	-0.00	1.80			-0.03	-0.16

Notes

Parameters stable weather: cloudy wet

Grab Samples

HGWC-9

Sampling at 1515

Product Name: Low-Flow System

Date: 2016-12-07 10:22:11

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.17 in
Site Name	Hammond - AP 1 & 2	Tubing Length	23 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte2020we	Pump placement from TOC	17 ft

Well Information:		Pumping Information:	
Well ID	HGWC-10	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.1926587 L
Well Total Depth	22.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	22 in
Depth to Water	16.93 ft	Total Volume Pumped	11.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:40:02	600.02	18.58	6.58	1024.04	0.56	18.67	0.15	121.98
Last 5	09:45:02	900.01	18.79	6.56	1024.81	0.50	18.65	0.12	173.24
Last 5	09:50:02	1200.01	18.19	6.56	1019.00	0.70	17.04	0.11	201.34
Last 5	09:55:02	1500.01	17.95	6.56	1015.04	0.77	17.04	0.10	353.27
Last 5	10:00:02	1800.01	18.21	6.56	1055.76	0.62	17.04	0.10	446.73
Variance 0			-0.60	0.00	-5.81			-0.00	28.10
Variance 1			-0.24	-0.00	-3.97			-0.01	151.93
Variance 2			0.26	-0.00	40.72			-0.00	93.46

Notes

0930 start purge@500mL/min, 0945 reduce purge rate to 250mL/min, 1000 3 well volumes purged, all parameters stable, 1005 sampled@250mL/min. Sunny 45F

Grab Samples

HGWC-10

Sampled at 1005 .5gal, 1qt, 250mL

Product Name: Low-Flow System

Date: 2016-12-07 13:03:45

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Alexis Perstaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.17 in
Site Name	Hammond - AP 1 & 2	Tubing Length	27 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte2020we	Pump placement from TOC	21 ft

Well Information:		Pumping Information:	
Well ID	HGWC-11	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2105124 L
Well Total Depth	25.99 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	13 in
Depth to Water	18.2 ft	Total Volume Pumped	19 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:30:32	4521.95	19.48	6.27	1139.72	7.67	18.46	1.48	411.60
Last 5	12:35:32	4821.95	19.64	6.27	1132.13	5.99	18.46	1.42	375.46
Last 5	12:40:32	5121.95	19.45	6.28	1141.64	4.81	18.47	1.39	351.33
Last 5	12:45:32	5421.95	19.62	6.28	1137.63	4.69	18.47	1.36	340.33
Last 5	12:50:32	5721.95	19.41	6.29	1134.79	3.85	18.47	1.36	410.49
Variance 0			-0.18	0.00	9.51			-0.04	-24.13
Variance 1			0.17	0.01	-4.01			-0.03	-11.00
Variance 2			-0.21	0.00	-2.83			0.00	70.17

Notes

1115 start pruge@500mL/min, 1135 reduce purge rate to 250mL/min, 1145 reduce purge rate to 100mL/min, 1205 3 well volumes (14.5L) purged,1250 all parameters stable, 1255 sampled@100mL/min. Sunny, light breezy, 52F

Grab Samples

HGWC-11

Sampled at 1255 .5gal, 1qt, 250mL

Product Name: Low-Flow System

Date: 2016-12-07 09:37:51

Project Information:		Pump Information:	
Operator Name	W.Virgo	Pump Model/Type	QED bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.25 in
Site Name	Hammond - AP 1 & 2	Tubing Length	40 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	30 ft

Well Information:		Pumping Information:	
Well ID	HGWC-12	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.8711092 L
Well Total Depth	35.10 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.6 in
Depth to Water	18.16 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:15:30	300.04	18.63	6.92	1308.13	0.96	18.21	0.42	77.47
Last 5	09:20:30	600.03	18.70	6.92	1300.59	0.38	18.21	0.36	75.58
Last 5	09:25:30	900.02	18.66	6.91	1311.96	0.21	18.21	0.33	72.21
Last 5	09:30:30	1200.02	18.70	6.90	1326.29	0.20	18.21	0.35	68.80
Last 5	09:35:30	1500.02	18.70	6.92	1313.22	0.26	18.21	0.44	66.16
Variance 0			-0.04	-0.00	11.37			-0.03	-3.37
Variance 1			0.04	-0.02	14.33			0.02	-3.41
Variance 2			0.00	0.02	-13.07			0.08	-2.64

Notes

Started Purging well @ 0910 @ 200 ml/min

Weather: Sunny ~41F. Well parameters stable at 0935. Well sampled at 0940. Sample rate: 200 ml/min.

Grab Samples

HGWC-12

Sample Time: 0940

Product Name: Low-Flow System

Date: 2016-12-07 10:41:51

Project Information:		Pump Information:	
Operator Name	W.Virgo	Pump Model/Type	QED bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.25 in
Site Name	Hammond - AP 1 & 2	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	39.6 ft

Well Information:		Pumping Information:	
Well ID	HGWC-13	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.9193729 L
Well Total Depth	44.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.84 in
Depth to Water	18.74 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:18:38	300.03	20.57	6.89	871.81	0.35	18.78	0.58	5.60
Last 5	10:23:38	600.01	20.79	6.85	858.54	0.66	18.80	0.22	-4.41
Last 5	10:28:38	900.00	20.88	6.86	854.37	0.71	18.81	0.14	-16.57
Last 5	10:33:38	1200.00	20.91	6.87	852.08	0.64	18.81	0.11	-27.70
Last 5	10:38:38	1500.01	20.97	6.91	850.27	0.49	18.81	0.11	-35.91
Variance 0			0.09	0.00	-4.16			-0.08	-12.17
Variance 1			0.03	0.01	-2.29			-0.03	-11.12
Variance 2			0.06	0.04	-1.82			-0.00	-8.21

Notes

Weather: Sunny ~45 F. Started purging well at: 10:13. Purge rate: 200 ml/min
Well Parameters stable at 1038. Well sampled at 1045. Sample rate: 200 ml/min. DUP-2 collected.

Grab Samples

HGWC-13

Sample Time: 1045

DUP-2

--

Product Name: Low-Flow System

Date: 2016-12-07 11:56:01

Project Information:		Pump Information:	
Operator Name	W.Virgo	Pump Model/Type	QED bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.25 in
Site Name	Hammond - AP 1 & 2	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	HGWC-14	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.9193729 L
Well Total Depth	43 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.68 in
Depth to Water	24.98 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:33:32	300.10	21.04	4.58	3353.31	0.81	25.07	0.48	74.30
Last 5	11:38:32	600.04	21.13	4.57	3352.79	0.92	25.09	0.22	64.27
Last 5	11:43:32	900.02	21.16	4.58	3352.44	0.73	25.11	0.20	60.29
Last 5	11:48:32	1200.00	21.11	4.59	3352.91	0.84	25.12	0.18	58.52
Last 5	11:53:32	1500.00	21.23	4.60	3347.94	0.77	25.12	0.20	57.25
Variance 0			0.03	0.01	-0.35			-0.01	-3.98
Variance 1			-0.06	0.00	0.48			-0.03	-1.77
Variance 2			0.12	0.01	-4.98			0.02	-1.27

Notes

Weather: Sunny ~50F. Started Purging at 1128. Purge rate 200 ml/min.
Well parameters stable at 1153. Well sampled at 1158. Sample rate: 200 ml/min

Grab Samples

HGWC-14

Sample Time: 1158

Product Name: Low-Flow System

Date: 2016-12-07 12:48:47

Project Information:		Pump Information:	
Operator Name	W.Virgo	Pump Model/Type	QED bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.25 in
Site Name	Hammond - AP 1 & 2	Tubing Length	40 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	33 ft

Well Information:		Pumping Information:	
Well ID	HGWC-15	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.8711092 L
Well Total Depth	38.00 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	16.68 in
Depth to Water	18.70 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:25:29	300.03	19.39	5.86	1561.72	0.80	20.01	0.28	18.49
Last 5	12:30:29	600.02	19.43	5.89	1573.45	0.77	20.06	0.20	19.38
Last 5	12:35:29	900.02	19.46	5.90	1556.07	0.58	20.08	0.23	19.83
Last 5	12:40:29	1200.02	19.46	5.88	1568.72	0.37	20.08	0.21	20.00
Last 5	12:45:29	1500.00	19.55	5.87	1555.62	0.47	20.09	0.21	20.40
Variance 0			0.03	0.01	-17.39			0.04	0.44
Variance 1			-0.00	-0.01	12.65			-0.02	0.17
Variance 2			0.08	-0.01	-13.10			0.00	0.40

Notes

Weather: Sunny ~55F. Started Purging well at 1220. Purge rate 200 ml/min.
Well parameters stable @ 1245. Well sampled at 1250. Sample rate: 200 ml/min

Grab Samples

HGWC-15

Sample Time: 1250

Product Name: Low-Flow System

Date: 2016-12-07 14:51:39

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	QED Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.25 in
Site Name	Hammond - AP 1 & 2	Tubing Length	25 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte2020we	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	HGWC-16	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.7263182 L
Well Total Depth	33.0 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	5 in
Depth to Water	12.84 ft	Total Volume Pumped	9.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:20:01	1500.02	18.64	6.78	862.23	5.83	13.44	0.17	-30.05
Last 5	14:25:01	1800.08	18.56	6.81	865.55	5.21	13.34	0.18	-39.24
Last 5	14:30:01	2100.02	18.65	6.84	866.81	4.26	13.30	0.15	-45.00
Last 5	14:35:01	2399.98	18.78	6.84	869.16	3.72	13.28	0.16	-50.84
Last 5	14:40:01	2699.98	18.79	6.85	868.11	3.09	13.28	0.17	-57.19
Variance 0			0.09	0.03	1.27			-0.03	-5.76
Variance 1			0.12	0.00	2.35			0.01	-5.85
Variance 2			0.01	0.01	-1.05			0.01	-6.34

Notes

1355 start purge@250mL/min, 1420 reduce purge rate to 150mL/min, 1440 all parameters stable, 1445 sampled at 150mL/min. Sunny, light breeze, 56F

Grab Samples

HGWC-16

Sampled at 1445 .5gal, 1qt, 250mL

Product Name: Low-Flow System

Date: 2016-12-07 14:26:39

Project Information:		Pump Information:	
Operator Name	W.Virgo	Pump Model/Type	QED bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.25 in
Site Name	Hammond - AP 1 & 2	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	Lamotte 2020we	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	HGWC-17	Final Pumping Rate	500 mL/min
Well diameter	2 in	Total System Volume	0.7745819 L
Well Total Depth	27.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	10.32 in
Depth to Water	17.39 ft	Total Volume Pumped	23 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:02:30	2099.99	20.01	6.21	1286.28	--	--	0.29	34.45
Last 5	14:07:30	2399.99	19.99	6.20	1289.79	2.25	18.25	0.33	34.50
Last 5	14:12:30	2699.99	19.77	6.22	1268.15	1.72	17.86	0.61	33.77
Last 5	14:17:30	2999.96	19.81	6.24	1279.85	1.26	17.76	0.55	32.23
Last 5	14:22:30	3299.97	19.72	6.23	1282.64	1.19	17.73	0.55	32.92
Variance 0			-0.22	0.02	-21.64			0.28	-0.73
Variance 1			0.03	0.02	11.70			-0.05	-1.54
Variance 2			-0.09	-0.01	2.79			-0.00	0.68

Notes

Due to WL 3 well volume method required. Purging started at 1327. Purge rate 500 ml/min.
Well parameters stable at 1422. Well sampled at 1427. 3 well volumes purged at 500ml/min (20 L purged at 500 ml/min). Purge rate lowered to 200 ml/min at 1407. Well sampled at 200 ml/min

Grab Samples
HGWC-17
Sample Time: 1427

Product Name: Low-Flow System

Date: 2016-12-08 14:16:12

Project Information:		Pump Information:	
Operator Name	Tracy Wardell	Pump Model/Type	QED Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE/Teflon-lined LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	22.7 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	364456		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	22.7 ft

Well Information:		Pumping Information:	
Well ID	HGWC-18	Final Pumping Rate	500 mL/min
Well diameter	2 in	Total System Volume	0.704117 L
Well Total Depth	27.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.96 in
Depth to Water	16.92 ft	Total Volume Pumped	22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 20
Last 5	13:52:23	900.02	19.79	4.55	2348.26	1.32	17.23	0.12	294.77
Last 5	13:57:23	1200.02	19.79	4.54	2352.25	0.96	17.23	0.12	295.69
Last 5	14:02:23	1500.02	19.79	4.55	2350.08	0.43	17.24	0.11	294.53
Last 5	14:07:23	1800.02	19.76	4.55	2347.22	0.41	17.24	0.11	291.72
Last 5	14:12:23	2100.02	19.74	4.56	2343.77	0.36	17.25	0.10	288.84
Variance 0			0.00	0.00	-2.17			-0.01	-1.16
Variance 1			-0.03	0.01	-2.86			-0.00	-2.81
Variance 2			-0.02	0.01	-3.45			-0.01	-2.88

Notes

Started purge at 1328

Sample rate 250 mL/min. Weather - cloudy, 47. Water - clear, no odor. Settings - ref 10 dis 5 psi 13 for purge, 10 for sampling

Grab Samples

HGWC-18

Sample time 1417

Product Name: Low-Flow System

Date: 2017-01-24 10:07:03

Project Information:		Pump Information:	
Operator Name	M.Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	32 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	27 ft

Well Information:		Pumping Information:	
Well ID	HGWA-1	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.7938874 L
Well Total Depth	32.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	9 in
Depth to Water	14.94 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:41:55	600.00	16.96	7.21	503.03	0.59	15.63	0.19	0.02
Last 5	09:46:55	899.99	17.08	7.21	516.33	0.43	15.69	0.17	-2.72
Last 5	09:51:55	1199.99	17.01	7.21	527.47	0.53	15.69	0.15	-4.39
Last 5	09:56:55	1499.99	16.87	7.21	535.34	1.02	15.68	0.14	-5.65
Last 5	10:01:55	1800.00	17.10	7.20	541.25	0.59	15.68	0.13	-7.78
Variance 0			-0.07	-0.00	11.14			-0.02	-1.68
Variance 1			-0.14	-0.00	7.86			-0.01	-1.26
Variance 2			0.22	-0.01	5.91			-0.01	-2.13

Notes

Started purging @ 9:32 @ 200 ml/min

Stop Purging @ 0957- Sampling Time @ 1005 Sampling rate @200ML/min

Grab Samples

HGWA-1

Sample Time 1005

Product Name: Low-Flow System

Date: 2017-01-24 11:25:10

Project Information:		Pump Information:	
Operator Name	W.Virgo	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	32 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	HGWA-2	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.7938874 L
Well Total Depth	27.9 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3 in
Depth to Water	6.82 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:02:53	599.91	18.97	5.39	191.29	2.95	7.07	0.58	55.45
Last 5	11:07:53	899.91	19.05	5.39	189.32	2.42	7.07	0.47	51.75
Last 5	11:12:53	1199.91	19.06	5.38	187.72	2.12	7.07	0.40	50.33
Last 5	11:17:53	1499.91	19.07	5.36	192.04	1.57	7.07	0.42	47.87
Last 5	11:22:53	1799.91	19.11	5.37	185.94	1.39	7.07	0.39	45.81
Variance 0			0.01	-0.01	-1.60			-0.07	-1.41
Variance 1			0.01	-0.02	4.31			0.02	-2.46
Variance 2			0.05	0.01	-6.09			-0.04	-2.06

Notes

Started Purging well at 1053 purge rate: 200 ml/min

Weather: Sunny 50 F. Purge completed at 1123. Sampled at 1130. Sample rate: 200 ml/min

Grab Samples

HGWA-2

Sample Time: 1130

Product Name: Low-Flow System

Date: 2017-01-24 11:28:20

Project Information:		Pump Information:	
Operator Name	M.Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	43 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	39 ft

Well Information:		Pumping Information:	
Well ID	HGWA-3	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.9000674 L
Well Total Depth	44.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.6 in
Depth to Water	6.62 ft	Total Volume Pumped	5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:03:01	300.09	18.52	7.28	442.60	2.42	6.62	0.21	-88.40
Last 5	11:08:01	600.03	18.61	7.31	446.92	1.45	6.63	0.12	-98.85
Last 5	11:13:01	899.99	18.51	7.34	446.74	1.98	6.64	0.11	-104.08
Last 5	11:18:01	1199.99	18.61	7.37	445.71	1.39	6.67	0.11	-107.20
Last 5	11:23:01	1499.99	18.52	7.39	445.45	--	--	0.10	-108.63
Variance 0			-0.11	0.03	-0.18			-0.01	-5.23
Variance 1			0.11	0.03	-1.03			-0.00	-3.12
Variance 2			-0.09	0.02	-0.26			-0.00	-1.43

Notes

Start purge at 1058

Stopped purging @1124

Grab Samples

HGWA-3

Sample time 1129

Product Name: Low-Flow System

Date: 2017-01-24 13:06:27

Project Information:		Pump Information:	
Operator Name	M.Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	26 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	21 ft

Well Information:		Pumping Information:	
Well ID	HGWA-4	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.735971 L
Well Total Depth	25.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.58 in
Depth to Water	4.93 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:43:00	2099.99	18.66	6.12	202.33	6.18	5.37	0.24	164.42
Last 5	12:48:00	2399.99	18.91	6.13	209.49	5.37	5.38	0.24	171.00
Last 5	12:53:00	2699.99	18.75	6.13	212.43	4.66	5.35	0.25	175.89
Last 5	12:58:00	2999.99	18.87	6.16	217.67	4.57	5.35	0.27	178.33
Last 5	13:03:00	3299.99	18.85	6.16	222.03	3.57	5.32	0.24	181.05
Variance 0			-0.17	0.00	2.94			0.01	4.88
Variance 1			0.12	0.03	5.24			0.01	2.44
Variance 2			-0.02	0.00	4.36			-0.03	2.73

Notes

Started purging at 1208

Stopped purging at 1305

Grab Samples

HGWA-4

Started sampling at 1308-200ML/min

Product Name: Low-Flow System

Date: 2017-01-24 15:12:41

Project Information:		Pump Information:	
Operator Name	W.Virgo	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	22.4 ft

Well Information:		Pumping Information:	
Well ID	HGWA-5	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.7745819 L
Well Total Depth	27.4 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	18.12 in
Depth to Water	5.58 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:49:55	1499.87	18.03	6.58	208.52	5.84	6.93	0.31	27.32
Last 5	14:54:55	1799.87	18.02	6.53	210.26	5.72	6.95	0.30	28.26
Last 5	14:59:55	2099.87	17.90	6.56	210.35	4.97	7.01	0.28	26.92
Last 5	15:04:55	2399.87	18.11	6.56	213.35	3.84	7.06	0.25	26.60
Last 5	15:09:55	2699.87	18.15	6.59	216.75	3.73	7.09	0.22	26.28
Variance 0			-0.12	0.03	0.08			-0.03	-1.34
Variance 1			0.21	0.00	3.00			-0.03	-0.32
Variance 2			0.05	0.03	3.40			-0.03	-0.32

Notes

Weather: Sunny 69F. Started Purging @ 1425. Purge rate: 200 ml/min
Well parameters stable at 15:10. Well sampled at 15:15 @ 200 ml/min.

Grab Samples

HGWA-5

Sample Time: 1515

Product Name: Low-Flow System

Date: 2017-01-24 15:06:02

Project Information:		Pump Information:	
Operator Name	M.Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	49 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	HGWA-6	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.9579839 L
Well Total Depth	50 ft	Calculated Sample Rate	300 sec
Screen Length	ft	Stabilization Drawdown	31.2 in
Depth to Water	5.29 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:41:48	900.03	18.06	7.49	364.37	3.75	7.42	0.08	-75.48
Last 5	14:46:48	1200.02	18.01	7.50	364.12	5.06	7.75	0.08	-86.04
Last 5	14:51:48	1500.03	18.02	7.50	363.51	3.82	7.85	0.08	-98.08
Last 5	14:56:48	1800.02	18.03	7.50	363.41	4.16	7.89	0.08	-105.65
Last 5	15:01:48	2100.03	17.90	7.52	363.09	4.09	7.89	0.08	-111.48
Variance 0			0.01	0.00	-0.61			-0.00	-12.04
Variance 1			0.01	0.00	-0.11			0.00	-7.57
Variance 2			-0.13	0.02	-0.32			0.00	-5.83

Notes

Started purging at 1427

Stopped purging at 1502

Grab Samples

HGWA-6

1508

Product Name: Low-Flow System

Date: 2017-01-26 09:53:10

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.17 in
Site Name	AP 1&2	Tubing Length	25 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	17 ft

Well Information:		Pumping Information:	
Well ID	HGWC-10	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.2015856 L
Well Total Depth	22.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	11.35 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:25:10	900.02	13.95	6.81	539.32	0.40	11.37	7.30	86.53
Last 5	09:30:10	1200.02	13.95	6.81	552.42	0.42	11.37	7.33	84.03
Last 5	09:35:10	1500.02	14.22	6.82	549.70	0.64	11.37	7.26	82.38
Last 5	09:40:10	1799.95	14.22	6.83	549.61	0.22	11.37	7.11	81.09
Last 5	09:45:10	2099.95	14.35	6.83	549.93	0.17	11.36	7.13	79.64
Variance 0			0.27	0.01	-2.72			-0.07	-1.65
Variance 1			0.00	0.01	-0.08			-0.14	-1.29
Variance 2			0.13	-0.00	0.32			0.02	-1.44

Notes

0910 Start purge at 100mL/min; 0945 all parameters stable; 0950 sampled at 100mL/min. 48F, Sunny, windy

Grab Samples

HGWC-10

Sampled at 0950

DUP-1

Sampled at 0950

Product Name: Low-Flow System

Date: 2017-01-25 15:11:19

Project Information:		Pump Information:	
Operator Name	M.Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	6 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	24 ft

Well Information:		Pumping Information:	
Well ID	HGWC-7	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5429164 L
Well Total Depth	29.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.88 in
Depth to Water	3.84 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:48:49	1500.03	18.75	7.11	683.34	5.82	4.05	0.08	33.79
Last 5	14:53:49	1800.03	18.70	7.12	683.56	5.41	4.06	0.08	32.72
Last 5	14:58:49	2100.03	18.67	7.11	683.92	5.16	4.08	0.07	30.00
Last 5	15:03:49	2400.03	18.69	7.11	682.88	4.30	4.07	0.07	27.53
Last 5	15:08:49	2700.03	18.66	7.11	683.55	4.50	4.08	0.07	25.98
Variance 0			-0.03	-0.01	0.36			-0.00	-2.72
Variance 1			0.03	0.00	-1.04			-0.00	-2.47
Variance 2			-0.04	-0.00	0.67			-0.00	-1.54

Notes

Grab Samples
HGWC-7
Taking sample @1513

Product Name: Low-Flow System

Date: 2017-01-25 14:45:53

Project Information:		Pump Information:	
Operator Name	W.Virgo	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	26 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	19.7 ft

Well Information:		Pumping Information:	
Well ID	HGWA-8	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.735971 L
Well Total Depth	24.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1 in
Depth to Water	2.35 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:24:01	300.10	19.10	7.05	995.77	0.92	2.39	0.15	79.21
Last 5	14:29:01	600.03	19.06	7.05	995.92	0.44	2.40	0.15	81.49
Last 5	14:34:01	900.02	19.15	7.04	994.53	0.32	2.40	0.13	82.65
Last 5	14:39:01	1200.02	19.05	7.04	995.23	0.25	2.40	0.13	83.55
Last 5	14:44:01	1500.02	19.24	7.04	992.33	0.23	2.40	0.13	84.12
Variance 0			0.09	-0.00	-1.39			-0.02	1.16
Variance 1			-0.10	-0.00	0.71			0.01	0.90
Variance 2			0.18	-0.00	-2.91			-0.00	0.57

Notes

Weather: Sunny ~65F. Started Purging at 14:19 purge rate: 200 ml/min.
Well parameters stable @ 1444. Well sampled at 1448. Rate: 200ml/min

Grab Samples

HGWC-8

Sample Time: 1448

Product Name: Low-Flow System

Date: 2017-01-26 09:23:02

Project Information:		Pump Information:	
Operator Name	M.Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	4 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	HGWC-9	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5236109 L
Well Total Depth	46.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.2 in
Depth to Water	13.04 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:00:52	300.11	17.36	6.97	1220.09	0.22	13.12	0.31	11.14
Last 5	09:05:52	600.03	17.41	6.97	1217.41	0.45	13.13	0.13	15.68
Last 5	09:10:52	900.02	17.44	6.98	1215.02	0.63	13.13	0.11	16.93
Last 5	09:15:52	1200.02	17.39	6.98	1216.12	0.83	13.13	0.10	16.68
Last 5	09:20:52	1500.03	17.36	6.99	1216.12	1.03	13.14	0.10	17.07
Variance 0			0.03	0.01	-2.39			-0.02	1.24
Variance 1			-0.05	0.00	1.10			-0.01	-0.24
Variance 2			-0.03	0.00	0.01			-0.00	0.39

Notes

Started purging at 0855

Grab Samples

HGWC-9

Started sample at 0925

Product Name: Low-Flow System

Date: 2017-01-26 12:19:47

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.17 in
Site Name	AP 1&2	Tubing Length	25 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	17 ft

Well Information:		Pumping Information:	
Well ID	HGWC-11	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.2015856 L
Well Total Depth	22.3 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	11 in
Depth to Water	14.34 ft	Total Volume Pumped	15 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:50:46	1500.02	18.93	6.42	841.19	0.25	15.26	0.59	90.56
Last 5	11:55:47	1800.92	19.05	6.42	842.27	0.19	15.26	0.58	90.26
Last 5	12:00:47	2100.92	18.70	6.46	841.86	0.19	14.80	0.57	89.35
Last 5	12:05:47	2400.92	18.52	6.47	844.01	0.07	14.79	0.56	88.43
Last 5	12:10:47	2700.92	18.58	6.46	851.69	0.12	14.79	0.56	88.14
Variance 0			-0.35	0.04	-0.41			-0.01	-0.91
Variance 1			-0.18	0.01	2.15			-0.01	-0.92
Variance 2			0.06	-0.01	7.68			0.00	-0.29

Notes

1125 start purge at 400mL/min; 1200 reduce purge rate to 250mL/min; 1212 all parameters stable, 3 well volumes purged; 1215 sampled at 250mL/min. 50F, Sunny, Windy

Grab Samples

HGWC-11

Sampled at 1215

Product Name: Low-Flow System

Date: 2017-01-26 09:40:54

Project Information:		Pump Information:	
Operator Name	W.Virgo	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	35 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	30 ft

Well Information:		Pumping Information:	
Well ID	HGWC-12	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.8228456 L
Well Total Depth	35.10 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	14.41 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:18:00	600.09	18.70	6.98	1210.65	1.05	14.42	0.25	138.30
Last 5	09:23:00	900.04	18.68	7.01	1209.30	0.46	14.42	0.17	135.54
Last 5	09:28:00	1200.03	18.66	7.03	1210.50	0.56	14.42	0.16	133.35
Last 5	09:33:00	1500.01	18.70	7.05	1211.23	0.49	14.42	0.16	130.46
Last 5	09:38:00	1800.00	18.68	7.05	1206.89	0.43	14.42	0.15	127.77
Variance 0			-0.02	0.02	1.20			-0.01	-2.19
Variance 1			0.04	0.01	0.73			-0.00	-2.89
Variance 2			-0.02	0.00	-4.34			-0.01	-2.69

Notes

Started Purge at: 0908. Purge rate: 200ml/min

Weather: Sunny/Cold ~45F. Parameters stable at 0938, sampled at 0943. Sample rate: 200ml/min. 2nd Rad collected.

Grab Samples

HGWC-12

Sample Time: 0943

2nd Rad

Lab QA/QC

Product Name: Low-Flow System

Date: 2017-01-26 10:50:17

Project Information:		Pump Information:	
Operator Name	W.Virgo	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	39.6 ft

Well Information:		Pumping Information:	
Well ID	HGWC-13	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.9193729 L
Well Total Depth	44.60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.32 in
Depth to Water	17.65 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:26:59	300.02	17.14	7.06	799.81	2.42	17.75	3.52	25.48
Last 5	10:31:59	600.01	20.32	7.08	650.47	5.90	17.76	0.82	27.80
Last 5	10:36:59	900.01	20.62	7.09	630.42	2.15	17.76	0.40	31.79
Last 5	10:41:59	1199.99	20.62	7.08	623.65	1.81	17.76	0.26	33.55
Last 5	10:46:59	1499.99	20.60	7.08	623.39	2.13	17.76	0.20	33.94
Variance 0			0.30	0.00	-20.05			-0.42	3.98
Variance 1			0.00	-0.01	-6.77			-0.14	1.77
Variance 2			-0.02	-0.00	-0.27			-0.06	0.39

Notes

Weather: sunny ~50F. Started Purging at 1022. Purge rate: 200ml/min
Strong odor from well after starting purge. Parameters stable at 1047. Sampled at 1052 @ 200 ml/min

Grab Samples

HGWC-13

Sample Time: 1052

DUP-2

--

Product Name: Low-Flow System

Date: 2017-01-26 13:26:07

Project Information:		Pump Information:	
Operator Name	W.Virgo	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	440279		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	HGWC14	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.9193729 L
Well Total Depth	43.00 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2 in
Depth to Water	22.85 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:48:59	1799.99	20.72	4.80	3472.33	0.35	23.02	0.39	67.35
Last 5	12:53:59	2099.97	20.83	4.80	3480.79	0.16	22.98	0.60	67.64
Last 5	12:58:59	2399.97	20.83	4.80	3468.29	0.28	22.93	0.47	67.58
Last 5	13:03:59	2699.97	20.84	4.80	3441.97	0.24	22.93	0.26	67.50
Last 5	13:08:59	2999.97	20.76	4.80	3456.39	0.13	22.93	0.15	67.88
Variance 0			0.00	-0.00	-12.50			-0.13	-0.05
Variance 1			0.01	-0.00	-26.32			-0.21	-0.09
Variance 2			-0.08	0.01	14.42			-0.11	0.39

Notes

Started Purging at 12:19. Purge rate 200 ml/min

1219 WV starts purge at 200mL/min; 1309 all parameters stable; 1315 sampled by MT at 200mL/min. 52F, sunny, windy.

Grab Samples

HGWC-14

Sampled at 1315

Product Name: Low-Flow System

Date: 2017-01-26 14:39:38

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	38 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	449622		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	33 ft

Well Information:		Pumping Information:	
Well ID	HGWC-15	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.8518038 L
Well Total Depth	38 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	9 in
Depth to Water	15.02 ft	Total Volume Pumped	6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:05:02	300.09	18.30	6.11	1616.12	0.38	15.58	1.55	69.79
Last 5	14:10:02	600.03	18.48	6.06	1629.11	1.09	15.68	0.84	66.96
Last 5	14:15:02	900.03	18.67	6.04	1640.84	0.62	15.77	0.33	65.85
Last 5	14:20:02	1200.03	18.70	6.05	1649.67	0.01	15.77	0.23	65.14
Last 5	14:25:03	1500.92	18.94	6.05	1642.77	0.66	15.77	0.21	64.76
Variance 0			0.19	-0.01	11.73			-0.52	-1.11
Variance 1			0.03	0.00	8.83			-0.10	-0.71
Variance 2			0.23	0.00	-6.90			-0.02	-0.38

Notes

1400 start purge at 200mL/min; 1425 all parameters stable; 1430 sampled at 250mL/min. 53F, Sunny and windy

Grab Samples

HGWC-15

Sampled at 1430

Product Name: Low-Flow System

Date: 2017-01-26 11:06:42

Project Information:		Pump Information:	
Operator Name	M.Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	4 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	HGWC-16	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.5236109 L
Well Total Depth	33 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.48 in
Depth to Water	12.59 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:42:45	1799.99	18.00	7.07	859.47	7.09	12.59	0.09	-87.95
Last 5	10:47:45	2099.99	18.01	7.06	870.03	5.35	12.62	0.09	-92.16
Last 5	10:52:45	2399.99	18.08	7.06	873.42	4.54	12.63	0.09	-92.28
Last 5	10:57:45	2699.99	18.14	7.07	875.47	4.48	12.59	0.09	-91.90
Last 5	11:02:45	2999.99	18.15	7.07	875.47	4.54	12.63	0.09	-91.53
Variance 0			0.07	0.01	3.39			0.00	-0.12
Variance 1			0.06	0.00	2.06			0.00	0.38
Variance 2			0.00	0.00	0.00			-0.00	0.38

Notes

Stop purge at 1102 @ 200mL/min

Grab Samples

HGWC-16

Start sampling at 1107

Product Name: Low-Flow System

Date: 2017-01-26 13:18:35

Project Information:		Pump Information:	
Operator Name	M.Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	4 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	HGWC-17	Final Pumping Rate	500 mL/min
Well diameter	2 in	Total System Volume	0.5236109 L
Well Total Depth	28.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.8 in
Depth to Water	16.96 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:55:06	3903.99	19.25	6.23	1295.08	7.46	17.63	0.13	101.22
Last 5	13:00:06	4203.99	19.24	6.24	1291.94	5.93	17.59	0.15	103.51
Last 5	13:05:06	4503.99	19.22	6.23	1289.65	4.50	17.58	0.17	104.28
Last 5	13:10:06	4803.99	19.22	6.24	1292.85	3.21	17.57	0.14	104.45
Last 5	13:15:06	5103.99	19.16	6.24	1298.56	2.67	17.55	0.13	106.58
Variance 0			-0.01	-0.00	-2.29			0.02	0.76
Variance 1			-0.01	0.00	3.20			-0.03	0.17
Variance 2			-0.06	-0.00	5.71			-0.01	2.12

Notes

Due to WL within 1ft of screen 3 well volume method required

Grab Samples

HGWC-17

Started sampling at 1320

Product Name: Low-Flow System

Date: 2017-01-26 15:10:43

Project Information:		Pump Information:	
Operator Name	M.Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.25 in
Site Name	AP 1&2	Tubing Length	4 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463453		
Turbidity Make/Model	LaMotte 2020We	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	HGWC-18	Final Pumping Rate	500 mL/min
Well diameter	2 in	Total System Volume	0.5236109 L
Well Total Depth	27.70 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	12.84 in
Depth to Water	17.50 ft	Total Volume Pumped	62 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:47:51	2400.99	17.86	4.61	2356.07	--	--	0.11	282.04
Last 5	14:52:51	2700.99	17.88	4.61	2355.18	0.26	17.72	0.10	281.98
Last 5	14:57:51	3001.00	17.83	4.61	2351.97	0.15	17.52	0.12	281.63
Last 5	15:02:51	3300.99	17.86	4.63	2351.52	0.16	17.49	0.12	280.07
Last 5	15:07:51	3601.00	17.86	4.61	2354.81	0.72	17.57	0.12	283.79
Variance 0			-0.05	-0.00	-3.20			0.02	-0.35
Variance 1			0.03	0.01	-0.46			0.00	-1.56
Variance 2			-0.00	-0.01	3.30			-0.01	3.72

Notes

3 Well Volume required due to wL

Grab Samples

HGWC-18

Started sampling at 1512

Product Name: Low-Flow System

Date: 2017-03-21 10:25:18

Project Information:		Pump Information:	
Operator Name	M. Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Plant Hammond	Tubing Diameter	0.375 in
Site Name	AP 1&2	Tubing Length	27 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	17 ft

Well Information:		Pumping Information:	
Well ID	HGWA-1	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.071403 L
Well Total Depth	32.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	14.4 in
Depth to Water	12.61 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			+/- 100	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:02:56	300.13	17.15	7.01	600.69	2.12	13.39	0.33	66.90
Last 5	10:07:56	600.03	17.14	7.02	596.54	1.37	13.73	0.32	61.32
Last 5	10:12:56	900.02	17.14	7.01	594.01	1.15	13.75	0.26	56.22
Last 5	10:17:56	1200.02	17.19	7.01	592.83	0.96	13.79	0.24	51.23
Last 5	10:22:56	1500.03	17.25	7.01	590.89	0.83	13.80	0.23	47.03
Variance 0			-0.00	-0.00	-2.52			-0.06	-5.10
Variance 1			0.05	-0.00	-1.18			-0.02	-4.99
Variance 2			0.06	-0.00	-1.94			-0.02	-4.20

Notes

Starting Purge at 0958 @ 200mL/min
Finish Purging at 1023 at 200mL/min

Grab Samples

HGWA-1-20170321-01

Grabbed Sample At 1028 @200mL/min

Product Name: Low-Flow System

Date: 2017-03-21 10:57:09

Project Information:		Pump Information:	
Operator Name	W.Virgo	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.375 in
Site Name	AP 1&2	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte 2020 We	Pump placement from TOC	23 ft

Well Information:		Pumping Information:	
Well ID	HGWA-2	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.136559 L
Well Total Depth	27.9 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.32 in
Depth to Water	6.35 ft	Total Volume Pumped	13 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:33:54	2699.97	18.25	4.94	189.72	3.19	6.46	0.25	98.72
Last 5	10:38:54	2999.97	18.25	4.91	188.92	3.34	6.64	0.25	99.77
Last 5	10:43:54	3299.96	18.21	4.83	188.73	2.93	6.64	0.25	104.87
Last 5	10:48:54	3599.97	18.26	4.88	189.90	2.88	6.46	0.24	102.60
Last 5	10:53:54	3899.97	18.42	4.90	190.52	2.63	6.46	0.22	101.59
Variance 0			-0.04	-0.09	-0.19			-0.00	5.10
Variance 1			0.05	0.05	1.17			-0.01	-2.27
Variance 2			0.16	0.02	0.62			-0.01	-1.00

Notes

Started purge at 9:49. Purge 200 ml/min. Weather: sunny ~ 60F

Well parameters stable at 1054. Well sample 1100. Sample rate 200 ml/min.

Grab Samples

HGWA-2

Sample Time: 1100

Product Name: Low-Flow System

Date: 2017-03-21 12:15:44

Project Information:		Pump Information:	
Operator Name	W.Virgo	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.375 in
Site Name	AP 1&2	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	463068		
Turbidity Make/Model	LaMotte 2020 We	Pump placement from TOC	39 ft

Well Information:		Pumping Information:	
Well ID	HGWA-3	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.462339 L
Well Total Depth	44.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.48 in
Depth to Water	6.04 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:51:54	1500.97	18.30	6.67	452.46	0.05	6.08	0.09	10.44
Last 5	11:56:54	1800.97	18.32	6.74	451.16	0.06	6.08	0.10	1.08
Last 5	12:01:54	2100.97	18.34	6.84	452.29	0.24	6.08	0.10	-10.19
Last 5	12:06:54	2400.97	18.39	6.80	451.23	0.04	6.08	0.09	-12.12
Last 5	12:11:54	2700.97	18.36	6.83	450.30	0.04	6.08	0.09	-17.36
Variance 0			0.02	0.10	1.13			0.00	-11.27
Variance 1			0.05	-0.04	-1.06			-0.00	-1.93
Variance 2			-0.03	0.04	-0.93			-0.00	-5.24

Notes

Started Purging well @ 11:27 purge rate: 200 ml/min. Weather sunny ~ 60F

Well parameters stable at 12:12. Well sampled at 12:17. Sample rate: 200ml/min.

Grab Samples

HGWA-3

Sample time 12:17

Product Name: Low-Flow System

Date: 2017-03-21 12:07:47

Project Information:		Pump Information:	
Operator Name	M. Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Plant Hammond	Tubing Diameter	0.375 in
Site Name	AP 1&2	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	20 ft

Well Information:		Pumping Information:	
Well ID	HWGA-4	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.136559 L
Well Total Depth	25.17 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6.84 in
Depth to Water	5.41 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			+/- 100	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:45:36	1799.92	17.38	5.97	191.10	3.11	5.99	0.33	80.11
Last 5	11:50:36	2099.93	17.56	6.03	206.30	2.77	5.98	0.29	80.22
Last 5	11:55:36	2399.93	17.59	6.03	210.45	2.27	5.98	0.30	79.95
Last 5	12:00:36	2699.93	17.59	6.04	214.53	2.11	5.98	0.30	79.83
Last 5	12:05:36	2999.93	17.59	6.07	220.33	2.02	5.98	0.32	80.40
Variance 0			0.04	0.01	4.16			0.01	-0.27
Variance 1			-0.01	0.01	4.08			0.00	-0.13
Variance 2			0.00	0.03	5.80			0.02	0.57

Notes

Started Purging at 1115 at 200mL/min
Finish Purging at 1205 at 200mL/min

Grab Samples

HGWA-4

Grabbed Sample at 1210 at 200mL/min

Product Name: Low-Flow System

Date: 2017-03-21 14:04:04

Project Information:		Pump Information:	
Operator Name	M. Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Plant Hammond	Tubing Diameter	0.375 in
Site Name	AP 1&2	Tubing Length	45 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	35 ft

Well Information:		Pumping Information:	
Well ID	HGWA-5	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.462339 L
Well Total Depth	50 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	15.96 in
Depth to Water	5.32 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			+/- 100	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:41:00	1499.95	18.08	6.56	253.20	8.12	6.55	0.20	4.74
Last 5	13:46:00	1799.95	18.10	6.56	253.60	5.47	6.61	0.17	1.55
Last 5	13:51:00	2099.95	18.12	6.56	253.54	4.61	6.62	0.21	-0.45
Last 5	13:56:00	2399.95	18.17	6.56	251.59	3.32	6.65	0.23	-2.27
Last 5	14:01:00	2699.95	18.17	6.55	251.48	3.17	6.65	0.23	-3.71
Variance 0			0.02	-0.00	-0.06			0.04	-2.00
Variance 1			0.05	-0.00	-1.95			0.02	-1.82
Variance 2			0.00	-0.00	-0.11			-0.01	-1.44

Notes

Starting Purging at 1315 at 200mL/min
Stopped Purging at 1400 @200mL/min

Grab Samples

HGWA-5

Grabbed Sample at 1405 at 200mL/min

Product Name: Low-Flow System

Date: 2017-03-21 15:02:13

Project Information:		Pump Information:	
Operator Name	M. Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Plant Hammond	Tubing Diameter	0.375 in
Site Name	AP 1&2	Tubing Length	55 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	HGWA-6	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.679525 L
Well Total Depth	50 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	10.32 in
Depth to Water	5.14 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			+/- 100	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:40:24	599.93	19.51	7.39	374.26	0.84	5.68	1.91	-49.27
Last 5	14:45:24	899.93	19.26	7.40	376.40	0.93	5.87	1.04	-51.46
Last 5	14:50:24	1199.93	19.19	7.40	376.29	0.84	5.96	0.80	-53.88
Last 5	14:55:24	1499.93	19.24	7.40	376.79	1.18	5.98	0.70	-56.59
Last 5	15:00:24	1799.93	19.09	7.40	375.34	1.80	6.00	0.51	-59.63
Variance 0			-0.07	0.00	-0.11			-0.24	-2.42
Variance 1			0.05	0.00	0.49			-0.10	-2.72
Variance 2			-0.15	-0.00	-1.44			-0.19	-3.03

Notes

Starting Purging at 1430 at 200mL/min
Finish Purging at 1500 at 200mL/min

Grab Samples

HGWA-6

Grabbed Sample at 1505 at 200mL/min

Product Name: Low-Flow System

Date: 2017-03-21 14:02:50

Project Information:		Pump Information:	
Operator Name	W.Virgo	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.375 in
Site Name	AP 1&2	Tubing Length	32 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte 2020 We	Pump placement from TOC	24 ft

Well Information:		Pumping Information:	
Well ID	HGWC-7	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.179997 L
Well Total Depth	29.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.88 in
Depth to Water	4.25 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:38:53	300.06	18.92	7.12	675.51	0.95	4.48	0.22	42.63
Last 5	13:43:53	600.03	18.89	7.13	671.95	1.89	4.52	0.16	40.02
Last 5	13:48:53	900.02	18.96	7.12	659.72	2.02	4.53	0.16	38.34
Last 5	13:53:54	1200.95	18.92	7.12	657.71	1.79	4.53	0.15	37.45
Last 5	13:58:54	1500.96	18.93	7.12	651.27	2.01	4.49	0.15	36.59
Variance 0			0.07	-0.01	-12.23			0.01	-1.68
Variance 1			-0.04	-0.00	-2.01			-0.02	-0.89
Variance 2			0.02	-0.00	-6.44			-0.00	-0.86

Notes

Weather is sunny, 70 F. Started purge at 1334. Purge rate: 200ml/min.
Well parameters stable at 13:59. Well sampled at 14:05. Well sample rate: 200ml/min.

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-21 15:18:22

Project Information:		Pump Information:	
Operator Name	W.Virgo	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.375 in
Site Name	AP 1&2	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte 2020 We	Pump placement from TOC	19 ft

Well Information:		Pumping Information:	
Well ID	HGWC-8	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.136559 L
Well Total Depth	24.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	3.53 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:54:03	300.11	18.96	6.87	993.95	0.50	3.51	0.25	68.26
Last 5	14:59:03	600.02	18.92	6.87	1016.00	0.10	3.46	0.21	64.67
Last 5	15:04:03	900.02	18.97	6.87	954.53	0.23	3.50	0.21	61.47
Last 5	15:09:03	1200.02	18.97	6.87	987.90	0.21	3.50	0.21	58.43
Last 5	15:14:03	1500.02	18.98	6.87	966.44	0.18	3.50	0.22	57.84
Variance 0			0.05	-0.00	-61.47			-0.00	-3.21
Variance 1			0.00	-0.00	33.37			0.00	-3.03
Variance 2			0.01	0.00	-21.46			0.01	-0.59

Notes

Weather: sunny 70 F. Purge rate: 200ml/min. Start purge time: 2:49.
All parameters stable at 1514. Well sampled at 1520. Sample rate 200ml/min.

Grab Samples

HGWC-8

Sample time 1520

Product Name: Low-Flow System

Date: 2017-03-22 09:24:38

Project Information:		Pump Information:	
Operator Name	M. Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Plant Hammond	Tubing Diameter	0.375 in
Site Name	AP 1&2	Tubing Length	46 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	41 ft

Well Information:		Pumping Information:	
Well ID	HGWC-9	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.484058 L
Well Total Depth	46.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.6 in
Depth to Water	13.49 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			+/- 100	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:02:48	300.10	17.62	6.99	1152.74	0.15	13.54	0.12	39.85
Last 5	09:07:48	600.03	17.63	7.00	1153.26	0.37	13.56	0.09	34.71
Last 5	09:12:48	900.03	17.63	7.01	1152.36	0.52	13.53	0.08	31.36
Last 5	09:17:48	1200.03	17.63	7.02	1153.73	0.70	13.54	0.08	28.52
Last 5	09:22:48	1500.03	17.63	7.03	1156.20	0.90	13.54	0.08	25.96
Variance 0			-0.00	0.01	-0.90			-0.01	-3.34
Variance 1			0.00	0.01	1.37			-0.00	-2.85
Variance 2			0.00	0.01	2.47			-0.00	-2.56

Notes

Starting Purge at 0858 at 200mL/min
Finish Purging at 0923 at 200mL/min

Grab Samples

HGWC-9

Grabbed Sample at 0928 and Dup-1

Product Name: Low-Flow System

Date: 2017-03-22 11:02:18

Project Information:		Pump Information:	
Operator Name	T.Thomas	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.17 in
Site Name	AP 1&2	Tubing Length	27 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	LaMotte 2020 We	Pump placement from TOC	17 ft

Well Information:		Pumping Information:	
Well ID	HGWC-10	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.4605124 L
Well Total Depth	22.60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.2 in
Depth to Water	13.20 ft	Total Volume Pumped	20.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:20:13	3304.99	17.45	6.67	969.74	--	--	0.10	46.70
Last 5	10:25:13	3604.97	17.07	6.67	982.63	--	--	0.51	46.88
Last 5	10:30:13	3904.96	17.05	6.66	982.52	0.65	13.30	0.18	46.67
Last 5	10:35:13	4204.97	17.28	6.66	980.41	0.64	13.30	0.14	46.32
Last 5	10:40:13	4504.96	17.14	6.66	979.62	0.72	13.30	0.11	46.20
Variance 0			-0.02	-0.01	-0.11			-0.32	-0.22
Variance 1			0.23	0.00	-2.11			-0.05	-0.34
Variance 2			-0.14	0.00	-0.79			-0.03	-0.12

Notes

Due to initial depth to water 3 well volume method is required. 1 well volume = 5.8 liters. Purge rate at 500 ml/min 12 minutes per volume. Start purge at 9:25.

Due to initial depth to water 3 well volume method required. 1 well volume = 5.8 liters. Purge rate at 350 ml/min 17 min per volume. Purge rate changed to 200 ml/ min @ 10:15. Problem with pump occurred at 10:20. Purge resumed at 10:23 @ 200 ml/ min. Parameters stable at 10:40. Well sampled at 10:50.

Grab Samples
HGWC-10
Well sampled at 10:50
DUP-2
--

Product Name: Low-Flow System

Date: 2017-03-22 12:24:15

Project Information:		Pump Information:	
Operator Name	T.Thomas	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.17 in
Site Name	AP 1&2	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	LaMotte 2020 We	Pump placement from TOC	21 ft

Well Information:		Pumping Information:	
Well ID	HGWC-11	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.4739027 L
Well Total Depth	25.99 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.96 in
Depth to Water	14.90 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:58:01	600.01	17.26	5.75	818.52	1.57	14.98	4.38	49.76
Last 5	12:03:01	900.01	17.32	5.75	820.66	1.76	14.98	4.28	50.90
Last 5	12:08:01	1200.01	17.14	5.77	824.79	1.79	14.98	4.16	51.97
Last 5	12:13:01	1500.01	17.34	5.78	825.75	1.89	14.98	4.06	52.52
Last 5	12:18:01	1800.01	17.51	5.81	830.11	1.48	14.98	3.80	53.46
Variance 0			-0.18	0.02	4.13			-0.12	1.07
Variance 1			0.20	0.01	0.96			-0.09	0.55
Variance 2			0.18	0.03	4.35			-0.26	0.94

Notes

Weather- overcast 50 F. Purge rate @ 100 ml/min. Purge start time 11:48.
Parameters stable at 1218. Well sampled at 1225. Sample rate 100 ml/ min.

Grab Samples

HGWC-11

Well sampled at 1225

Product Name: Low-Flow System

Date: 2017-03-22 10:33:47

Project Information:		Pump Information:	
Operator Name	M. Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Plant Hammond	Tubing Diameter	0.375 in
Site Name	AP 1&2	Tubing Length	35 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	30 ft

Well Information:		Pumping Information:	
Well ID	HGWC-12	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.245153 L
Well Total Depth	35.1 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6.48 in
Depth to Water	14.97 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			+/- 100	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:10:17	300.11	18.16	7.08	1128.21	0.90	15.53	1.30	40.82
Last 5	10:15:17	600.03	19.05	7.07	1097.38	0.27	15.50	0.09	42.99
Last 5	10:20:17	900.03	19.14	7.07	1097.26	0.17	15.50	0.08	38.74
Last 5	10:25:17	1200.03	19.13	7.07	1097.33	0.22	15.51	0.07	35.04
Last 5	10:30:17	1500.03	19.12	7.08	1097.48	0.21	15.51	0.07	31.88
Variance 0			0.09	0.00	-0.12			-0.02	-4.25
Variance 1			-0.00	0.00	0.07			-0.01	-3.70
Variance 2			-0.02	0.00	0.15			-0.01	-3.16

Notes

Starting Purge at 1005 at 200mL/min
Finish Purging at 1030 at 200mL/min

Grab Samples

HGWC-12

Grabbed Sample at 1035 and 2nd Rad both at 200mL/min

Product Name: Low-Flow System

Date: 2017-03-22 14:31:20

Project Information:		Pump Information:	
Operator Name	T.Thomas	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.375 in
Site Name	AP 1&2	Tubing Length	50 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	LaMotte 2020 We	Pump placement from TOC	39 ft

Well Information:		Pumping Information:	
Well ID	HGWC-13	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.570932 L
Well Total Depth	44.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.84 in
Depth to Water	18.32 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:05:18	1500.01	20.61	7.10	630.42	7.98	18.39	0.12	18.47
Last 5	14:10:18	1800.01	20.65	7.11	629.96	4.67	18.39	0.12	13.69
Last 5	14:15:18	2100.01	20.66	7.12	630.06	4.75	18.39	0.11	9.10
Last 5	14:20:18	2400.01	20.59	7.12	630.61	4.70	18.39	0.11	4.63
Last 5	14:25:18	2700.01	20.57	7.13	629.92	3.46	18.39	0.11	0.08
Variance 0			0.01	0.01	0.10			-0.00	-4.59
Variance 1			-0.07	0.01	0.55			-0.00	-4.47
Variance 2			-0.02	0.01	-0.69			-0.00	-4.55

Notes

Weather - partly cloudy 55 F. Purge rate @ 200 ml/min. Purge started at 1340.
Parameters stable at 1425. Purge rate at 200 ml/min. Well sampled at 1430. Sample rate at 200 ml/min.

Grab Samples

HGWC-13

Well sampled at 1430

Product Name: Low-Flow System

Date: 2017-03-23 09:36:22

Project Information:		Pump Information:	
Operator Name	T.Thomas	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.375 in
Site Name	AP 1&2	Tubing Length	48.0 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	LaMotte 2020 We	Pump placement from TOC	38.0 ft

Well Information:		Pumping Information:	
Well ID	HGWC-14	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.527495 L
Well Total Depth	43.0 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.72 in
Depth to Water	24.03 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:11:01	300.11	19.77	4.53	3515.27	1.93	24.09	0.35	145.94
Last 5	09:16:01	600.02	19.00	4.54	3572.14	1.55	24.09	0.26	144.32
Last 5	09:21:01	899.99	19.18	4.55	3553.75	1.19	24.09	0.21	143.47
Last 5	09:26:01	1199.99	19.16	4.56	3554.96	1.10	24.09	0.21	141.49
Last 5	09:31:01	1499.99	19.47	4.57	3567.71	1.06	24.09	0.20	139.81
Variance 0			0.18	0.01	-18.39			-0.05	-0.85
Variance 1			-0.02	0.01	1.20			0.00	-1.98
Variance 2			0.31	0.00	12.75			-0.01	-1.68

Notes

Weather- partly cloudy 55F. Purge rate at 200 ml/min. Start purge at 9:06.
Parameters stable at 9:31. Purge rate 200 ml/min. Well sampled at 9:35. Sample rate 200 ml/min.

Grab Samples

HGWC-14

Well sampled at 09:35

Product Name: Low-Flow System

Date: 2017-03-23 11:28:29

Project Information:		Pump Information:	
Operator Name	T.Thomas	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	0.375 in
Site Name	AP 1&2	Tubing Length	43.00 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	457516		
Turbidity Make/Model	LaMotte 2020 We	Pump placement from TOC	33.00 ft

Well Information:		Pumping Information:	
Well ID	HGWC-15	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.418902 L
Well Total Depth	38.00 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	12.48 in
Depth to Water	15.95 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:55:13	899.98	18.30	5.92	1731.37	0.65	16.99	1.05	118.78
Last 5	11:00:13	1199.97	18.35	5.89	1741.56	0.71	16.99	0.63	107.78
Last 5	11:10:20	1806.98	18.37	5.83	1761.37	0.68	16.99	0.28	96.82
Last 5	11:15:20	2106.98	18.39	5.81	1761.54	0.65	16.99	0.21	93.59
Last 5	11:20:20	2406.98	18.44	5.79	1756.48	0.61	16.99	0.17	91.32
Variance 0			0.03	-0.06	19.80			-0.35	-10.96
Variance 1			0.02	-0.02	0.18			-0.07	-3.22
Variance 2			0.04	-0.02	-5.06			-0.04	-2.28

Notes

Weather- sunny and partly cloudy, 55F. Purge started at 10:40. Purge rate at 200 ml/min.
Parameters stable at 1120. SmarTROLL missed one reading at 1105. Purge rate at 200 ml/min. Well sampled at 1125. Sample rate at 200ml/min.

Grab Samples

HGWC-15

Well sampled at 1125

Product Name: Low-Flow System

Date: 2017-03-22 12:08:23

Project Information:		Pump Information:	
Operator Name	M. Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Plant Hammond	Tubing Diameter	0.375 in
Site Name	AP 1&2	Tubing Length	33 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	28 ft

Well Information:		Pumping Information:	
Well ID	HGWC-16	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.201715 L
Well Total Depth	33 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	26.28 in
Depth to Water	11.93 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			+/- 100	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:45:02	600.03	18.29	7.14	882.39	13.90	13.95	0.07	-71.41
Last 5	11:50:02	900.03	18.33	7.15	882.81	10.76	13.99	0.07	-71.93
Last 5	11:55:02	1200.03	18.34	7.15	883.31	4.54	14.12	0.07	-71.73
Last 5	12:00:02	1499.93	18.34	7.15	882.05	3.09	14.12	0.07	-71.91
Last 5	12:05:02	1799.93	18.33	7.15	883.48	3.40	14.12	0.07	-71.29
Variance 0			0.01	0.00	0.50			0.00	0.20
Variance 1			-0.00	0.00	-1.26			0.00	-0.18
Variance 2			-0.00	-0.00	1.43			0.00	0.62

Notes

Starting Purge at 1135 at 200mL/min
Finish Purging at 1205 @200mL/min

Grab Samples

HGWC-16

Grabbed Sample at 1210 at 200mL/min

Product Name: Low-Flow System

Date: 2017-03-22 14:51:58

Project Information:		Pump Information:	
Operator Name	M. Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Plant Hammond	Tubing Diameter	0.375 in
Site Name	AP 1&2	Tubing Length	27 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	HGWC-17	Final Pumping Rate	0.5 mL/min
Well diameter	2 in	Total System Volume	1.071403 L
Well Total Depth	27.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	8.16 in
Depth to Water	17.45 ft	Total Volume Pumped	32.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:28:26	5699.89	18.60	6.25	1399.19	7.52	18.12	0.17	67.70
Last 5	14:33:26	5999.90	18.59	6.25	1395.69	5.11	18.12	0.16	71.40
Last 5	14:38:26	6299.87	18.55	6.25	1397.52	3.91	18.13	0.17	75.65
Last 5	14:43:26	6599.87	18.53	6.25	1395.40	4.23	18.30	0.17	80.91
Last 5	14:48:26	6899.87	18.51	6.25	1395.15	4.48	18.13	0.16	77.48
Variance 0			-0.04	-0.00	1.83			0.01	4.25
Variance 1			-0.02	0.00	-2.12			0.00	5.26
Variance 2			-0.02	-0.00	-0.25			-0.01	-3.43

Notes

3 WV Method starting Purge at 500mL/min at 1254
Finish Purging at 1449 at 200mL/min

Grab Samples

HGWC-17

Grabbed Sample at 1454 at 200mL/min

Product Name: Low-Flow System

Date: 2017-03-23 10:23:31

Project Information:		Pump Information:	
Operator Name	M. Burch	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Plant Hammond	Tubing Diameter	0.375 in
Site Name	AP 1&2	Tubing Length	27 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	HGWC-18	Final Pumping Rate	0.5 mL/min
Well diameter	2 in	Total System Volume	1.071403 L
Well Total Depth	27.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1.69 in
Depth to Water	17.84 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			+/- 100	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:00:35	3899.95	16.28	4.64	2446.77	12.80	18.10	0.61	268.42
Last 5	10:05:35	4199.95	16.37	4.63	2444.74	6.94	17.99	0.73	272.21
Last 5	10:10:35	4499.95	16.37	4.63	2444.02	4.11	17.99	0.75	275.15
Last 5	10:15:35	4799.93	16.50	4.64	2440.22	3.17	17.98	0.75	279.52
Last 5	10:20:35	5099.93	16.64	4.63	2442.17	2.36	17.98	0.73	281.47
Variance 0			0.00	-0.00	-0.72			0.02	2.94
Variance 1			0.12	0.01	-3.80			-0.01	4.37
Variance 2			0.14	-0.01	1.95			-0.01	1.94

Notes

Starting Purge at 0855 at 500mL/min (3WV)
Finish Purging at 1020 at 200mL/min

Grab Samples

HGWC-18

Grabbed Sample at 1025 at 200mL/min

Product Name: Low-Flow System

Date: 2017-05-22 13:20:52

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.375 in
Site Name	AP 1&2	Tubing Length	23 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	27.6 ft

Well Information:		Pumping Information:	
Well ID	HGWA-1	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.9845288 L
Well Total Depth	32.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	13 in
Depth to Water	15.93 ft	Total Volume Pumped	6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:50:25	300.15	17.70	7.14	629.76	1.61	17.04	0.41	-80.26
Last 5	12:55:25	600.07	17.49	7.14	628.86	0.99	17.04	0.28	-81.39
Last 5	13:00:25	900.07	17.45	7.13	621.45	0.84	17.04	0.20	-83.02
Last 5	13:05:25	1200.07	17.39	7.12	612.46	0.72	17.04	0.21	-83.02
Last 5	13:10:25	1500.11	17.36	7.11	606.09	0.72	17.04	0.19	-82.40
Variance 0			-0.05	-0.01	-7.41			-0.08	-1.63
Variance 1			-0.06	-0.01	-8.99			0.01	-0.00
Variance 2			-0.03	-0.01	-6.36			-0.02	0.62

Notes

1245 start purge at 250mL/min; 1310 all parameters stable; 1315 sampled at 250mL/min. 75F Mostly Cloudy, very light drizzle.

Grab Samples

HGWA-1

Sampled at 1315

Product Name: Low-Flow System

Date: 2017-05-22 14:19:52

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	Teflon
Project Name	GPC - Plant Hammond	Tubing Diameter	.375 in
Site Name	AP 1&2	Tubing Length	24 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	22.9 ft

Well Information:		Pumping Information:	
Well ID	HGWA-2	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	1.006248 L
Well Total Depth	27.9 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2 in
Depth to Water	7.16 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:55:35	600.03	18.47	5.30	180.50	12.12	7.31	0.13	-37.86
Last 5	14:00:35	900.03	18.61	5.24	180.67	7.38	7.28	0.10	-50.56
Last 5	14:05:35	1200.04	18.56	5.22	180.94	4.59	7.28	0.11	-59.57
Last 5	14:10:35	1500.03	18.54	5.21	180.82	4.01	7.28	0.10	-66.19
Last 5	14:15:35	1800.03	18.54	5.20	180.38	3.25	7.28	0.10	-70.86
Variance 0			-0.05	-0.02	0.27			0.00	-9.01
Variance 1			-0.02	-0.01	-0.12			-0.00	-6.61
Variance 2			0.00	-0.01	-0.44			-0.00	-4.68

Notes

1345 start purge at 250mL/min; 1355 high NTUs, adjust throttle; 1415 all parameters stable; 1420 sampled at 250mL/min. 76F Mostly Cloudy

Grab Samples

HGWA-2

Sampled at 1420

ERM

GROUNDWATER SAMPLING LOG SHEET

Client: GPC
Project No.: 0372394
Sampling Date: 5-22-17

Site: Plant Hammond , Coosa GA
Location: P 1&2 AP 3&4 Huffaker LF (circle or
Sampler's Name: Markeirous Thomas

Well ID: HGWA-3
Pump Type/Model: Dedicated Bladder / QED
Sample Collection Time: 1510

Total Depth (ft)[1]: 44.6
Tubing Material: Teflon
Sample Purge Rate (mL/min)[3]: 250

Depth to Water (ft): 6.92
Pump Intake Depth (ft): 39.6
Sample ID: HGWA-3

Well Diameter (in): 2
Start/Stop Purge Time: 1440/1505
Laboratory Analyses: Metals App. III & IV (EPA 6020/7470), Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C), Radium 226 & 228 (SW-846 9315/9320)

Well Volume (gal) = $0.041d^2h$:
Purge Rate (mL/min)[2]: 250

Well Volume (L) = gal * 3.785:
Total Purge Volume (L): 6.25

d = well diameter (inches) h = length of water column (feet)
Purge Method: (Low-Flow) Well Volume Other:
QA/QC Collected? No

Well Type: Flush Stick Up
Sampling Method: (Pump Discharge) Other:
QA/QC I.D.

Well Lock: Yes (No)

Well Bolted: (Yes) No Bolts Needed:

Well Cap Condition: (Good) Replace Other

All sample containers requiring chemical preservation properly preserved prior to demob from well? (Yes) No

Well Tag Present: (Yes) No Water in Vault: Yes No

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H_2O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1445	19.41	439.15	0.52	6.67	-70.00	0.79	250	1.25	6.92	
1450	18.90	436.63	0.30	6.67	-76.00	0.45	250	1.25	6.92	
1455	18.83	436.72	0.21	6.95	-83.80	0.31	250	1.25	6.93	
1500	18.78	436.82	0.15	6.99	-89.10	0.36	250	1.25	6.93	
1505	18.70	436.58	0.12	7.02	-93.00	0.30	250	1.25	6.93	
				All Parameters Stable						
				77°F Mostly Cloudy						
				Total Depth: Not Measured						
				Markeirous L. Thomas						
Stabilizing Criteria[4, 5]		+/- 5%	0.2 mg/L or 10% whichever is greater [9]	+/- 0.1 unit		<5 NTUs	>100 mL < 250 mL	>3L	<0.33 ft	

(1) - Maximum purge rate of 250 mL/min
(2) - Sample rate to be between 100 mL/min and 250 mL/min
(3) - Collect sample from pump discharge without tubing contacting sample container
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft.
(7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed
(8) - Preserve all samples as appropriate immediately following collection
(9) - DO 0.2 mg/L or 10% whichever is greater (no criteria apply if DO < 0.5 mg/L)

Purge Log QA/QC'd By:
Date:

Purge Log QA/QC'd By:
Date:

Product Name: Low-Flow System

Date: 2017-05-23 09:59:18

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.375 in
Site Name	AP 1&2	Tubing Length	24 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	20.7 ft

Well Information:		Pumping Information:	
Well ID	HGWA-4	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	1.006248 L
Well Total Depth	25.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3 in
Depth to Water	6.57 ft	Total Volume Pumped	6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:15:40	300.16	18.16	6.50	234.64	2.20	5.88	0.48	-57.84
Last 5	09:20:40	600.04	18.11	6.31	262.19	2.27	5.88	0.19	-67.04
Last 5	09:25:40	900.04	18.14	6.28	280.77	2.01	5.88	0.14	-73.01
Last 5	09:30:40	1200.04	18.16	6.28	286.32	1.99	5.88	0.13	-76.83
Last 5	09:35:40	1500.04	18.16	6.28	290.43	2.19	5.88	0.13	-79.40
Variance 0			0.03	-0.03	18.58			-0.05	-5.98
Variance 1			0.02	-0.00	5.55			-0.01	-3.82
Variance 2			0.00	-0.00	4.11			-0.00	-2.57

Notes

0910 start purge at 250mL/min; 0935 all parameters stable; 0940 sampled at 250mL/min. 67F Overcast, Light drizzle

Grab Samples

HGWA-4

Sampled at 0940

Product Name: Low-Flow System

Date: 2017-05-23 09:50:18

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Dedicated bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Plant Hammond	Tubing Diameter	.17 in
Site Name	AP 1&2	Tubing Length	27 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	22 ft

Well Information:		Pumping Information:	
Well ID	HGWA-5	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2105124 L
Well Total Depth	27.4 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	10.2 in
Depth to Water	6.13 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:28:19	300.09	17.89	6.38	176.02	7.13	6.84	0.51	26.32
Last 5	09:33:19	600.02	17.89	6.46	184.11	6.63	6.90	0.37	20.09
Last 5	09:38:19	900.02	17.90	6.48	188.62	4.93	6.92	0.21	16.96
Last 5	09:43:19	1200.02	17.89	6.49	185.51	4.64	6.95	0.16	16.03
Last 5	09:48:20	1501.02	17.89	6.50	192.97	4.61	6.98	0.16	15.44
Variance 0			0.00	0.03	4.51			-0.16	-3.13
Variance 1			-0.00	0.01	-3.11			-0.05	-0.93
Variance 2			0.00	0.01	7.46			-0.01	-0.60

Notes

Parameters stable. Weather:Raining off and on.

Grab Samples

HGWA-5

Sampling at 9:52

Product Name: Low-Flow System

Date: 2017-05-23 10:53:48

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Dedicated bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Plant Hammond	Tubing Diameter	.17 in
Site Name	AP 1&2	Tubing Length	55 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	HGWA-6	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3354883 L
Well Total Depth	50.0 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	20.16 in
Depth to Water	6.02 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:31:26	300.03	17.89	7.51	326.86	1.00	7.23	0.59	-71.69
Last 5	10:36:26	600.02	17.90	7.51	334.45	0.67	7.60	0.30	-77.34
Last 5	10:41:26	900.02	17.89	7.52	313.02	1.20	7.63	0.29	-81.48
Last 5	10:46:26	1200.02	17.85	7.53	313.79	1.15	7.67	0.31	-84.51
Last 5	10:51:26	1500.02	17.83	7.53	300.99	1.07	7.70	0.28	-88.09
Variance 0			-0.00	0.02	-21.43			-0.01	-4.15
Variance 1			-0.04	0.01	0.77			0.02	-3.03
Variance 2			-0.02	-0.00	-12.80			-0.03	-3.58

Notes

Parameters stable. Weather:cloudy little rain

Grab Samples

HGWA-6

Sampling at 10:55

GROUNDWATER SAMPLING LOG SHEET

ERM

Client:	GPC	Project No.:	0372394	Sampling Date:	5-23-17
Site:	Plant Hammond , Coosa GA	Location:	(P 1&2) AP 3&4 Huffaker LF (circle or	Sampler's Name:	Markunas Thomas
Well ID:	HGWC-7	Pump Type/Model:	Dedicated Bladder/QED	Sample Collection Time:	1100
Total Depth (ft)[1]:	29.8	Tubing Material:	Teflon	Sample Purge Rate (mL/min)[3]:	250
Depth to Water (ft):	4.0	Pump Intake Depth (ft):	24.8	Sample ID:	HGWC-7
Well Diameter (in):	2	Start/Stop Purge Time:	1030/1055	Laboratory Analyses:	Metals App. III & IV (EPA 6020/7470), Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C), Radium 226 & 228 (SW-846 9315/9320)
Well Volume (gal) = $0.041d^2h$:		Purge Rate (mL/min)[2]:	250		
Well Volume (L) = gal * 3.785:		Total Purge Volume (L):	6.25		
d = well diameter (inches) h = length of water column (feet)		Purge Method:	(Low-Flow) Well Volume Other:	QA/QC Collected?	Yes
Well Type:	Flush (Stick Up)	Sampling Method:	(Pump Discharge) Other:	QA/QC I.D.	DUP-1
Well Lock:	(Yes) No				
Well Bolted:	(Yes) No	Bolts Needed:			
Well Cap Condition:	(Good) Replace	Other		All sample containers requiring chemical preservation properly preserved prior to demob from well?	(Yes) No
Well Tag Present:	(Yes) No	Water in Vault:	Yes No		

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H_2O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, Issues with pump/well/weather/etc.)
1035	19.19	689.36	0.92	7.03	-53.20	1.22	250	1.25	4.17	
1040	19.14	686.30	0.31	7.07	-64.70	2.18	250	1.25	4.18	
1045	19.19	689.55	0.15	7.06	-74.60	3.07	250	1.25	4.18	
1050	19.10	689.50	0.12	7.08	-81.30	2.55	250	1.25	4.18	
1055	19.13	690.52	0.11	7.08	-84.60	2.31	250	1.25	4.18	
Stabilizing Criteria[4, 5]		+/- 5%	0.2 mg/L or 10% whichever is greater [9]	+/- 0.1 unit		<5 NTUs	>100 mL < 250 mL	>3L	<0.33 ft	

All Parameters Stable
68°F Cloudy/Overcast, Light Breeze
Total Depth Not Measured
[illegible]

(1) - Maximum purge rate of 250 mL/min
(2) - Sample rate to be between 100 mL/min and 250 mL/min
(3) - Collect sample from pump discharge without tubing contacting sample container
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft.
(7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed
(8) - Preserve all samples as appropriate immediately following collection
(9) - DO 0.2 mg/L or 10% whichever is greater (no criteria apply if DO < 0.5 mg/L)

Purge Log QA/QC'd By:
Date:

Purge Log QA/QC'd By:
Date:

Product Name: Low-Flow System

Date: 2017-05-23 12:39:02

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	Teflon
Project Name	GPC - Plant Hammond	Tubing Diameter	.375 in
Site Name	AP 1&2	Tubing Length	20 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	19.7 ft

Well Information:		Pumping Information:	
Well ID	HGWC-8	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.9193729 L
Well Total Depth	24.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	3.16 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:55:11	300.11	19.25	7.04	1078.51	0.67	3.18	0.46	-77.79
Last 5	12:00:11	600.03	19.17	6.95	1083.82	0.53	3.18	0.13	-83.79
Last 5	12:05:11	900.03	19.10	6.91	1082.80	0.33	3.18	0.11	-86.12
Last 5	12:10:11	1200.03	19.05	6.89	1081.72	0.28	3.18	0.10	-87.76
Last 5	12:20:12	1801.03	19.00	6.87	1086.14	0.26	3.18	0.09	-89.54
Variance 0			-0.07	-0.04	-1.02			-0.02	-2.33
Variance 1			-0.05	-0.02	-1.08			-0.01	-1.64
Variance 2			-0.04	-0.02	4.43			-0.01	-1.78

Notes

1150 start purge at 250mL/min; 1215 SmarTroll did not log parameters; 1220 all parameters stable; 1225 sampled at 250mL/min. 69F Mostly

Grab Samples

HGWC-8

Sampled at 1225

FB-1

Sampled at 1240

Product Name: Low-Flow System

Date: 2017-05-23 13:55:37

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	Teflon
Project Name	GPC - Plant Hammond	Tubing Diameter	.375 in
Site Name	AP 1&2	Tubing Length	43 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	41.6 ft

Well Information:		Pumping Information:	
Well ID	HGWC-9	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	1.418902 L
Well Total Depth	46.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	13.6 ft	Total Volume Pumped	6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:30:39	300.10	19.64	7.29	1208.05	0.25	13.08	1.57	-79.53
Last 5	13:35:39	600.03	19.32	7.14	1216.18	0.23	13.08	0.49	-85.34
Last 5	13:40:39	900.03	19.32	7.09	1217.28	0.60	13.08	0.22	-88.21
Last 5	13:45:39	1200.03	19.23	7.06	1217.02	0.59	13.08	0.16	-91.22
Last 5	13:50:39	1500.02	19.27	7.05	1216.29	0.59	13.08	0.14	-91.63
Variance 0			0.00	-0.05	1.11			-0.27	-2.87
Variance 1			-0.09	-0.03	-0.26			-0.06	-3.02
Variance 2			0.04	-0.01	-0.73			-0.02	-0.41

Notes

1335 start purge at 250mL/min; 1350 all parameters stable; 1355 sampled at 250mL/min. 72F Partly Cloudy, light breeze

Grab Samples

HGWC-9

Sampled at 1355

2nd Rad

Sampled at 1355

Product Name: Low-Flow System

Date: 2017-05-24 10:02:52

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.17 in
Site Name	AP 1&2	Tubing Length	20 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	17.6 ft

Well Information:		Pumping Information:	
Well ID	HGWC-10	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.1792685 L
Well Total Depth	22.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2 in
Depth to Water	12.36 ft	Total Volume Pumped	18.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:30:07	1200.04	18.30	6.67	980.29	0.25	13.45	0.39	16.63
Last 5	09:35:07	1500.04	18.31	6.67	983.64	0.42	13.45	0.15	8.16
Last 5	09:40:07	1800.04	18.35	6.66	979.06	0.35	13.45	0.15	1.41
Last 5	09:45:07	2100.04	18.38	6.67	978.06	0.36	13.45	0.14	-4.08
Last 5	09:50:07	2400.03	18.57	6.67	994.89	0.28	13.38	0.12	-8.44
Variance 0			0.04	-0.00	-4.59			-0.00	-6.74
Variance 1			0.03	0.00	-1.00			-0.00	-5.49
Variance 2			0.19	-0.00	16.83			-0.02	-4.37

Notes

0910 start purge at 500mL/min; 0945 reduce purge rate to 250mL/min; 0950 3 well volumes purged, all parameters stable; 0955 sampled at 250mL/min. 67F Overcast, light drizzle

Grab Samples

HGWC-10

Sampled at 0955

Product Name: Low-Flow System

Date: 2017-05-24 11:28:21

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Alexis Peristaltic
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC - Plant Hammond	Tubing Diameter	.17 in
Site Name	AP 1&2	Tubing Length	24 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	21 ft

Well Information:		Pumping Information:	
Well ID	HGWC-11	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.1971222 L
Well Total Depth	25.99 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3 in
Depth to Water	13.53 ft	Total Volume Pumped	6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:00:15	300.10	18.90	6.53	806.84	5.16	13.71	0.63	3.74
Last 5	11:05:15	600.03	19.36	6.53	803.81	2.31	13.70	0.39	-4.79
Last 5	11:10:15	900.03	19.00	6.54	800.19	2.12	13.68	0.35	-11.74
Last 5	11:15:15	1200.04	18.92	6.53	800.45	1.42	13.66	0.35	-16.36
Last 5	11:20:15	1500.04	18.74	6.51	799.38	2.68	13.67	0.40	-19.15
Variance 0			-0.36	0.01	-3.62			-0.04	-6.95
Variance 1			-0.08	-0.02	0.27			0.00	-4.62
Variance 2			-0.18	-0.01	-1.07			0.05	-2.79

Notes

1100 start purge at 250mL/min; 1120 all parameters stable; 1125 sampled at 250mL/min. 63F Mostly Cloudy, light rain

Grab Samples

HGWC-11

Sampled at 1125

Product Name: Low-Flow System

Date: 2017-05-24 12:42:19

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	Teflon
Project Name	GPC - Plant Hammond	Tubing Diameter	.375 in
Site Name	AP 1&2	Tubing Length	30 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	30.1 ft

Well Information:		Pumping Information:	
Well ID	HGWC-12	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	1.136559 L
Well Total Depth	35.1 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	13.53 ft	Total Volume Pumped	6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:10:22	300.09	19.10	6.99	1084.19	0.36	13.54	1.42	-13.71
Last 5	12:15:22	600.03	19.41	7.07	1074.59	0.26	13.54	0.74	-24.30
Last 5	12:20:22	900.03	19.56	7.09	1070.30	0.20	13.54	0.40	-31.32
Last 5	12:25:22	1200.03	19.59	7.10	1069.90	0.26	13.54	0.34	-34.42
Last 5	12:30:22	1500.03	19.63	7.11	1071.61	0.26	13.54	0.30	-36.41
Variance 0			0.15	0.02	-4.28			-0.34	-7.03
Variance 1			0.02	0.01	-0.40			-0.06	-3.10
Variance 2			0.05	0.01	1.71			-0.04	-1.99

Notes

1205 start purge at 250mL/min; 1220 all parameters stable; 1235 sampled at 250mL/min. 64F Mostly Cloudy

Grab Samples

HGWC-12

Sampled at 1235

Product Name: Low-Flow System

Date: 2017-05-24 11:28:42

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Dedicated bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Plant Hammond	Tubing Diameter	.17 in
Site Name	AP 1&2	Tubing Length	49 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	39 ft

Well Information:		Pumping Information:	
Well ID	HGWC-13	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.3087077 L
Well Total Depth	44.6 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.84 in
Depth to Water	17.21 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:07:21	1500.76	19.41	7.14	556.31	7.00	17.28	0.19	-12.35
Last 5	11:12:21	1800.77	19.40	7.14	561.32	5.13	17.28	0.19	-15.71
Last 5	11:17:21	2100.77	19.36	7.15	559.26	4.88	17.28	0.17	-18.59
Last 5	11:22:21	2400.76	19.33	7.15	563.17	3.40	17.28	0.17	-21.16
Last 5	11:27:21	2700.76	19.28	7.15	563.71	3.53	17.28	0.17	-22.81
Variance 0			-0.04	0.00	-2.06			-0.02	-2.88
Variance 1			-0.03	0.00	3.91			0.00	-2.58
Variance 2			-0.05	0.00	0.54			0.00	-1.64

Notes

Parameters stable. Weather: raining hard.

Grab Samples

HGWC-13

Sampling at 11:30

Product Name: Low-Flow System

Date: 2017-05-24 14:58:30

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	Teflon
Project Name	GPC - Plant Hammond	Tubing Diameter	.375 in
Site Name	AP 1&2	Tubing Length	38 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	38 ft

Well Information:		Pumping Information:	
Well ID	HGWC-14	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	1.310309 L
Well Total Depth	43.0 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1 in
Depth to Water	23.23 ft	Total Volume Pumped	6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:25:04	300.10	21.66	5.62	3429.16	0.28	23.31	2.42	45.30
Last 5	14:30:04	600.03	21.19	4.68	3421.77	1.96	23.31	0.57	79.09
Last 5	14:35:04	900.03	21.10	4.60	3413.80	0.94	23.31	0.28	81.26
Last 5	14:40:04	1200.03	21.10	4.60	3415.24	0.54	23.31	0.23	76.85
Last 5	14:45:04	1500.03	21.04	4.61	3413.98	0.97	23.31	0.20	70.31
Variance 0			-0.09	-0.08	-7.97			-0.29	2.17
Variance 1			-0.00	-0.00	1.43			-0.05	-4.41
Variance 2			-0.06	0.00	-1.26			-0.03	-6.55

Notes

1425 start purge at 250mL/min; 1445 all parameters stable; 1450 sampled at 250mL/min. 68F Partly Cloudy

Grab Samples

HGWC-14

Sampled at 1450

Product Name: Low-Flow System

Date: 2017-05-24 12:59:54

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Dedicated bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Plant Hammond	Tubing Diameter	.17 in
Site Name	AP 1&2	Tubing Length	43.00 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	33.00 ft

Well Information:		Pumping Information:	
Well ID	HGWC-15	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2819272 L
Well Total Depth	38.00 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	9.72 in
Depth to Water	15.64 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:37:58	600.02	18.97	6.20	1614.62	0.35	16.40	2.64	56.83
Last 5	12:42:58	900.02	18.72	6.19	1599.14	0.22	16.45	2.16	99.80
Last 5	12:47:58	1200.02	18.74	6.11	1473.87	0.18	16.45	1.48	99.24
Last 5	12:52:58	1500.02	18.74	6.06	1463.31	0.06	16.45	1.06	84.88
Last 5	12:57:59	1800.83	18.96	6.01	1474.15	0.20	16.45	0.85	73.92
Variance 0			0.03	-0.07	-125.27			-0.68	-0.56
Variance 1			-0.00	-0.05	-10.56			-0.42	-14.36
Variance 2			0.22	-0.05	10.84			-0.21	-10.95

Notes

Parameters stable. Weather: 13:02

Grab Samples

HGWC-15

Sampling at 13:02

Product Name: Low-Flow System

Date: 2017-05-24 14:39:07

Project Information:		Pump Information:	
Operator Name	Myles Rogers	Pump Model/Type	Dedicated bladder
Company Name	ERM	Tubing Type	LDPE
Project Name	GPC-Plant Hammond	Tubing Diameter	.17 in
Site Name	AP 1&2	Tubing Length	38 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	513028		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	27 ft

Well Information:		Pumping Information:	
Well ID	HGWC-16	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.2596101 L
Well Total Depth	33 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	13.2 in
Depth to Water	11.07 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:16:06	3001.02	18.70	7.10	848.01	11.52	12.69	0.22	-61.81
Last 5	14:21:07	3301.78	18.75	7.11	841.04	13.98	12.51	0.20	-63.02
Last 5	14:26:47	3641.78	18.78	7.11	832.16	6.57	12.46	0.23	-64.41
Last 5	14:31:47	3941.78	19.23	7.09	856.26	4.64	12.31	0.07	-64.33
Last 5	14:36:47	4241.83	19.07	7.11	831.63	3.34	12.16	0.30	-64.86
Variance 0			0.03	0.00	-8.88			0.03	-1.40
Variance 1			0.45	-0.02	24.11			-0.15	0.09
Variance 2			-0.16	0.02	-24.64			0.23	-0.54

Notes

Parameters stable. Orange organic material raised turbidity so I increased purge rate to .5L/min at 14:06 and decreased back to .2L/min at 14:26.
Weather: raining off and on

Grab Samples

HGWC-16

Sampling at 14:40

Product Name: Low-Flow System

Date: 2017-05-25 09:40:32

Project Information:		Pump Information:	
Operator Name	Markevious Thomas	Pump Model/Type	Dedicated Bladder
Company Name	ERM	Tubing Type	Teflon
Project Name	GPC - Plant Hammond	Tubing Diameter	.375 in
Site Name	AP 1&2	Tubing Length	23 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	365491		
Turbidity Make/Model	LaMotte 2020we	Pump placement from TOC	22.8 ft

Well Information:		Pumping Information:	
Well ID	HGWC-17	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.9845288 L
Well Total Depth	27.8 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3 in
Depth to Water	16.6 ft	Total Volume Pumped	2.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:10:04	300.19	18.74	6.38	1408.39	0.52	16.78	1.00	1.92
Last 5	09:15:03	600.06	18.82	6.31	1414.13	0.66	16.78	0.55	-9.03
Last 5	09:20:03	900.03	18.76	6.28	1420.26	0.38	16.79	0.38	-15.59
Last 5	09:25:03	1200.03	18.74	6.27	1416.74	0.45	16.79	0.31	-20.19
Last 5	09:30:03	1500.03	18.54	6.27	1418.43	0.44	16.79	0.28	-24.41
Variance 0			-0.06	-0.02	6.13			-0.17	-6.57
Variance 1			-0.02	-0.01	-3.52			-0.07	-4.59
Variance 2			-0.20	-0.00	1.69			-0.03	-4.23

Notes

0905 start purge at 100mL/min; 0930 all parameters stable; 0935 sampled at 100mL/min. 70F Mostly Cloudy, light wind

Grab Samples

HGWC-17

Sampled at 0935

GROUNDWATER SAMPLING LOG SHEET

ERM

Client: GPC
Site: Plant Hammond , Coosa GA
Well ID: HGWC-18
Total Depth (ft)[1]: 27.7
Depth to Water (ft): 17.12
Well Diameter (in): 2
Well Volume (gal) = 0.041d²h: 1.74
Well Volume (L) = gal * 3.785: 6.6
d = well diameter (inches) h = length of water column (feet) 13.2 min volumes

Project No.: 0372394
Location: AP 1&2 AP 3&4 Huffaker LF (circle or
Pump Type/Model: Dedicated Bladder
Tubing Material: LDPE
Pump Intake Depth (ft): ~22
Start/Stop Purge Time: 841
Purge Rate (mL/min)[2]: 200
Total Purge Volume (L):
Purge Method: Low-Flow Well Volume Other:
Sampling Method: Pump Discharge Other:

Sampling Date: 5-25-17
Sampler's Name: MR
Sample Collection Time: 9:40
Sample Purge Rate (mL/min)[3]: .266
Sample ID: HGWC-18
Laboratory Analyses: Metals App. III & IV (EPA 6020/7470), Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C), Radium 226 & 228 (SW-846 9315/9320)

QA/QC Collected? Yes
QA/QC I.D. Extra RAD Bottle

Well Type: Flush Stick Up
Well Lock: Yes No
Well Bolted: Yes No Bolts Needed: No
Well Cap Condition: Good Replace Other —
Well Tag Present: Yes No Water in Vault: Yes No

All sample containers requiring chemical preservation properly preserved prior to demob from well? Yes No

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H_2O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
854	17.72	2159	0.36	4.60	295.7	3.56	500	6.6	17.56	1st WV
907	17.76	2206.3	0.32	4.64	307.8	2.13	↓	13.2	17.61	2nd WV
920	17.03	2172.6	0.44	4.68	321.7	2.06		19.8	17.60	3rd WV Dec PR to .2L/m
926	17.87	2165.9	0.44	4.70	309.1	0.78	200	20.8	17.42	
931	17.83	2062.5	0.45	4.68	324.0	0.72		21.8	17.43	
936	17.02	2105.7	0.43	4.69	325.3	0.49		22.8	17.43	
										Parameters Stable
										Sampling at 9:40
Stabilizing Criteria[4, 5]		+/- 5%	0.2 mg/L or 10% whichever is greater [9]	+/- 0.1 unit		<5 NTUs	>100 mL < 250 mL	>3L	<0.33 ft	

(1) - Maximum purge rate of 250 mL/min
(2) - Sample rate to be between 100 mL/min and 250 mL/min
(3) - Collect sample from pump discharge without tubing contacting sample container
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft.
(7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed
(8) - Preserve all samples as appropriate immediately following collection
(9) - DO 0.2 mg/L or 10% whichever is greater (no criteria apply if DO < 0.5 mg/L)

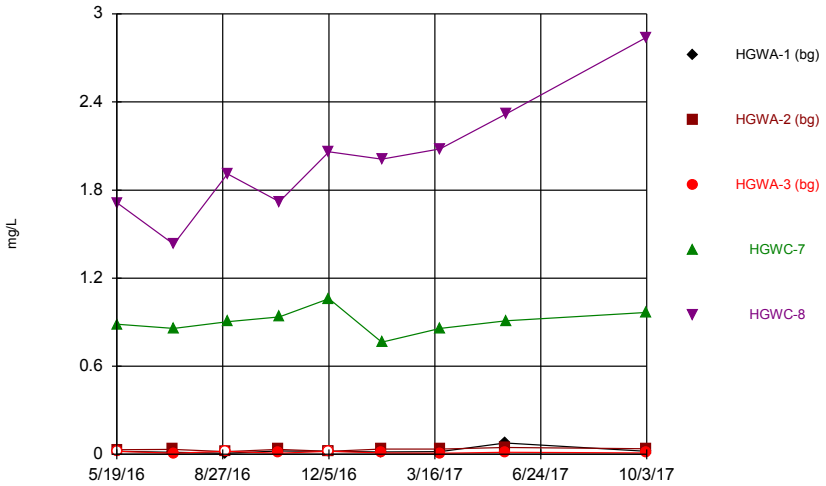
Purge Log QA/QC'd By:
Date:

Purge Log QA/QC'd By:
Date:

Appendix B
Statistical Analyses

Hollow symbols indicate censored values.

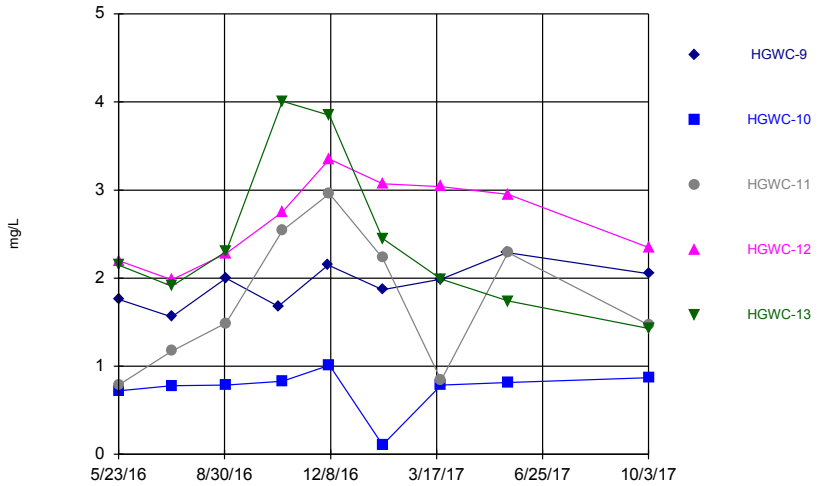
Time Series



Constituent: Boron Analysis Run 1/25/2018 6:21 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG

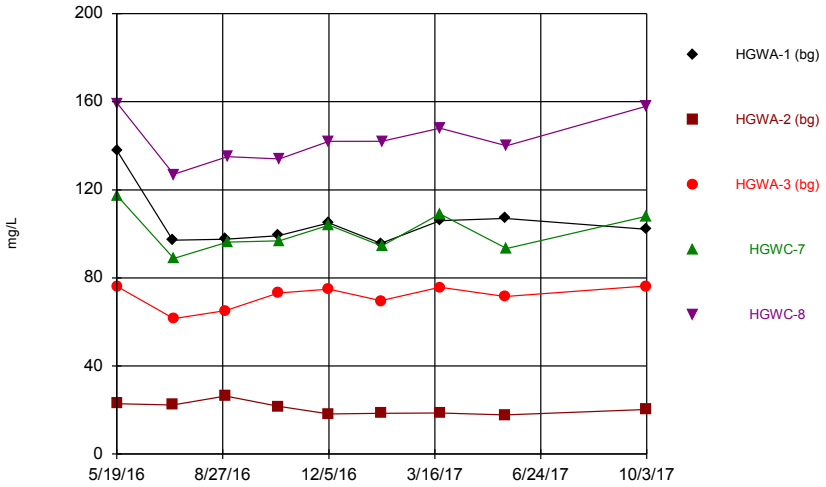
Time Series



Constituent: Boron Analysis Run 1/25/2018 6:21 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG

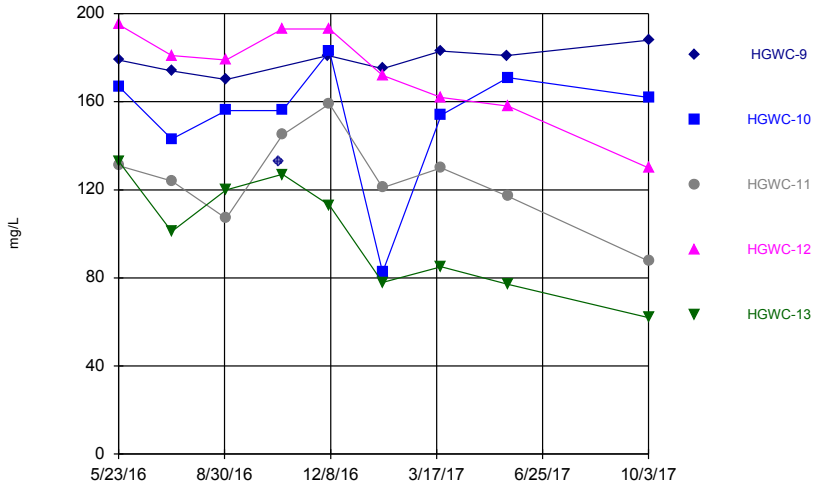
Time Series



Constituent: Calcium Analysis Run 1/25/2018 6:21 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

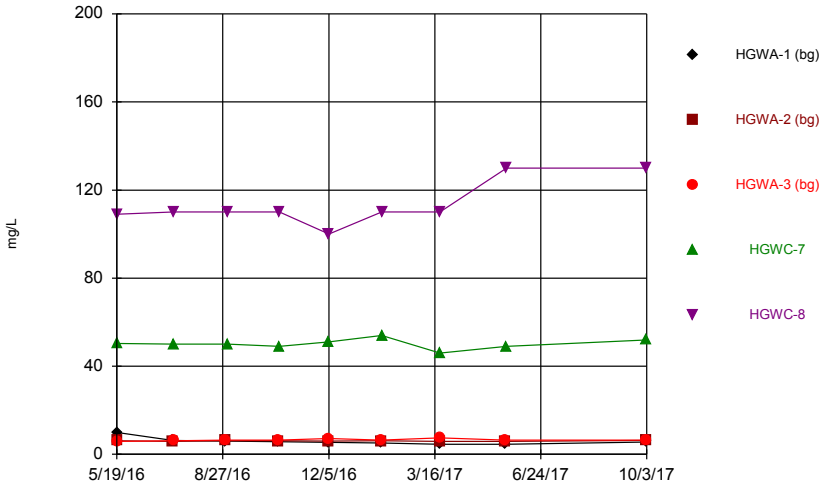
Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG

Time Series



Constituent: Calcium Analysis Run 1/25/2018 6:21 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

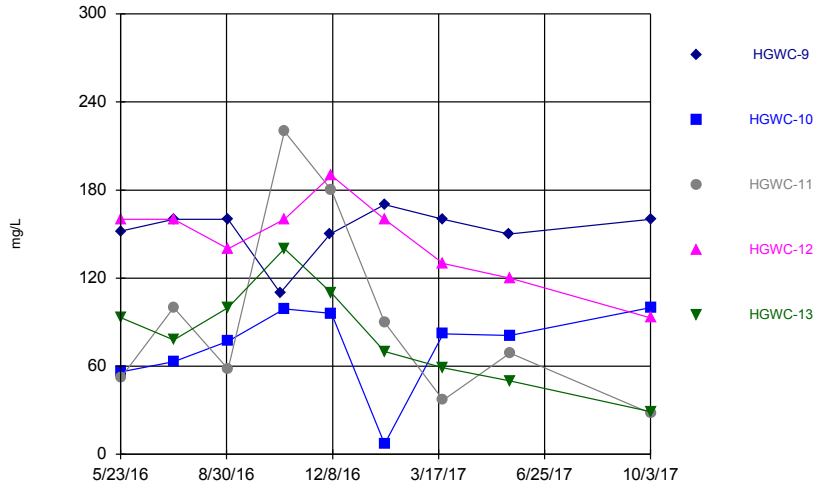
Time Series



Constituent: Chloride Analysis Run 1/25/2018 6:21 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG

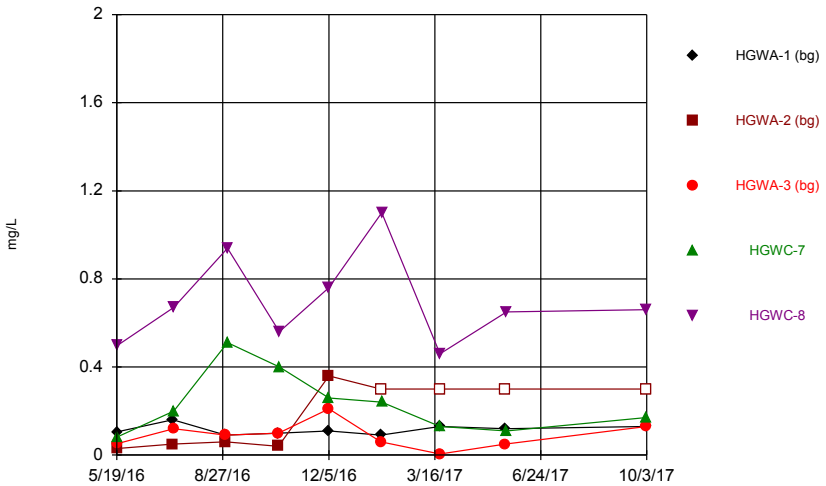
Time Series



Constituent: Chloride Analysis Run 1/25/2018 6:21 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG
Hollow symbols indicate censored values.

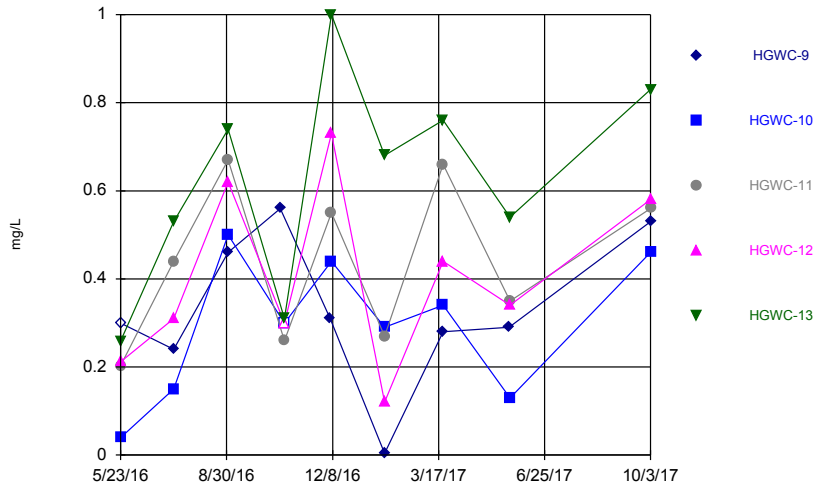
Time Series



Constituent: Fluoride Analysis Run 1/25/2018 6:21 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

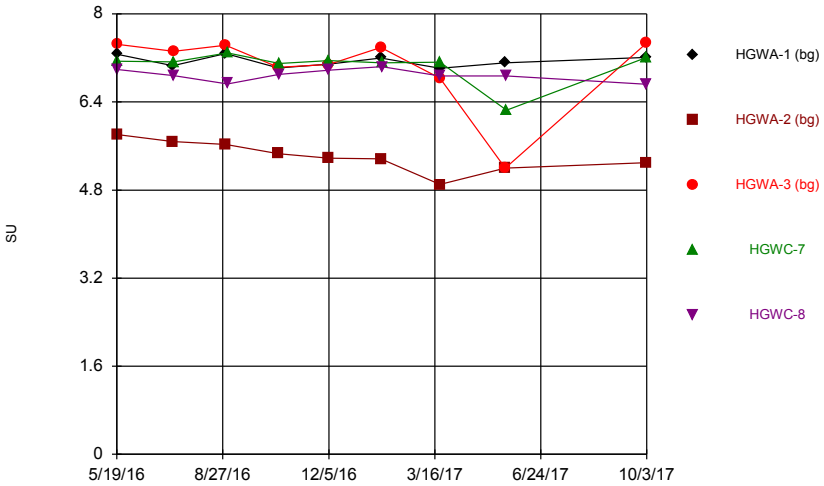
Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Fluoride Analysis Run 1/25/2018 6:21 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

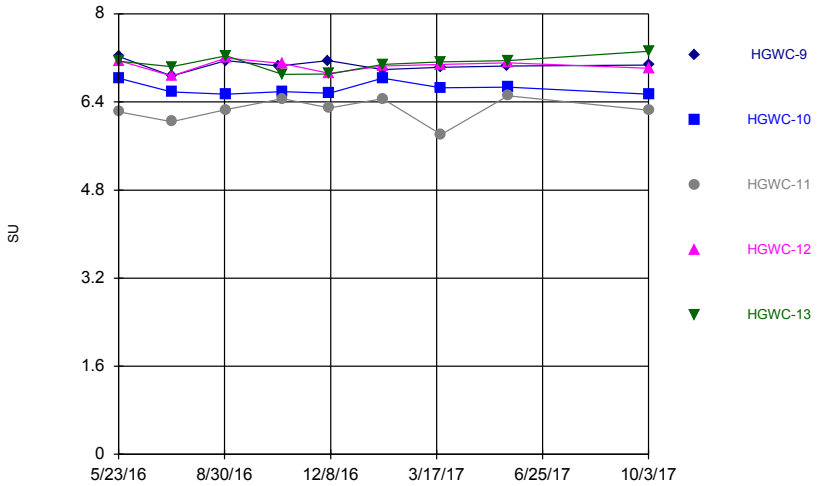
Time Series



Constituent: pH Analysis Run 1/25/2018 6:21 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG

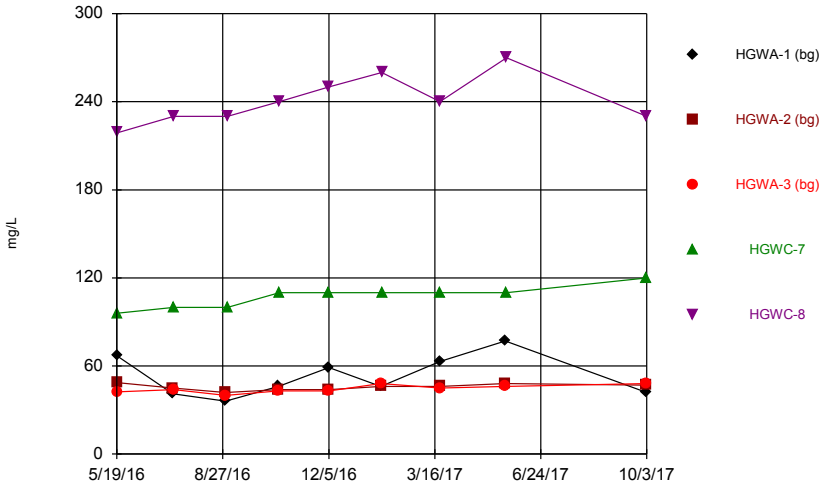
Time Series



Constituent: pH Analysis Run 1/25/2018 6:21 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG

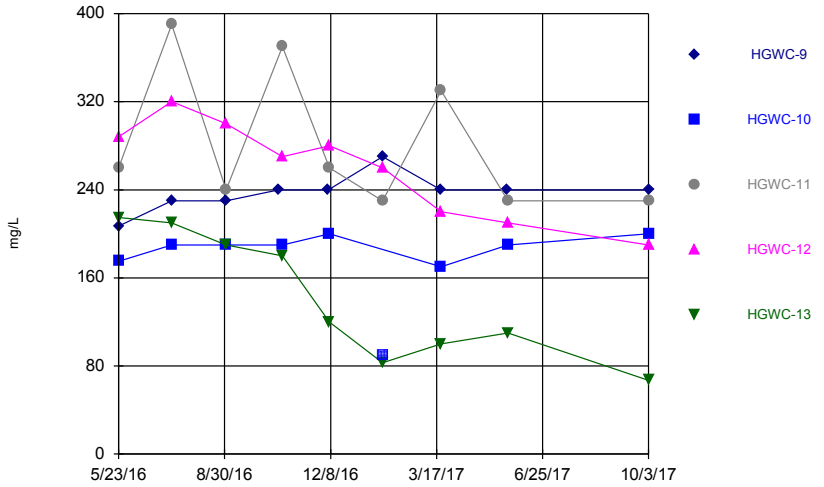
Time Series



Constituent: Sulfate Analysis Run 1/25/2018 6:21 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

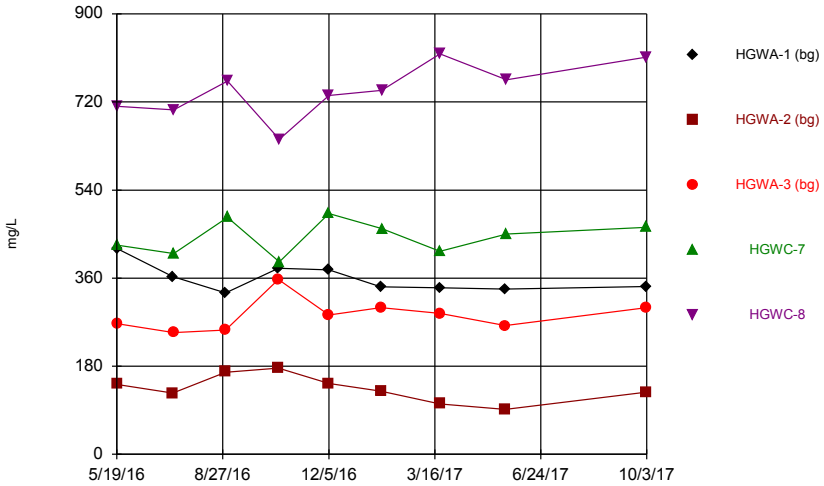
Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG

Time Series



Constituent: Sulfate Analysis Run 1/25/2018 6:21 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

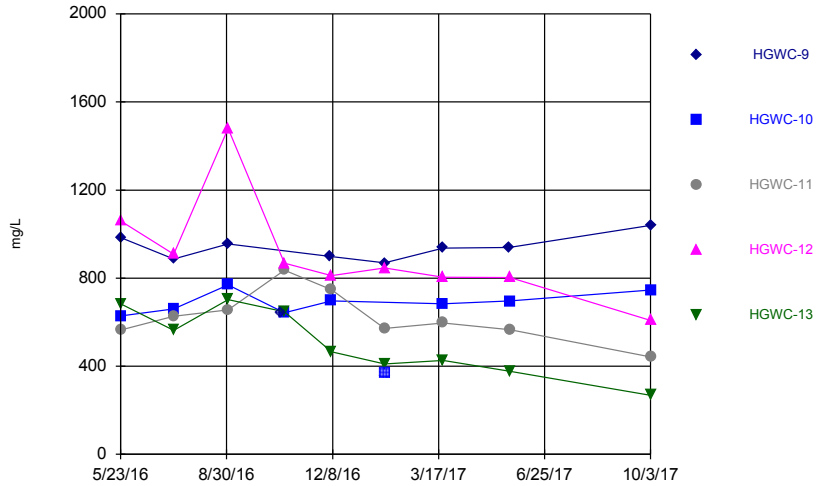
Time Series



Constituent: Total Dissolved Solids Analysis Run 1/25/2018 6:21 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG

Time Series



Constituent: Total Dissolved Solids Analysis Run 1/25/2018 6:21 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

Prediction Limit

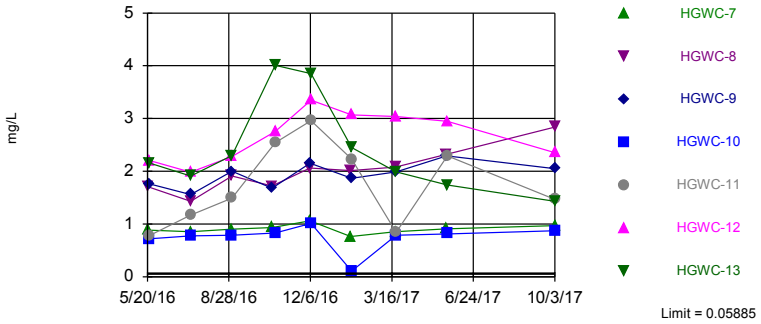
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125 Printed 1/25/2018, 6:23 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	**HGWC-7**	**0.05885**	**n/a**	**10/3/2017**	**0.967**	**Yes**	**27**	**18.52**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-8**	**0.05885**	**n/a**	**10/3/2017**	**2.84**	**Yes**	**27**	**18.52**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-9**	**0.05885**	**n/a**	**10/3/2017**	**2.05**	**Yes**	**27**	**18.52**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-10**	**0.05885**	**n/a**	**10/3/2017**	**0.871**	**Yes**	**27**	**18.52**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-11**	**0.05885**	**n/a**	**10/3/2017**	**1.47**	**Yes**	**27**	**18.52**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-12**	**0.05885**	**n/a**	**10/3/2017**	**2.35**	**Yes**	**27**	**18.52**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Boron (mg/L)	**HGWC-13**	**0.05885**	**n/a**	**10/3/2017**	**1.43**	**Yes**	**27**	**18.52**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Calcium (mg/L)	HGWC-7	138	n/a	10/3/2017	108	No	27	0	n/a	0.002353	NP Inter (normality) ...
Calcium (mg/L)	**HGWC-8**	**138**	**n/a**	**10/3/2017**	**158**	**Yes**	**27**	**0**	**n/a**	**0.002353**	**NP Inter (normality) ...**
Calcium (mg/L)	**HGWC-9**	**138**	**n/a**	**10/3/2017**	**188**	**Yes**	**27**	**0**	**n/a**	**0.002353**	**NP Inter (normality) ...**
Calcium (mg/L)	**HGWC-10**	**138**	**n/a**	**10/3/2017**	**162**	**Yes**	**27**	**0**	**n/a**	**0.002353**	**NP Inter (normality) ...**
Calcium (mg/L)	HGWC-11	138	n/a	10/3/2017	87.7	No	27	0	n/a	0.002353	NP Inter (normality) ...
Calcium (mg/L)	HGWC-12	138	n/a	10/3/2017	130	No	27	0	n/a	0.002353	NP Inter (normality) ...
Calcium (mg/L)	HGWC-13	138	n/a	10/3/2017	62	No	27	0	n/a	0.002353	NP Inter (normality) ...
Chloride (mg/L)	**HGWC-7**	**9.94**	**n/a**	**10/3/2017**	**52**	**Yes**	**27**	**0**	**n/a**	**0.002353**	**NP Inter (normality) ...**
Chloride (mg/L)	**HGWC-8**	**9.94**	**n/a**	**10/3/2017**	**130**	**Yes**	**27**	**0**	**n/a**	**0.002353**	**NP Inter (normality) ...**
Chloride (mg/L)	**HGWC-9**	**9.94**	**n/a**	**10/3/2017**	**160**	**Yes**	**27**	**0**	**n/a**	**0.002353**	**NP Inter (normality) ...**
Chloride (mg/L)	**HGWC-10**	**9.94**	**n/a**	**10/3/2017**	**100**	**Yes**	**27**	**0**	**n/a**	**0.002353**	**NP Inter (normality) ...**
Chloride (mg/L)	**HGWC-11**	**9.94**	**n/a**	**10/3/2017**	**28**	**Yes**	**27**	**0**	**n/a**	**0.002353**	**NP Inter (normality) ...**
Chloride (mg/L)	**HGWC-12**	**9.94**	**n/a**	**10/3/2017**	**93**	**Yes**	**27**	**0**	**n/a**	**0.002353**	**NP Inter (normality) ...**
Chloride (mg/L)	**HGWC-13**	**9.94**	**n/a**	**10/3/2017**	**29**	**Yes**	**27**	**0**	**n/a**	**0.002353**	**NP Inter (normality) ...**
pH (SU)	HGWC-7	7.47	4.9	10/3/2017	7.21	No	27	0	n/a	0.004706	NP Inter (normality) ...
pH (SU)	HGWC-8	7.47	4.9	10/3/2017	6.72	No	27	0	n/a	0.004706	NP Inter (normality) ...
pH (SU)	HGWC-9	7.47	4.9	10/3/2017	7.07	No	27	0	n/a	0.004706	NP Inter (normality) ...
pH (SU)	HGWC-10	7.47	4.9	10/3/2017	6.54	No	27	0	n/a	0.004706	NP Inter (normality) ...
pH (SU)	HGWC-11	7.47	4.9	10/3/2017	6.25	No	27	0	n/a	0.004706	NP Inter (normality) ...
pH (SU)	HGWC-12	7.47	4.9	10/3/2017	7.01	No	27	0	n/a	0.004706	NP Inter (normality) ...
pH (SU)	HGWC-13	7.47	4.9	10/3/2017	7.32	No	27	0	n/a	0.004706	NP Inter (normality) ...
Sulfate (mg/L)	**HGWC-7**	**77**	**n/a**	**10/3/2017**	**120**	**Yes**	**27**	**0**	**n/a**	**0.002353**	**NP Inter (normality) ...**
Sulfate (mg/L)	**HGWC-8**	**77**	**n/a**	**10/3/2017**	**230**	**Yes**	**27**	**0**	**n/a**	**0.002353**	**NP Inter (normality) ...**
Sulfate (mg/L)	**HGWC-9**	**77**	**n/a**	**10/3/2017**	**240**	**Yes**	**27**	**0**	**n/a**	**0.002353**	**NP Inter (normality) ...**
Sulfate (mg/L)	**HGWC-10**	**77**	**n/a**	**10/3/2017**	**200**	**Yes**	**27**	**0**	**n/a**	**0.002353**	**NP Inter (normality) ...**
Sulfate (mg/L)	**HGWC-11**	**77**	**n/a**	**10/3/2017**	**230**	**Yes**	**27**	**0**	**n/a**	**0.002353**	**NP Inter (normality) ...**
Sulfate (mg/L)	**HGWC-12**	**77**	**n/a**	**10/3/2017**	**190**	**Yes**	**27**	**0**	**n/a**	**0.002353**	**NP Inter (normality) ...**
Sulfate (mg/L)	HGWC-13	77	n/a	10/3/2017	67	No	27	0	n/a	0.002353	NP Inter (normality) ...
Total Dissolved Solids (mg/L)	HGWC-7	464.4	n/a	10/3/2017	464	No	27	0	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**HGWC-8**	**464.4**	**n/a**	**10/3/2017**	**812**	**Yes**	**27**	**0**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-9**	**464.4**	**n/a**	**10/3/2017**	**1040**	**Yes**	**27**	**0**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-10**	**464.4**	**n/a**	**10/3/2017**	**746**	**Yes**	**27**	**0**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-11	464.4	n/a	10/3/2017	443	No	27	0	No	0.001075	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**HGWC-12**	**464.4**	**n/a**	**10/3/2017**	**608**	**Yes**	**27**	**0**	**No**	**0.001075**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	HGWC-13	464.4	n/a	10/3/2017	268	No	27	0	No	0.001075	Param Inter 1 of 2

Exceeds Limit: HGWC-7, HGWC-8, HGWC-9. HGWC-10. HGWC-11. HGWC-12...

Prediction Limit

Interwell Parametric



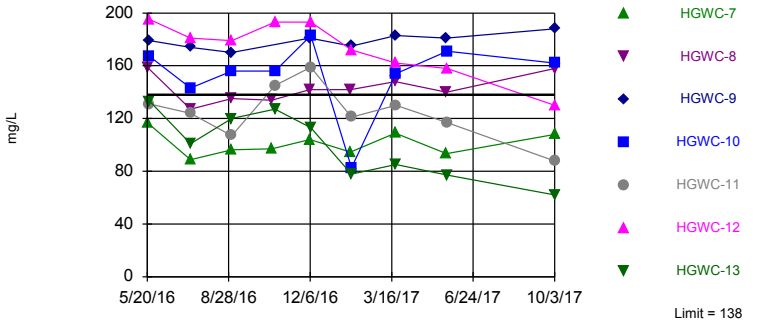
Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.1421, Std. Dev.=0.04886, n=27, 18.52% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9255, critical = 0.894. Kappa = 2.057 (c=7, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001075. Comparing 7 points to limit.

Constituent: Boron Analysis Run 1/25/2018 6:22 PM View: 2A. Interwell UPL - Group A
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

Exceeds Limit: HGWC-8, HGWC-9, HGWC-10

Prediction Limit

Interwell Non-parametric



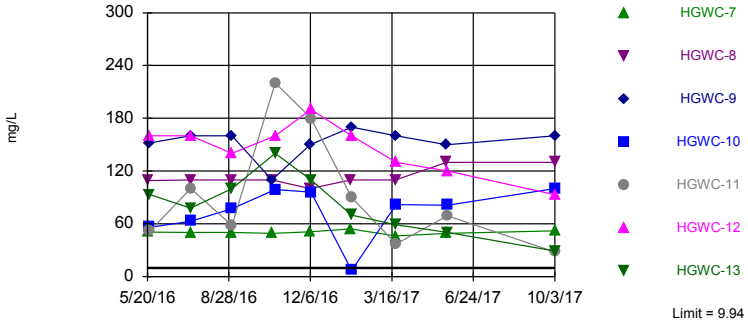
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 27 background values. Annual per-constituent alpha = 0.03244. Individual comparison alpha = 0.002353 (1 of 2). Comparing 7 points to limit.

Constituent: Calcium Analysis Run 1/25/2018 6:22 PM View: 2A. Interwell UPL - Group A
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

Exceeds Limit: HGWC-7, HGWC-8, HGWC-9. HGWC-10. HGWC-11. HGWC-12...

Prediction Limit

Interwell Non-parametric



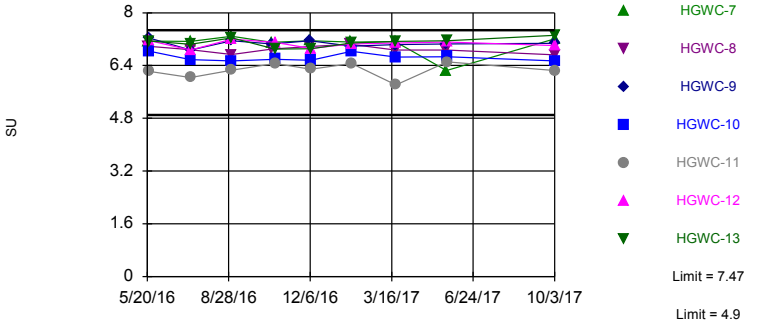
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 27 background values. Annual per-constituent alpha = 0.03244. Individual comparison alpha = 0.002353 (1 of 2). Comparing 7 points to limit.

Constituent: Chloride Analysis Run 1/25/2018 6:22 PM View: 2A. Interwell UPL - Group A
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

Within Limits

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 27 background values. Annual per-constituent alpha = 0.06489. Individual comparison alpha = 0.004706 (1 of 2). Comparing 7 points to limit.

Constituent: pH Analysis Run 1/25/2018 6:22 PM View: 2A. Interwell UPL - Group A
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/25/2018 6:23 PM View: 2A. Interwell UPL - Group A

Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-1 (bg)	HGWC-7	HGWC-8	HGWC-9	HGWC-10	HGWC-11	HGWC-13
5/19/2016	0.0321 (J)	<0.0211	0.0214 (J)						
5/20/2016				0.885	1.71				
5/23/2016						1.76	0.72	0.787	2.15
7/11/2016	0.0337 (J)		0.0142 (J)						
7/12/2016		0.0074 (J)		0.857	1.43	1.56	0.778	1.17	1.91
8/30/2016	0.0173 (J)	<0.0211	0.0074 (J)						
9/1/2016				0.904	1.91	2	0.786	1.49	2.3
10/19/2016	0.0341 (J)	0.0085 (J)	0.0224 (J)						
10/20/2016				0.936	1.72	1.68			
10/24/2016							0.831	2.54	4.01
12/6/2016	<0.0211 (*)	<0.0211 (*)	<0.0211 (*)	1.06	2.06	2.15			
12/7/2016							1.01	2.96	3.85
1/24/2017	0.0365 (J)	0.01 (J)	0.0165 (J)						
1/25/2017				0.764	2.01				
1/26/2017						1.87	0.108	2.23	2.45
3/21/2017	0.0349 (J)	0.0079 (J)	0.0187 (J)	0.857	2.08				
3/22/2017						1.99	0.788	0.84	1.99
5/22/2017	0.0475	0.0131 (J)	0.0782						
5/23/2017				0.91	2.32	2.29			
5/24/2017							0.814	2.29	1.74
10/3/2017	0.0386 (J)	0.0097 (J)	0.0198 (J)	0.967	2.84	2.05	0.871	1.47	1.43

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/25/2018 6:23 PM View: 2A. Interwell UPL - Group A

Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

	HGWC-12
5/19/2016	
5/20/2016	
5/23/2016	2.2
7/11/2016	
7/12/2016	1.98
8/30/2016	
9/1/2016	2.28
10/19/2016	
10/20/2016	
10/24/2016	2.75
12/6/2016	
12/7/2016	3.35
1/24/2017	
1/25/2017	
1/26/2017	3.07
3/21/2017	
3/22/2017	3.04
5/22/2017	
5/23/2017	
5/24/2017	2.95
10/3/2017	2.35

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/25/2018 6:23 PM View: 2A. Interwell UPL - Group A

Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-1 (bg)	HGWC-7	HGWC-8	HGWC-9	HGWC-10	HGWC-11	HGWC-13
5/19/2016	22.9	76.2	138						
5/20/2016				117	159				
5/23/2016						179	167	131	133
7/11/2016	22.3		97.2						
7/12/2016		61.5		88.8	127	174	143	124	101
8/30/2016	26.4	65.1	97.5						
9/1/2016				96.3	135	170	156	107	120
10/19/2016	21.7	73.2	99.2						
10/20/2016				96.9	134	133 (O)			
10/24/2016							156	145	127
12/6/2016	18.2	74.9	105	104	142	181			
12/7/2016							183	159	113
1/24/2017	18.5	69.6	95.7						
1/25/2017				94.5	142				
1/26/2017						175 (B-01)	82.6 (B-01)	121 (B-01)	77.9 (B-01)
3/21/2017	18.6	75.7	106	109	148				
3/22/2017						183	154	130	85.1
5/22/2017	17.8	71.5	107						
5/23/2017				93.3	140	181			
5/24/2017							171	117	77.1
10/3/2017	20.2	76.3	102	108	158	188	162	87.7	62

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/25/2018 6:23 PM View: 2A. Interwell UPL - Group A

Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

	HGWC-12
5/19/2016	
5/20/2016	
5/23/2016	195
7/11/2016	
7/12/2016	181
8/30/2016	
9/1/2016	179
10/19/2016	
10/20/2016	
10/24/2016	193
12/6/2016	
12/7/2016	193
1/24/2017	
1/25/2017	
1/26/2017	172 (B-01)
3/21/2017	
3/22/2017	162
5/22/2017	
5/23/2017	
5/24/2017	158
10/3/2017	130

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/25/2018 6:23 PM View: 2A. Interwell UPL - Group A

Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-1 (bg)	HGWC-7	HGWC-8	HGWC-9	HGWC-10	HGWC-11	HGWC-13
5/19/2016	6.14	5.93	9.94						
5/20/2016				50.4	109				
5/23/2016						152	56.1	51.9	93.2
7/11/2016	5.9 (B)		6.3 (B-01)						
7/12/2016		6.2 (B)		50 (B)	110 (B)	160 (B)	63 (B)	100 (B)	78 (B)
8/30/2016	6.2	6.4	6						
9/1/2016				50	110	160	77	58	100
10/19/2016	6.1	6.5	5.8						
10/20/2016				49	110	110			
10/24/2016							99	220	140
12/6/2016	6	7.2	5.4	51	100	150			
12/7/2016							96	180	110
1/24/2017	6.1	6.4	5.2						
1/25/2017				54	110				
1/26/2017						170	7	90	70
3/21/2017	5.9	7.5	4.6	46	110				
3/22/2017						160	82	37	59
5/22/2017	5.9	6.5	4.6						
5/23/2017				49	130	150			
5/24/2017							81	69	50
10/3/2017	6.3	6.5	5.6	52	130	160	100	28	29

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/25/2018 6:23 PM View: 2A. Interwell UPL - Group A

Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

	HGWC-12
5/19/2016	
5/20/2016	
5/23/2016	160
7/11/2016	
7/12/2016	160 (B)
8/30/2016	
9/1/2016	140
10/19/2016	
10/20/2016	
10/24/2016	160
12/6/2016	
12/7/2016	190
1/24/2017	
1/25/2017	
1/26/2017	160
3/21/2017	
3/22/2017	130
5/22/2017	
5/23/2017	
5/24/2017	120
10/3/2017	93

Prediction Limit

Constituent: pH (SU) Analysis Run 1/25/2018 6:23 PM View: 2A. Interwell UPL - Group A

Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-1 (bg)	HGWC-7	HGWC-8	HGWC-9	HGWC-10	HGWC-11	HGWC-13
5/19/2016	5.81	7.45	7.27						
5/20/2016				7.14	6.99				
5/23/2016						7.23	6.83	6.22	7.14
7/11/2016	5.68		7.06						
7/12/2016		7.32		7.13	6.88	6.87	6.58	6.04	7.04
8/30/2016	5.63	7.43	7.28						
9/1/2016				7.29	6.73	7.15	6.54	6.26	7.24
10/19/2016	5.46	7.03	7.02						
10/20/2016				7.1	6.9	7.05			
10/24/2016							6.59	6.46	6.9
12/6/2016	5.38	7.08	7.09	7.15	6.98	7.15			
12/7/2016							6.56	6.29	6.91
1/24/2017	5.37	7.39	7.2						
1/25/2017				7.11	7.04				
1/26/2017						6.99	6.83	6.46	7.08
3/21/2017	4.9	6.83	7.01	7.12	6.87				
3/22/2017						7.03	6.66	5.81	7.13
5/22/2017	5.2	5.2	7.11						
5/23/2017				6.25 (L)	6.87	7.05			
5/24/2017							6.67	6.51	7.15
10/3/2017	5.3	7.47	7.21	7.21	6.72	7.07	6.54	6.25	7.32

Prediction Limit

Constituent: pH (SU) Analysis Run 1/25/2018 6:23 PM View: 2A. Interwell UPL - Group A

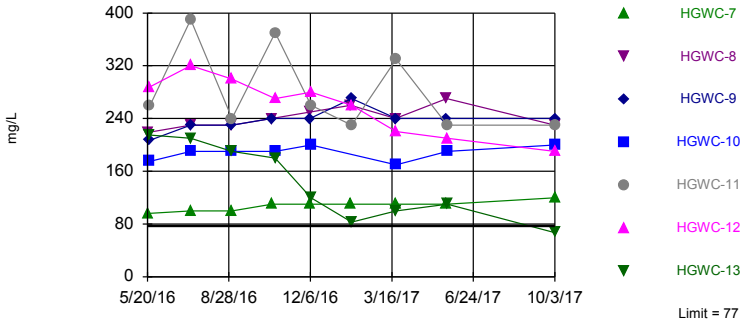
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

	HGWC-12
5/19/2016	
5/20/2016	
5/23/2016	7.15
7/11/2016	
7/12/2016	6.87
8/30/2016	
9/1/2016	7.2
10/19/2016	
10/20/2016	
10/24/2016	7.1
12/6/2016	
12/7/2016	6.92
1/24/2017	
1/25/2017	
1/26/2017	7.05
3/21/2017	
3/22/2017	7.08
5/22/2017	
5/23/2017	
5/24/2017	7.11
10/3/2017	7.01

Exceeds Limit: HGWC-7, HGWC-8, HGWC-9. HGWC-10. HGWC-11. HGWC-12

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 27 background values. Annual per-constituent alpha = 0.03244. Individual comparison alpha = 0.002353 (1 of 2). Comparing 7 points to limit.

Constituent: Sulfate Analysis Run 1/25/2018 6:22 PM View: 2A. Interwell UPL - Group A

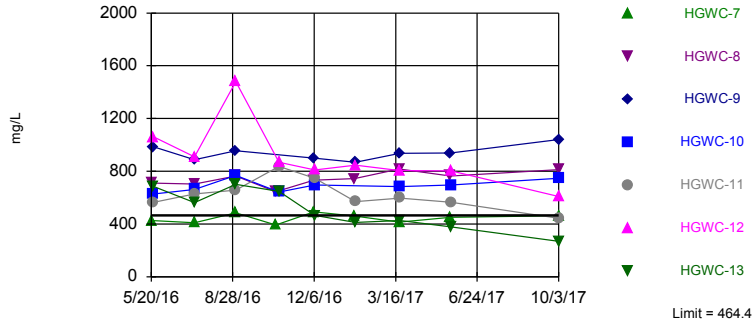
Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG

Exceeds Limit: HGWC-8, HGWC-9, HGWC-10. HGWC-12

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=259.4, Std. Dev.=99.66, n=27. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.916, critical = 0.894. Kappa = 2.057 (c=7, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001075. Comparing 7 points to limit.

Constituent: Total Dissolved Solids Analysis Run 1/25/2018 6:22 PM View: 2A. Interwell UPL - Group A

Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/25/2018 6:23 PM View: 2A. Interwell UPL - Group A

Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-1 (bg)	HGWC-7	HGWC-8	HGWC-9	HGWC-10	HGWC-11	HGWC-13
5/19/2016	48.6	42.3	66.9						
5/20/2016				96	219				
5/23/2016						207	175	260	215
7/11/2016	45		41						
7/12/2016		44		100	230	230	190	390	210
8/30/2016	42	40	36						
9/1/2016				100	230	230	190	240	190
10/19/2016	44	43	46						
10/20/2016				110	240	240			
10/24/2016							190	370	180
12/6/2016	44	43	59	110	250	240			
12/7/2016							200	260	120
1/24/2017	46	48	46						
1/25/2017				110	260				
1/26/2017						270	90 (O)	230	83
3/21/2017	46	45	63	110	240				
3/22/2017						240	170	330	100
5/22/2017	48	46	77						
5/23/2017				110	270	240			
5/24/2017							190	230	110
10/3/2017	47 (B-01)	48 (B-01)	42 (B-01)	120 (B-01)	230 (B-01)	240 (B-01)	200 (B-01)	230 (B-01)	67 (B-01)

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/25/2018 6:23 PM View: 2A. Interwell UPL - Group A

Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

	HGWC-12
5/19/2016	
5/20/2016	
5/23/2016	288
7/11/2016	
7/12/2016	320
8/30/2016	
9/1/2016	300
10/19/2016	
10/20/2016	
10/24/2016	270
12/6/2016	
12/7/2016	280
1/24/2017	
1/25/2017	
1/26/2017	260
3/21/2017	
3/22/2017	220
5/22/2017	
5/23/2017	
5/24/2017	210
10/3/2017	190 (B-01)

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/25/2018 6:23 PM View: 2A. Interwell UPL - Group A

Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-1 (bg)	HGWC-7	HGWC-8	HGWC-13	HGWC-12	HGWC-9	HGWC-11
5/19/2016	143	267	421						
5/20/2016				427	711				
5/23/2016						683	1060	984	564
7/11/2016	125		363						
7/12/2016		249		410	704	563	909	887	627
8/30/2016	168	254	330						
9/1/2016				484	763	702	1480	956	656
10/19/2016	176	357	380						
10/20/2016				393	644			642 (O)	
10/24/2016						647	868		836
12/6/2016	145	285	377	492	733			899	
12/7/2016						465	811		748
1/24/2017	129	300	342						
1/25/2017				461	744				
1/26/2017						411	846	869	571
3/21/2017	103	288	340	415	818				
3/22/2017						427	804	936	597
5/22/2017	92	263	338						
5/23/2017				450	765			939	
5/24/2017						377	803		566
10/3/2017	127	300	343	464	812	268	608	1040	443

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/25/2018 6:23 PM View: 2A. Interwell UPL - Group A

Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

	HGWC-10
5/19/2016	
5/20/2016	
5/23/2016	629
7/11/2016	
7/12/2016	661
8/30/2016	
9/1/2016	769
10/19/2016	
10/20/2016	
10/24/2016	643
12/6/2016	
12/7/2016	697
1/24/2017	
1/25/2017	
1/26/2017	368 (O)
3/21/2017	
3/22/2017	683
5/22/2017	
5/23/2017	
5/24/2017	696
10/3/2017	746

Prediction Limit

Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125 Printed 1/25/2018, 6:24 PM

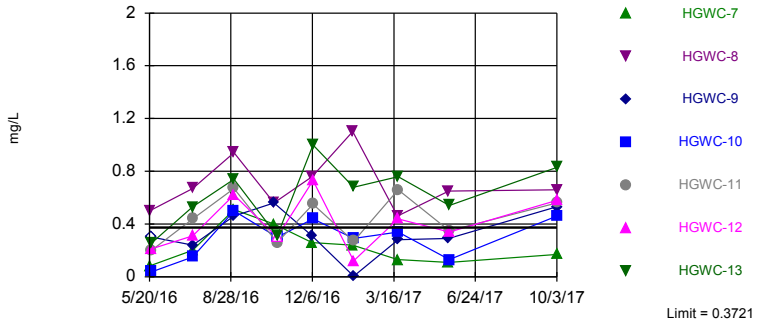
Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Fluoride (mg/L)	HGWC-7	0.3721	n/a	10/3/2017	0.17	No	27	14.81	sqrt(x)	0.001075	Param Inter 1 of 2
Fluoride (mg/L)	**HGWC-8**	**0.3721**	**n/a**	**10/3/2017**	**0.66**	**Yes**	**27**	**14.81**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Fluoride (mg/L)	**HGWC-9**	**0.3721**	**n/a**	**10/3/2017**	**0.53**	**Yes**	**27**	**14.81**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Fluoride (mg/L)	**HGWC-10**	**0.3721**	**n/a**	**10/3/2017**	**0.46**	**Yes**	**27**	**14.81**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Fluoride (mg/L)	**HGWC-11**	**0.3721**	**n/a**	**10/3/2017**	**0.56**	**Yes**	**27**	**14.81**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Fluoride (mg/L)	**HGWC-12**	**0.3721**	**n/a**	**10/3/2017**	**0.58**	**Yes**	**27**	**14.81**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**
Fluoride (mg/L)	**HGWC-13**	**0.3721**	**n/a**	**10/3/2017**	**0.83**	**Yes**	**27**	**14.81**	**sqrt(x)**	**0.001075**	**Param Inter 1 of 2**

Hollow symbols indicate censored values.

Exceeds Limit: HGWC-8, HGWC-9, HGWC-10. HGWC-11. HGWC-12. HGWC-13

Prediction Limit

Interwell Parametric



Background Data Summary (based on square root transformation): Mean=0.3415, Std. Dev.=0.1305, n=27, 14.81% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.941, critical = 0.894. Kappa = 2.057 (c=7, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001075. Comparing 7 points to limit.

Constituent: Fluoride Analysis Run 1/25/2018 6:24 PM View: 2B. Interwell UPL - Group B

Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/25/2018 6:24 PM View: 2B. Interwell UPL - Group B

Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-1 (bg)	HGWC-7	HGWC-8	HGWC-9	HGWC-10	HGWC-11	HGWC-13
5/19/2016	0.0303 (J)	0.0513 (J)	0.105 (J)						
5/20/2016				0.0828 (J)	0.499				
5/23/2016						<0.3	0.0394 (J)	0.203 (J)	0.2587 (J)
7/11/2016	0.05 (J)		0.16 (J)						
7/12/2016		0.12 (J)		0.2 (J)	0.67	0.24 (J)	0.15 (J)	0.44	0.53
8/30/2016	0.06 (J)	0.09 (J)	0.09 (J)						
9/1/2016				0.51	0.94	0.46	0.5	0.67	0.74
10/19/2016	0.04 (J)	0.1 (J)	0.1 (J)						
10/20/2016				0.4	0.56	0.56			
10/24/2016							<0.3 (*)	0.26 (J)	0.31
12/6/2016	0.36	0.21 (J)	0.11 (J)	0.26 (J)	0.76	0.31			
12/7/2016							0.44	0.55	1
1/24/2017	<0.3	0.06 (J)	0.09 (J)						
1/25/2017				0.24 (J)	1.1				
1/26/2017						0.004 (J)	0.29 (J)	0.27 (J)	0.68
3/21/2017	<0.3	0.005 (J)	0.13 (J)	0.13 (J)	0.46				
3/22/2017						0.28 (J)	0.34	0.66	0.76
5/22/2017	<0.3	0.05 (J)	0.12 (J)						
5/23/2017				0.11 (J)	0.65	0.29 (J)			
5/24/2017							0.13 (J)	0.35	0.54
10/3/2017	<0.3	0.13 (J)	0.13 (J)	0.17 (J)	0.66	0.53	0.46	0.56	0.83

Prediction Limit

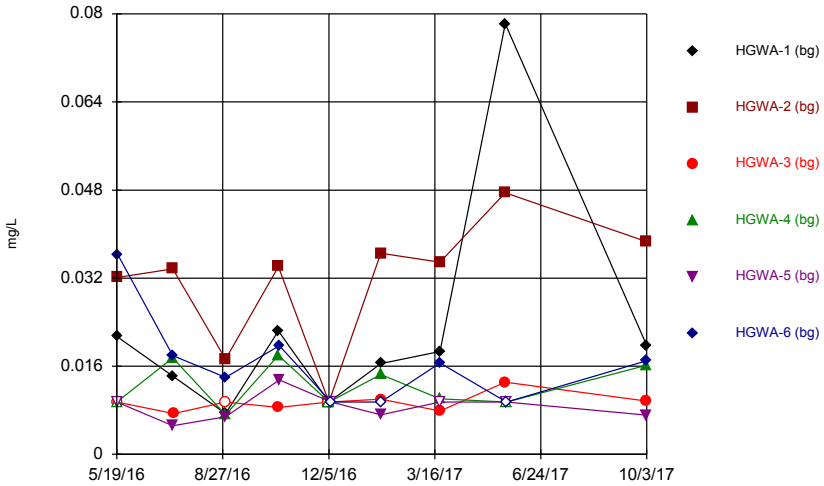
Constituent: Fluoride (mg/L) Analysis Run 1/25/2018 6:24 PM View: 2B. Interwell UPL - Group B

Plant Hammond Client: Southern Company Data: Hammond Ash Pond1 20180125

	HGWC-12
5/19/2016	
5/20/2016	
5/23/2016	0.212 (J)
7/11/2016	
7/12/2016	0.31
8/30/2016	
9/1/2016	0.62
10/19/2016	
10/20/2016	
10/24/2016	<0.3 (*)
12/6/2016	
12/7/2016	0.73
1/24/2017	
1/25/2017	
1/26/2017	0.12 (J)
3/21/2017	
3/22/2017	0.44
5/22/2017	
5/23/2017	
5/24/2017	0.34
10/3/2017	0.58

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG
Hollow symbols indicate censored values.

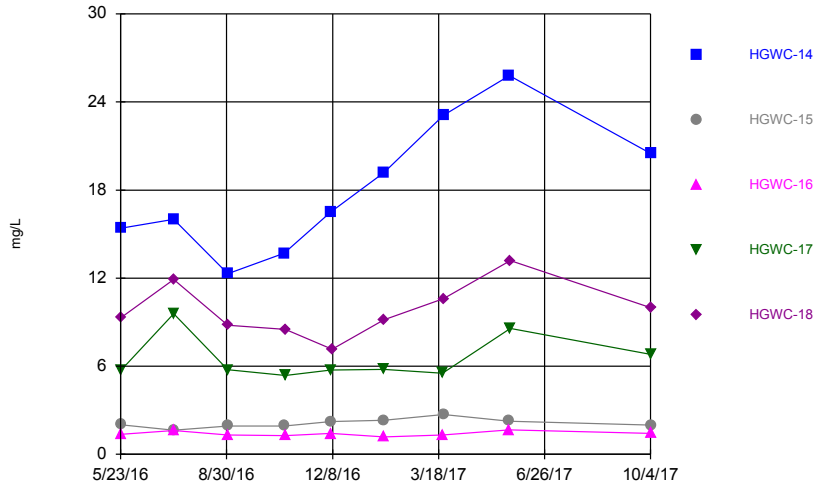
Time Series



Constituent: Boron Analysis Run 1/25/2018 7:19 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG

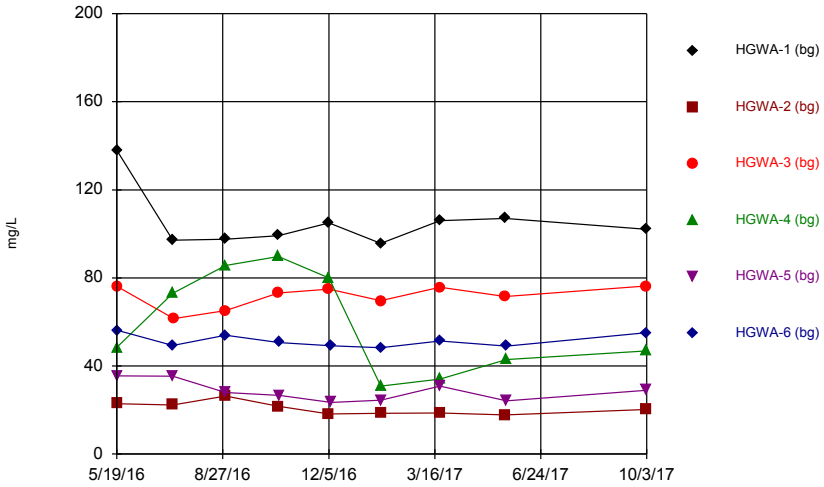
Time Series



Constituent: Boron Analysis Run 1/25/2018 7:19 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG

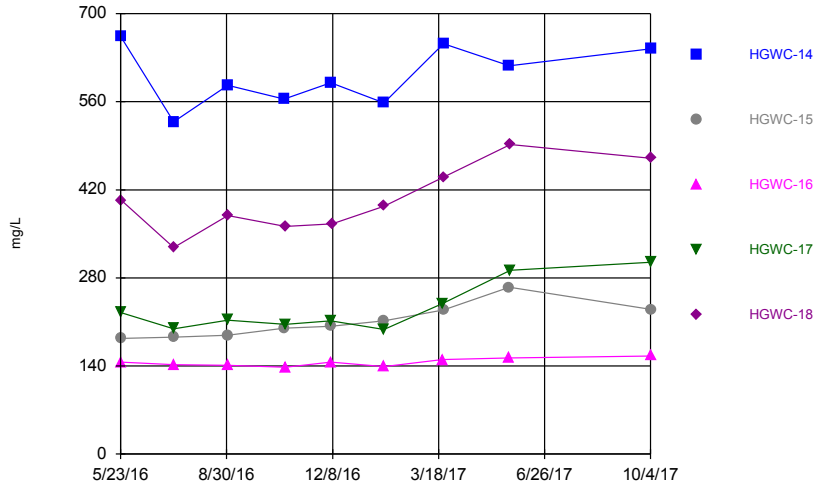
Time Series



Constituent: Calcium Analysis Run 1/25/2018 7:19 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG

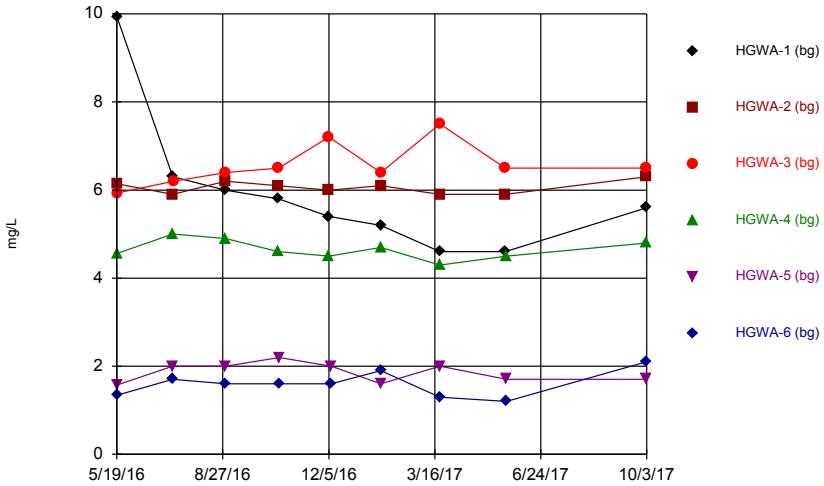
Time Series



Constituent: Calcium Analysis Run 1/25/2018 7:19 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG

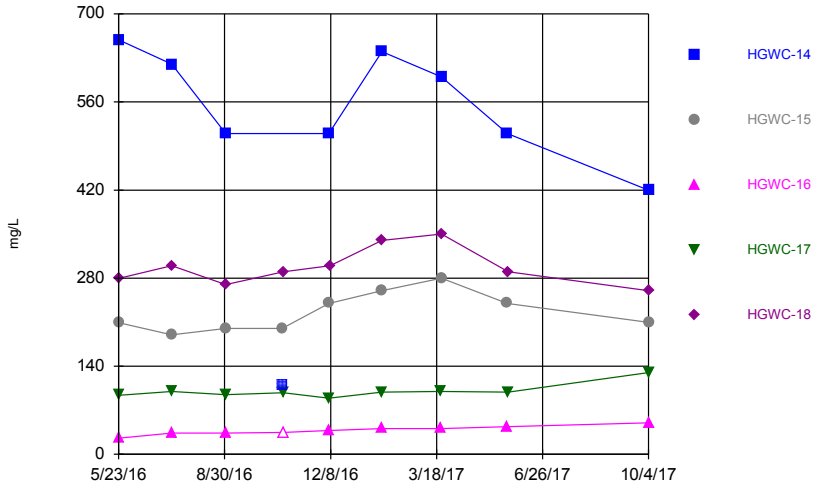
Time Series



Constituent: Chloride Analysis Run 1/25/2018 7:19 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG
Hollow symbols indicate censored values.

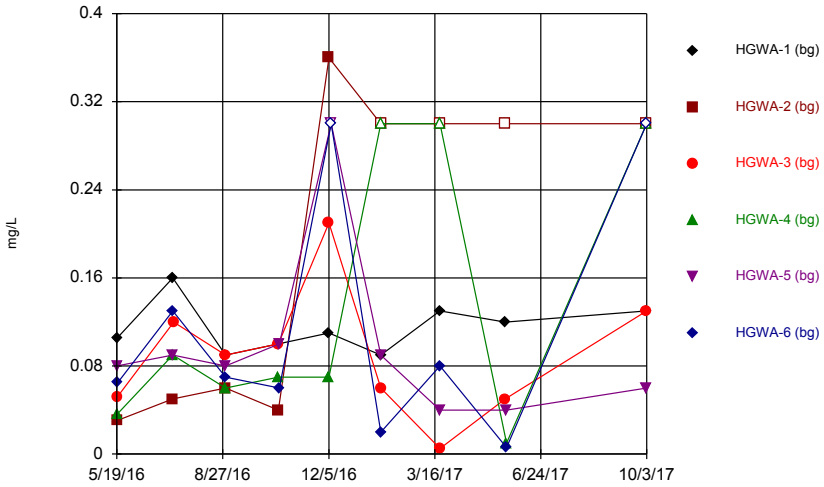
Time Series



Constituent: Chloride Analysis Run 1/25/2018 7:19 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG
Hollow symbols indicate censored values.

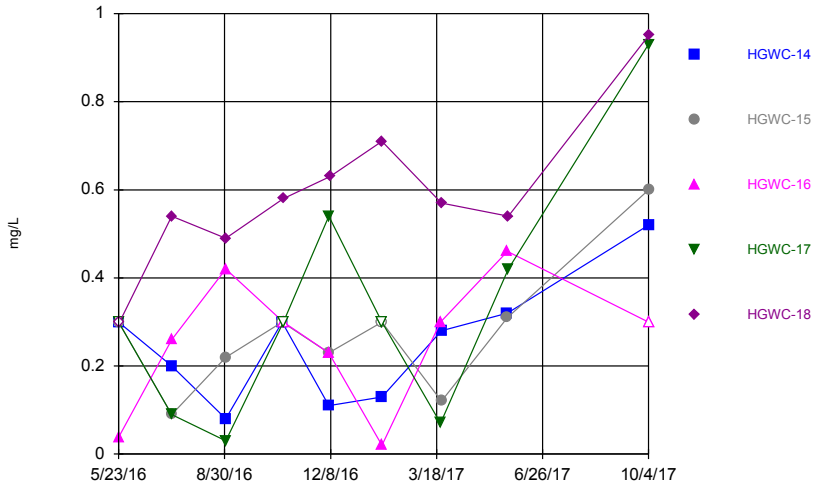
Time Series



Constituent: Fluoride Analysis Run 1/25/2018 7:19 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

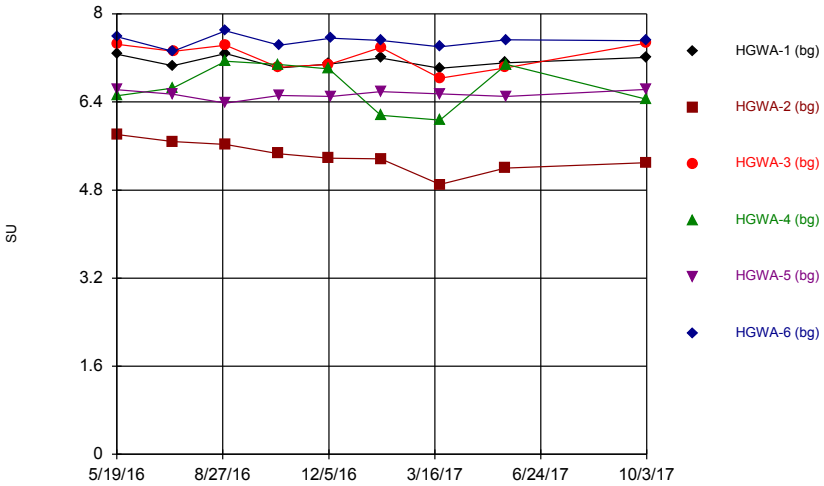
Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Fluoride Analysis Run 1/25/2018 7:19 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

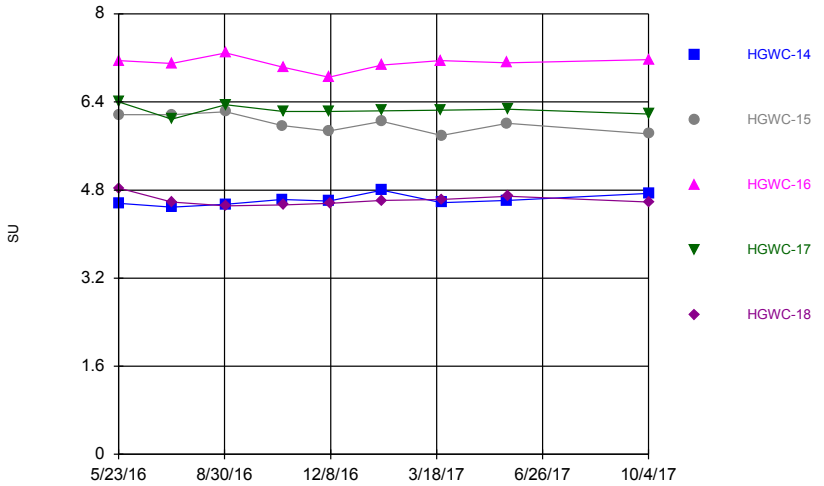
Time Series



Constituent: pH Analysis Run 1/25/2018 7:19 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG

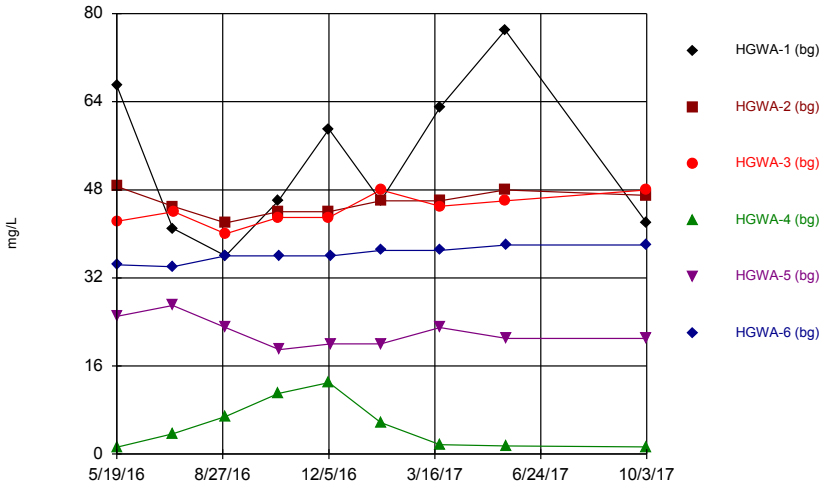
Time Series



Constituent: pH Analysis Run 1/25/2018 7:19 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG

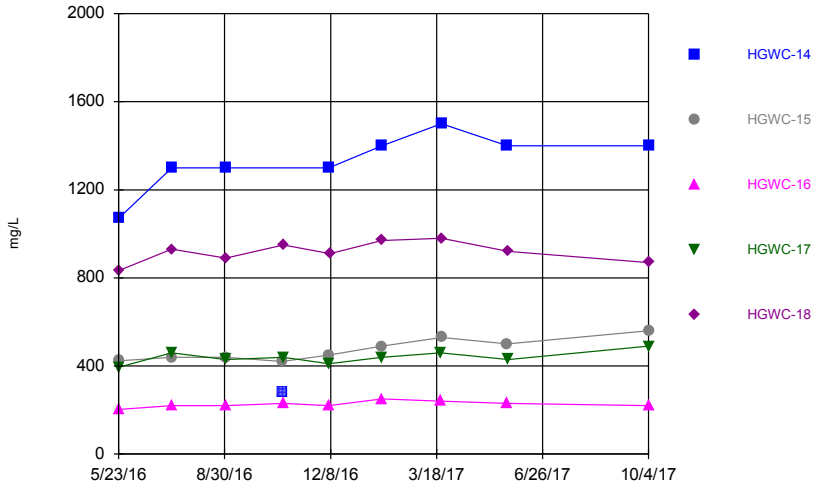
Time Series



Constituent: Sulfate Analysis Run 1/25/2018 7:19 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

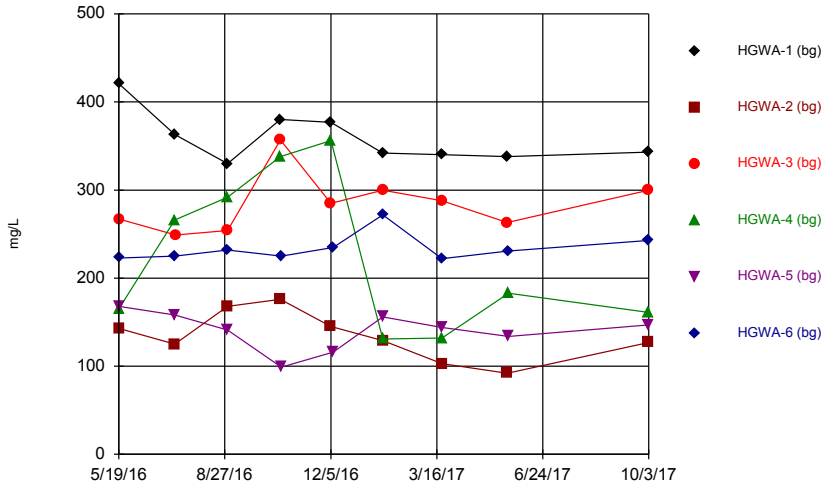
Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG

Time Series



Constituent: Sulfate Analysis Run 1/25/2018 7:19 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

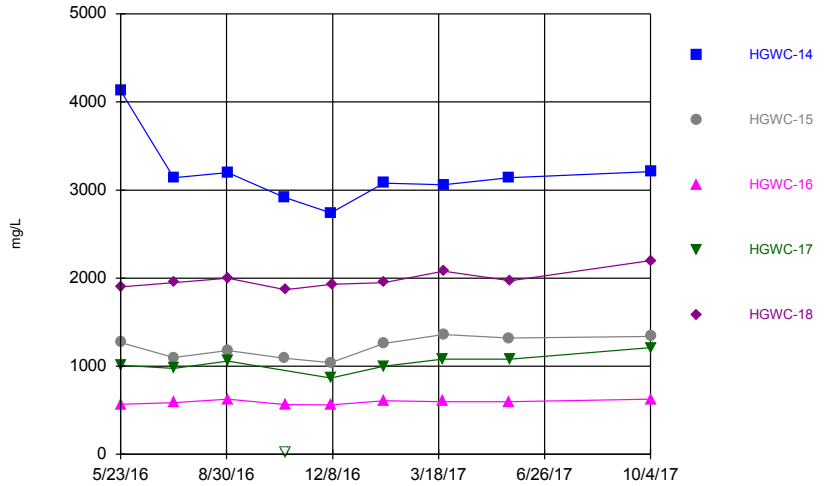
Time Series



Constituent: Total Dissolved Solids Analysis Run 1/25/2018 7:19 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

Sanitas™ v.9.5.32 Sanitas software licensed to ERM. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Total Dissolved Solids Analysis Run 1/25/2018 7:19 PM View: 1. Time Series - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

Prediction Limit

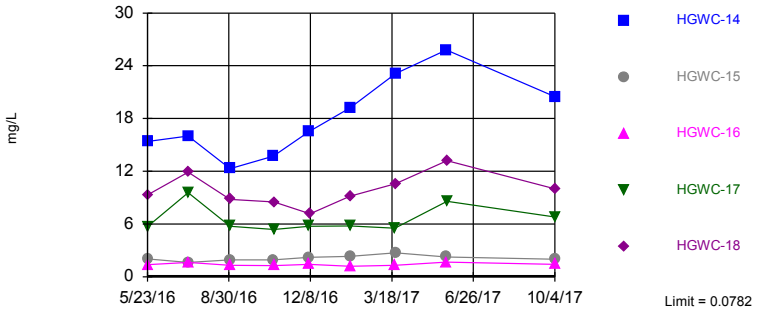
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125 Printed 1/25/2018, 7:21 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	**HGWC-14**	**0.0782**	**n/a**	**10/4/2017**	**20.5**	**Yes**	**54**	**27.78**	**n/a**	**0.000...**	**NP Inter (normality) ...**
Boron (mg/L)	**HGWC-15**	**0.0782**	**n/a**	**10/4/2017**	**2**	**Yes**	**54**	**27.78**	**n/a**	**0.000...**	**NP Inter (normality) ...**
Boron (mg/L)	**HGWC-16**	**0.0782**	**n/a**	**10/4/2017**	**1.43**	**Yes**	**54**	**27.78**	**n/a**	**0.000...**	**NP Inter (normality) ...**
Boron (mg/L)	**HGWC-17**	**0.0782**	**n/a**	**10/4/2017**	**6.8**	**Yes**	**54**	**27.78**	**n/a**	**0.000...**	**NP Inter (normality) ...**
Boron (mg/L)	**HGWC-18**	**0.0782**	**n/a**	**10/4/2017**	**10**	**Yes**	**54**	**27.78**	**n/a**	**0.000...**	**NP Inter (normality) ...**
Calcium (mg/L)	**HGWC-14**	**112.1**	**n/a**	**10/4/2017**	**644**	**Yes**	**54**	**0**	**No**	**0.001504**	**Param Inter 1 of 2**
Calcium (mg/L)	**HGWC-15**	**112.1**	**n/a**	**10/4/2017**	**230**	**Yes**	**54**	**0**	**No**	**0.001504**	**Param Inter 1 of 2**
Calcium (mg/L)	**HGWC-16**	**112.1**	**n/a**	**10/4/2017**	**156**	**Yes**	**54**	**0**	**No**	**0.001504**	**Param Inter 1 of 2**
Calcium (mg/L)	**HGWC-17**	**112.1**	**n/a**	**10/4/2017**	**305**	**Yes**	**54**	**0**	**No**	**0.001504**	**Param Inter 1 of 2**
Calcium (mg/L)	**HGWC-18**	**112.1**	**n/a**	**10/4/2017**	**470**	**Yes**	**54**	**0**	**No**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**HGWC-14**	**9.94**	**n/a**	**10/4/2017**	**420**	**Yes**	**54**	**0**	**n/a**	**0.000...**	**NP Inter (normality) ...**
Chloride (mg/L)	**HGWC-15**	**9.94**	**n/a**	**10/4/2017**	**210**	**Yes**	**54**	**0**	**n/a**	**0.000...**	**NP Inter (normality) ...**
Chloride (mg/L)	**HGWC-16**	**9.94**	**n/a**	**10/4/2017**	**50**	**Yes**	**54**	**0**	**n/a**	**0.000...**	**NP Inter (normality) ...**
Chloride (mg/L)	**HGWC-17**	**9.94**	**n/a**	**10/4/2017**	**130**	**Yes**	**54**	**0**	**n/a**	**0.000...**	**NP Inter (normality) ...**
Chloride (mg/L)	**HGWC-18**	**9.94**	**n/a**	**10/4/2017**	**260**	**Yes**	**54**	**0**	**n/a**	**0.000...**	**NP Inter (normality) ...**
Fluoride (mg/L)	**HGWC-14**	**0.1819**	**n/a**	**10/4/2017**	**0.52**	**Yes**	**54**	**18.52**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Fluoride (mg/L)	**HGWC-15**	**0.1819**	**n/a**	**10/4/2017**	**0.6**	**Yes**	**54**	**18.52**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Fluoride (mg/L)	HGWC-16	0.1819	n/a	10/4/2017	0.3ND	No	54	18.52	x^(1/3)	0.001504	Param Inter 1 of 2
Fluoride (mg/L)	**HGWC-17**	**0.1819**	**n/a**	**10/4/2017**	**0.93**	**Yes**	**54**	**18.52**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Fluoride (mg/L)	**HGWC-18**	**0.1819**	**n/a**	**10/4/2017**	**0.95**	**Yes**	**54**	**18.52**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
pH (SU)	**HGWC-14**	**7.861**	**5.306**	**10/4/2017**	**4.74**	**Yes**	**54**	**0**	**x^3**	**0.000752**	**Param Inter 1 of 2**
pH (SU)	HGWC-15	7.861	5.306	10/4/2017	5.82	No	54	0	x^3	0.000752	Param Inter 1 of 2
pH (SU)	HGWC-16	7.861	5.306	10/4/2017	7.17	No	54	0	x^3	0.000752	Param Inter 1 of 2
pH (SU)	HGWC-17	7.861	5.306	10/4/2017	6.18	No	54	0	x^3	0.000752	Param Inter 1 of 2
pH (SU)	**HGWC-18**	**7.861**	**5.306**	**10/4/2017**	**4.58**	**Yes**	**54**	**0**	**x^3**	**0.000752**	**Param Inter 1 of 2**
Sulfate (mg/L)	**HGWC-14**	**77**	**n/a**	**10/4/2017**	**1400**	**Yes**	**54**	**0**	**n/a**	**0.000...**	**NP Inter (normality) ...**
Sulfate (mg/L)	**HGWC-15**	**77**	**n/a**	**10/4/2017**	**560**	**Yes**	**54**	**0**	**n/a**	**0.000...**	**NP Inter (normality) ...**
Sulfate (mg/L)	**HGWC-16**	**77**	**n/a**	**10/4/2017**	**220**	**Yes**	**54**	**0**	**n/a**	**0.000...**	**NP Inter (normality) ...**
Sulfate (mg/L)	**HGWC-17**	**77**	**n/a**	**10/4/2017**	**490**	**Yes**	**54**	**0**	**n/a**	**0.000...**	**NP Inter (normality) ...**
Sulfate (mg/L)	**HGWC-18**	**77**	**n/a**	**10/4/2017**	**870**	**Yes**	**54**	**0**	**n/a**	**0.000...**	**NP Inter (normality) ...**
Total Dissolved Solids (mg/L)	**HGWC-14**	**395.3**	**n/a**	**10/4/2017**	**3210**	**Yes**	**54**	**0**	**No**	**0.001504**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-15**	**395.3**	**n/a**	**10/4/2017**	**1340**	**Yes**	**54**	**0**	**No**	**0.001504**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-16**	**395.3**	**n/a**	**10/4/2017**	**626**	**Yes**	**54**	**0**	**No**	**0.001504**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-17**	**395.3**	**n/a**	**10/4/2017**	**1210**	**Yes**	**54**	**0**	**No**	**0.001504**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**HGWC-18**	**395.3**	**n/a**	**10/4/2017**	**2200**	**Yes**	**54**	**0**	**No**	**0.001504**	**Param Inter 1 of 2**

Exceeds Limit: HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18

Prediction Limit

Interwell Non-parametric



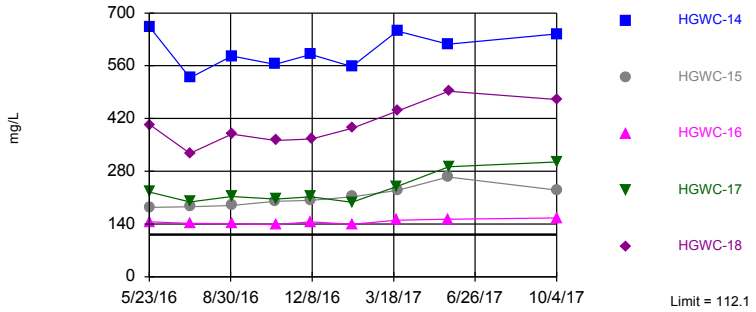
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 54 background values. 27.78% NDs. Annual per-constituent alpha = 0.006529. Individual comparison alpha = 0.0006549 (1 of 2). Comparing 5 points to limit.

Constituent: Boron Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

Exceeds Limit: HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=56.12, Std. Dev.=30.2, n=54. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9404, critical = 0.939. Kappa = 1.854 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Comparing 5 points to limit.

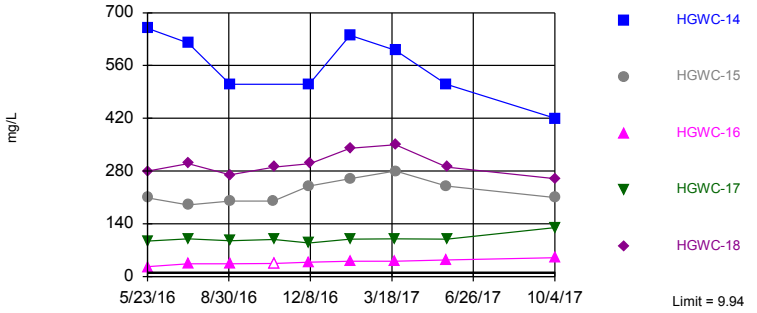
Constituent: Calcium Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

Hollow symbols indicate censored values.

Exceeds Limit: HGWC-14, HGWC-15, HGWC-16, HGWC-17, HGWC-18

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 54 background values. Annual per-constituent alpha = 0.006529. Individual comparison alpha = 0.0006549 (1 of 2). Comparing 5 points to limit.

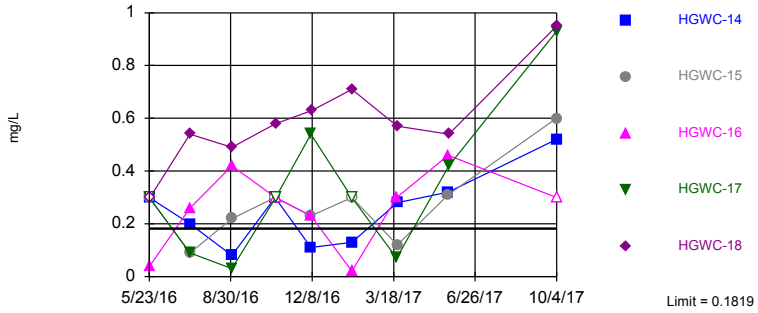
Constituent: Chloride Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

Hollow symbols indicate censored values.

Exceeds Limit: HGWC-14, HGWC-15, HGWC-17, HGWC-18

Prediction Limit

Interwell Parametric



Background Data Summary (based on cube root transformation) (after Kaplan-Meier Adjustment): Mean=0.3444, Std. Dev.=0.1198, n=54, 18.52% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9408, critical = 0.939. Kappa = 1.854 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Comparing 5 points to limit.

Constituent: Fluoride Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells

Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

	HGWA-2 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-5 (bg)	HGWA-1 (bg)	HGWA-6 (bg)	HGWC-16	HGWC-17	HGWC-15
5/19/2016	0.0321 (J)	<0.0095	<0.0095	<0.0095	0.0214 (J)				
5/20/2016						0.0363 (J)			
5/23/2016							1.36	5.7	2.02
5/24/2016									
7/11/2016	0.0337 (J)	0.0175 (J)		0.0052 (J)	0.0142 (J)	0.0179 (J)			
7/12/2016			0.0074 (J)				1.62	9.58	1.65
8/30/2016	0.0173 (J)	0.0072 (J)	<0.0095	0.0068 (J)	0.0074 (J)	0.014 (J)			
9/1/2016							1.31	5.76	1.93
10/19/2016	0.0341 (J)	0.018 (J)	0.0085 (J)		0.0224 (J)				
10/20/2016				0.0135 (J)		0.0197 (J)			
10/24/2016									1.93
10/25/2016							1.27	5.38	
12/6/2016	<0.0095 (*)	<0.0095 (*)	<0.0095 (*)		<0.0095 (*)				
12/7/2016							1.42	5.74	2.23
12/8/2016				<0.0095 (*)		<0.0095 (*)			
1/24/2017	0.0365 (J)	0.0145 (J)	0.01 (J)	0.0072 (J)	0.0165 (J)	<0.0095			
1/26/2017							1.19	5.78	2.31
3/21/2017	0.0349 (J)	0.0101 (J)	0.0079 (J)	<0.0095	0.0187 (J)	0.0166 (J)			
3/22/2017							1.32	5.52	
3/23/2017									2.72
5/22/2017	0.0475		0.0131 (J)		0.0782				
5/23/2017		<0.0095 (*)		<0.0095 (*)		<0.0095 (*)			
5/24/2017							1.67		2.26
5/25/2017								8.58	
10/3/2017	0.0386 (J)	0.0162 (J)	0.0097 (J)	0.0071 (J)	0.0198 (J)	0.017 (J)			
10/4/2017							1.43	6.8	2

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells

Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

	HGWC-14	HGWC-18
5/19/2016		
5/20/2016		
5/23/2016	15.4	
5/24/2016		9.33
7/11/2016		
7/12/2016	16	11.9
8/30/2016		
9/1/2016	12.3	8.8
10/19/2016		
10/20/2016		
10/24/2016	13.7	
10/25/2016		8.5
12/6/2016		
12/7/2016	16.5	
12/8/2016		7.15
1/24/2017		
1/26/2017	19.2	9.17
3/21/2017		
3/22/2017		
3/23/2017	23.1	10.6
5/22/2017		
5/23/2017		
5/24/2017	25.8	
5/25/2017		13.2
10/3/2017		
10/4/2017	20.5	10

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells

Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

	HGWA-2 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-5 (bg)	HGWA-1 (bg)	HGWA-6 (bg)	HGWC-16	HGWC-17	HGWC-15
5/19/2016	22.9	48.4	76.2	35.5	138				
5/20/2016						56.1			
5/23/2016							146	225	184
5/24/2016									
7/11/2016	22.3	73		35.4	97.2	49.3			
7/12/2016			61.5				142	199	186
8/30/2016	26.4	85.7	65.1	28	97.5	53.9			
9/1/2016							141	213	189
10/19/2016	21.7	89.7	73.2		99.2				
10/20/2016				26.7		50.7			
10/24/2016									200
10/25/2016							138	206	
12/6/2016	18.2	80	74.9		105				
12/7/2016							146	212	203
12/8/2016				23.5		49.2			
1/24/2017	18.5	30.8	69.6	24.5	95.7	48.3			
1/26/2017							139	198	212
3/21/2017	18.6	34	75.7	30.8	106	51.3			
3/22/2017							150	239	
3/23/2017									229 (B-01)
5/22/2017	17.8		71.5		107				
5/23/2017		43		24.2		49.1			
5/24/2017							153		265
5/25/2017								292	
10/3/2017	20.2	46.9	76.3	29	102	55.1			
10/4/2017							156	305	230

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells

Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

	HGWC-14	HGWC-18
5/19/2016		
5/20/2016		
5/23/2016	664	
5/24/2016		403
7/11/2016		
7/12/2016	528	328
8/30/2016		
9/1/2016	586	379
10/19/2016		
10/20/2016		
10/24/2016	564	
10/25/2016		362
12/6/2016		
12/7/2016	590	
12/8/2016		366
1/24/2017		
1/26/2017	558 (B-01)	394
3/21/2017		
3/22/2017		
3/23/2017	652 (B-01)	440 (B-01)
5/22/2017		
5/23/2017		
5/24/2017	617	
5/25/2017		492
10/3/2017		
10/4/2017	644	470

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells

Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

	HGWA-4 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-5 (bg)	HGWA-1 (bg)	HGWA-6 (bg)	HGWC-15	HGWC-17	HGWC-14
5/19/2016	4.56	6.14	5.93	1.57	9.94				
5/20/2016						1.35			
5/23/2016							209	94	659
5/24/2016									
7/11/2016	5 (B)	5.9 (B)		2 (B)	6.3 (B-01)	1.7 (B)			
7/12/2016			6.2 (B)				190 (B)	100 (B)	620 (B)
8/30/2016	4.9	6.2	6.4	2	6	1.6			
9/1/2016							200	95	510
10/19/2016	4.6	6.1	6.5		5.8				
10/20/2016				2.2		1.6			
10/24/2016							200		110 (O)
10/25/2016								98	
12/6/2016	4.5	6	7.2		5.4				
12/7/2016							240	89	510
12/8/2016				2		1.6			
1/24/2017	4.7	6.1	6.4	1.6	5.2	1.9			
1/26/2017							260	99	640
3/21/2017	4.3	5.9	7.5	2	4.6	1.3			
3/22/2017								100	
3/23/2017							280		600
5/22/2017		5.9	6.5		4.6				
5/23/2017	4.5			1.7		1.2			
5/24/2017							240		510
5/25/2017								99	
10/3/2017	4.8	6.3	6.5	1.7	5.6	2.1			
10/4/2017							210	130	420

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells

Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

	HGWC-16	HGWC-18
5/19/2016		
5/20/2016		
5/23/2016	25.8	
5/24/2016		280
7/11/2016		
7/12/2016	34 (B)	300 (B)
8/30/2016		
9/1/2016	34	270
10/19/2016		
10/20/2016		
10/24/2016		
10/25/2016	<35 (*)	290
12/6/2016		
12/7/2016	38	
12/8/2016		300
1/24/2017		
1/26/2017	41	340
3/21/2017		
3/22/2017	41	
3/23/2017		350
5/22/2017		
5/23/2017		
5/24/2017	44	
5/25/2017		290
10/3/2017		
10/4/2017	50	260

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells

Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

	HGWA-2 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-5 (bg)	HGWA-1 (bg)	HGWA-6 (bg)	HGWC-16	HGWC-17	HGWC-15
5/19/2016	0.0303 (J)	0.036 (J)	0.0513 (J)	0.08 (J)	0.105 (J)				
5/20/2016						0.065 (J)			
5/23/2016							0.038 (J)	<0.3	<0.3
5/24/2016									
7/11/2016	0.05 (J)	0.09 (J)		0.09 (J)	0.16 (J)	0.13 (J)			
7/12/2016			0.12 (J)				0.26 (J)	0.09 (J)	0.09 (J)
8/30/2016	0.06 (J)	0.06 (J)	0.09 (J)	0.08 (J)	0.09 (J)	0.07 (J)			
9/1/2016							0.42	0.03 (J)	0.22 (J)
10/19/2016	0.04 (J)	0.07 (J)	0.1 (J)		0.1 (J)				
10/20/2016				0.1 (J)		0.06 (J)			
10/24/2016									<0.3 (*)
10/25/2016							<0.3 (*)	<0.3 (*)	
12/6/2016	0.36	0.07 (J)	0.21 (J)		0.11 (J)				
12/7/2016							0.23 (J)	0.54	0.23 (J)
12/8/2016				<0.3 (*)		<0.3 (*)			
1/24/2017	<0.3	<0.3	0.06 (J)	0.09 (J)	0.09 (J)	0.02 (J)			
1/26/2017							0.02 (J)	<0.3	<0.3
3/21/2017	<0.3	<0.3	0.005 (J)	0.04 (J)	0.13 (J)	0.08 (J)			
3/22/2017							0.3	0.07 (J)	
3/23/2017									0.12 (J)
5/22/2017	<0.3		0.05 (J)		0.12 (J)				
5/23/2017		0.01 (J)		0.04 (J)		0.006 (J)			
5/24/2017							0.46		0.31
5/25/2017								0.42	
10/3/2017	<0.3	<0.3	0.13 (J)	0.06 (J)	0.13 (J)	<0.3			
10/4/2017							<0.3	0.93	0.6

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells

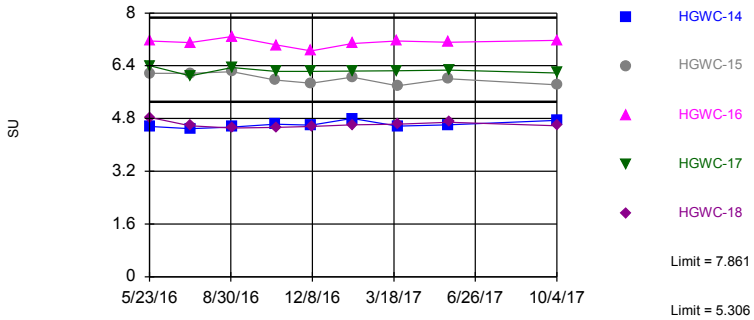
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

	HGWC-14	HGWC-18
5/19/2016		
5/20/2016		
5/23/2016	<0.3	
5/24/2016		<0.3
7/11/2016		
7/12/2016	0.2 (J)	0.54
8/30/2016		
9/1/2016	0.08 (J)	0.49
10/19/2016		
10/20/2016		
10/24/2016	<0.3 (*)	
10/25/2016		0.58
12/6/2016		
12/7/2016	0.11 (J)	
12/8/2016		0.63
1/24/2017		
1/26/2017	0.13 (J)	0.71
3/21/2017		
3/22/2017		
3/23/2017	0.28 (J)	0.57
5/22/2017		
5/23/2017		
5/24/2017	0.32	
5/25/2017		0.54
10/3/2017		
10/4/2017	0.52	0.95

Exceeds Limits: HGWC-14, HGWC-18

Prediction Limit

Interwell Parametric



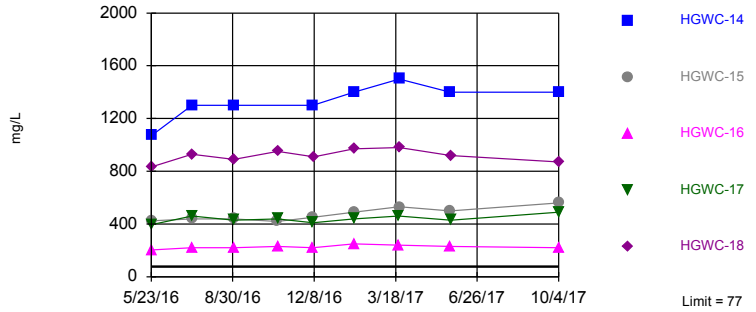
Background Data Summary (based on cube transformation): Mean=317.6, Std. Dev.=90.71, n=54. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9426, critical = 0.939. Kappa = 1.854 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.000752. Comparing 5 points to limit.

Constituent: pH Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

Exceeds Limit: HGWC-14, HGWC-15, HGWC-16. HGWC-17. HGWC-18

Prediction Limit

Interwell Non-parametric



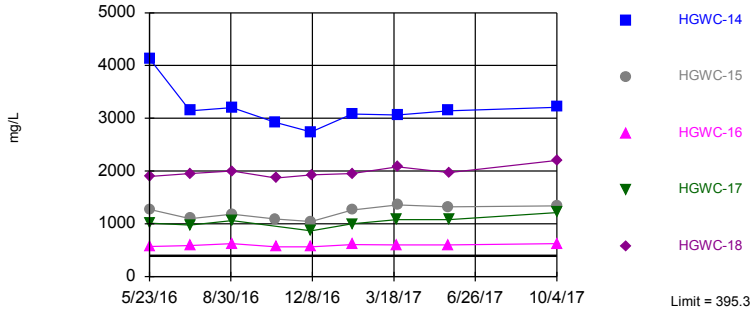
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 54 background values. Annual per-constituent alpha = 0.006529. Individual comparison alpha = 0.0006549 (1 of 2). Comparing 5 points to limit.

Constituent: Sulfate Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

Exceeds Limit: HGWC-14, HGWC-15, HGWC-16. HGWC-17. HGWC-18

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=229.6, Std. Dev.=89.35, n=54. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9567, critical = 0.939. Kappa = 1.854 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Comparing 5 points to limit.

Constituent: Total Dissolved Solids Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells
Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

Prediction Limit

Constituent: pH (SU) Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells

Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

	HGWA-2 (bg)	HGWA-4 (bg)	HGWA-3 (bg)	HGWA-5 (bg)	HGWA-1 (bg)	HGWA-6 (bg)	HGWC-16	HGWC-17	HGWC-15
5/19/2016	5.81	6.51	7.45	6.62	7.27				
5/20/2016						7.58			
5/23/2016							7.15	6.4	6.17
5/24/2016									
7/11/2016	5.68	6.65		6.54	7.06	7.32			
7/12/2016			7.32				7.1	6.09	6.17
8/30/2016	5.63	7.14	7.43	6.38	7.28	7.69			
9/1/2016							7.29	6.35	6.22
10/19/2016	5.46	7.08	7.03		7.02				
10/20/2016				6.52		7.43			
10/24/2016									5.97
10/25/2016							7.03	6.23	
12/6/2016	5.38	7	7.08		7.09				
12/7/2016							6.85	6.23	5.87
12/8/2016				6.5		7.56			
1/24/2017	5.37	6.16	7.39	6.59	7.2	7.52			
1/26/2017							7.07	6.24	6.05
3/21/2017	4.9	6.07	6.83	6.55	7.01	7.4			
3/22/2017							7.15	6.25	
3/23/2017									5.79
5/22/2017	5.2		7.02		7.11				
5/23/2017		7.08		6.5		7.53			
5/24/2017							7.11		6.01
5/25/2017								6.27	
10/3/2017	5.3	6.45	7.47	6.63	7.21	7.51			
10/4/2017							7.17	6.18	5.82

Prediction Limit

Constituent: pH (SU) Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells

Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

	HGWC-14	HGWC-18
5/19/2016		
5/20/2016		
5/23/2016	4.56	
5/24/2016		4.83
7/11/2016		
7/12/2016	4.49	4.58
8/30/2016		
9/1/2016	4.54	4.51
10/19/2016		
10/20/2016		
10/24/2016	4.63	
10/25/2016		4.53
12/6/2016		
12/7/2016	4.6	
12/8/2016		4.56
1/24/2017		
1/26/2017	4.8	4.61
3/21/2017		
3/22/2017		
3/23/2017	4.57	4.63
5/22/2017		
5/23/2017		
5/24/2017	4.61	
5/25/2017		4.69
10/3/2017		
10/4/2017	4.74	4.58

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells

Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

	HGWA-4 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-5 (bg)	HGWA-1 (bg)	HGWA-6 (bg)	HGWC-15	HGWC-17	HGWC-14
5/19/2016	1.22	48.6	42.3	25	66.9				
5/20/2016						34.4			
5/23/2016							424	395	1070
5/24/2016									
7/11/2016	3.7	45		27	41	34			
7/12/2016			44				440	460	1300
8/30/2016	6.8	42	40	23	36	36			
9/1/2016							440	430	1300
10/19/2016	11	44	43		46				
10/20/2016				19		36			
10/24/2016							420		280 (O)
10/25/2016								440	
12/6/2016	13	44	43		59				
12/7/2016							450	410	1300
12/8/2016				20		36			
1/24/2017	5.7	46	48	20	46	37			
1/26/2017							490	440	1400
3/21/2017	1.7	46	45	23	63	37			
3/22/2017								460	
3/23/2017							530		1500
5/22/2017		48	46		77				
5/23/2017	1.5			21		38			
5/24/2017							500		1400
5/25/2017								430	
10/3/2017	1.3 (B-01)	47 (B-01)	48 (B-01)	21 (B-01)	42 (B-01)	38 (B-01)			
10/4/2017							560	490	1400

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells

Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

	HGWC-16	HGWC-18
5/19/2016		
5/20/2016		
5/23/2016	203	
5/24/2016		834
7/11/2016		
7/12/2016	220	930
8/30/2016		
9/1/2016	220	890
10/19/2016		
10/20/2016		
10/24/2016		
10/25/2016	230	950
12/6/2016		
12/7/2016	220	
12/8/2016		910
1/24/2017		
1/26/2017	250	970
3/21/2017		
3/22/2017	240	
3/23/2017		980
5/22/2017		
5/23/2017		
5/24/2017	230	
5/25/2017		920
10/3/2017		
10/4/2017	220	870 (B-01)

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells

Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

	HGWA-4 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-5 (bg)	HGWA-1 (bg)	HGWA-6 (bg)	HGWC-15	HGWC-17	HGWC-14
5/19/2016	165	143	267	168	421				
5/20/2016						223			
5/23/2016							1270	1010	4130
5/24/2016									
7/11/2016	266	125		158	363	225			
7/12/2016			249				1100	976	3140
8/30/2016	292	168	254	141	330	232			
9/1/2016							1180	1060	3200
10/19/2016	338	176	357		380				
10/20/2016				99		225			
10/24/2016							1090		2920
10/25/2016								<25 (O)	
12/6/2016	356	145	285		377				
12/7/2016							1040	866	2740
12/8/2016				116		235			
1/24/2017	131	129	300	156	342	272			
1/26/2017							1260	1000	3080
3/21/2017	132	103	288	144	340	222			
3/22/2017								1080	
3/23/2017							1360		3060
5/22/2017		92	263		338				
5/23/2017	183			134		231			
5/24/2017							1320		3140
5/25/2017								1080	
10/3/2017	161	127	300	147	343	243			
10/4/2017							1340	1210	3210

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/25/2018 7:21 PM View: 2. Interwell UPL - All Wells

Plant Hammond Client: Southern Company Data: Hammond Ash Pond2 20180125

	HGWC-16	HGWC-18
5/19/2016		
5/20/2016		
5/23/2016	570	
5/24/2016		1900
7/11/2016		
7/12/2016	585	1950
8/30/2016		
9/1/2016	625	2000
10/19/2016		
10/20/2016		
10/24/2016		
10/25/2016	563	1870
12/6/2016		
12/7/2016	561	
12/8/2016		1930
1/24/2017		
1/26/2017	608	1950
3/21/2017		
3/22/2017	599	
3/23/2017		2080
5/22/2017		
5/23/2017		
5/24/2017	598	
5/25/2017		1970
10/3/2017		
10/4/2017	626	2200